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OAKLAND UNIVERSITY

Undergraduate Catalog 1983-1984

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OAKLAND UNIVERSITY

Undergraduate Catalog 1983-1984

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FOR INFORMATION

Oakland University
Rochester, Michigan 48063
(313) 377-2100

Admissions: Undergraduate, 377-3360; Graduate, 377-3166
Continuing Education: Main Office, 377-3120
Loans and Student Employment: Financial Aid Office, 377-3370
Scholarships and Grants: New Students, 377-3360; Returning OU Students, 377-3370; Graduate Students, 377-3166
Student Affairs: Student Life Office, 377-3352
Student Housing: Residence Halls Office, 377-3570

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Equality of Opportunity

Oakland University, as an equal opportunity and affirmative action institution, is committed to compliance with federal and state laws prohibiting discrimination, including Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972 and Section 504 of the Rehabilitation Act of 1973. It is the policy of Okland University that there shall be no discrimination on the basis of race, sex, color, religion, national origin or ancestry, age, marital status, handicap, veteran status or other prohibited factors in employment, admissions, educational programs or activities. Inquiries or complaints may be addressed to the Director, Office of Equal Opportunity, 152 North Foundation Hall, Oakland University, Rochester, Michigan 48063.

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Academic Calendars

Fall 1983

Registration	T, W, Th,	August 30, 31, Sept. 1
Labor Day Holiday	M	September 5
Classes Begin	8 a.m. T	September 6
Fall Commencement	Sunday	September 18
Thanksgiving Recess Begins	10 p.m. W	November 23
Classes Resume	8 a.m. M	November 28
Classes End	5:30 p.m. M	December 12
Exams Begin	6 p.m. M	December 12
Exams End	12 noon S	December 17

Winter 1984

Registration	T	January 3
Classes Begin	8 a.m. W	January 4
Winter Recess Begins	10 p.m. S	February 25
Classes Resume	8 a.m. M	March 5
Classes End	3:30 p.m. M	April 16
Exams Begin	4 p.m. M	April 16
Exams End	12 noon S	April 21

Spring 1984

Registration	M	April 30
Classes Begin	8 a.m. T	May 1
Memorial Day Holiday	M	May 28
Spring Commencement	Sunday	June 3
Classes End	10 p.m. T	June 19
Final Exams	W, Th	June 20, 21

Summer 1984

Registration	M	June 25
Classes Begin	8 a.m. T	June 26
Independence Day Recess	10 p.m. T	July 3
Classes Resume	8 a.m. Th	July 5
Classes End	10 p.m. T	August 14
Final Exams	W, Th	August 15, 16

INTRODUCTION

Oakland University is a medium-size public institution with a diverse set of academic offerings at the undergraduate and graduate levels. Anchored by a strong liberal arts program, the university is organized into a College of Arts and Sciences, and Schools of Economics and Management, Engineering, Human and Educational Services, Nursing, and Performing Arts, a Center for Health Sciences, and a Division of Continuing Education.

All academic programs of the university are accredited by the North Central Association of Colleges and Schools.

The university faculty, whose number now exceeds 400, has a distinguished record of research and scholarship. One of the focal points of the research is the Institute of Biological Sciences, a nationally recognized center for research of the eye. The university computing facilities include a modern Honeywell central computer and two Honeywell mini-computers.

The university has also established national reputations in several undergraduate and graduate degree programs.

Complementing its academic program, Oakland University has a major public service program with emphasis on the professional performing arts. Meadow Brook Theatre, a professional theatre, is located on the campus. Meadow Brook Music Festival is the summer home of the Detroit Symphony Orchestra. Meadow Brook Hall, home of the university's benefactors, now serves as a major conference and cultural center.

The university was founded in 1957 when the late Mr. and Mrs. Alfred G. Wilson donated their 1,500-acre estate and $2 million to Michigan State University to begin a new college in Oakland County. Named Michigan State University-Oakland, the new campus enrolled its first students in 1959. In 1963, the name was changed to Oakland University, and in 1970 the State Legislature recognized the maturity and stature of Oakland University and granted the institution its independence. The governor appointed Oakland University's first Board of Trustees in fall 1970.

Located between the cities of Pontiac and Rochester, Oakland University is easily accessible to millions of residents in the metropolitan Detroit area because of its proximity to major freeways. The natural beauty of the campus, much of it still wooded and undeveloped, is enhanced by comprehensive recreational facilities and modern buildings which house the university's many academic and public service programs as well as some 1700 residential students.

Family Educational Rights and Privacy Act, 1974

The federal Family Educational Rights and Privacy Act, 1974, pertains to confidential student educational records. This legislation allows students the right to view upon request their own confidential educational records and restricts the use of these records by others. Copies of the Family Educational Rights and Privacy Act, 1974, may be obtained from the assistant dean of students, 49 Oakland Center (377-2026), or from the U.S. Department of Health, Education, and Welfare.

Notification of Oakland University compliance with this legislation may be found in the Oakland University Policy Statement on the Family Educational Rights and Privacy Act (available at the office of the dean of students), in the appropriate *Schedule of Classes* and the undergraduate and graduate Oakland University catalogs. The assistant dean of students is the university compliance officer for the Family Educational Rights and Privacy Act. Any questions, grievances, complaints, or other related problems may be addressed to the compliance officer and/or filed with the U.S. Department of Health, Education, and Welfare.

GENERAL INFORMATION

ADMISSION

Admission to Freshman Standing

Candidates for admission to undergraduate degree programs should have completed regular high-school level college preparatory work or otherwise demonstrated sufficient academic preparation to begin or continue college work. Highly qualified students may be admitted without regard to the pattern of subject matter completed at their high school. Students planning majors in the sciences, mathematics, engineering, or management should present at least three years preparation in mathematics, including algebra, geometry, and trigonometry. Consideration for admission is based upon an applicant's total background including high school academic achievement, recommendations, educational goals, and potential for success at the university.

Students entering as freshmen must submit scores from the American College Test (ACT). Prospective applicants are encouraged to take the ACT in the spring of their junior year and have scores sent to the university (School Code 2033). Students unable to submit scores from the spring testing must submit scores before enrolling as freshmen. Test scores will be used for counseling purposes only and will not be part of the credentials necessary for consideration of the applicant.

Applications for undergraduate admission are available from high school counselors or from the university admissions office. They should be submitted as early as possible in the senior year.

Admission of Special High School Students

Specially qualified high school students may be permitted to enroll in classes on a part-time nonmatriculated basis. Students who wish to pursue course work at the university which is not available at their high school must present a letter of endorsement signed by their high school principal and counselor. An application for undergraduate admission and a copy of the current transcript must accompany the principal's endorsement. Admission as a special high school student is valid for one semester or session only. A student wishing to take subsequent courses must receive the principal's endorsement for each term for which he/she plans to enroll.

Admission of Transfer Students

Transfer students may enter Oakland University at four different times: fall semester, winter semester, spring session, or summer session. Students are encouraged to submit their applications at least six weeks before the beginning of the term in which they wish to enroll. Applicants in good academic standing (commonly defined as a cumulative college grade point average of 2.00 or higher) at their previous college or university and who have completed 26 or more semester credits normally will be admitted. Selected programs and majors will require a substantially higher than 2.0 grade point average for admission. Applicants who are in good academic standing at their previous college or university and who have not completed 26 or more semester credits may be admitted if one or more of the following indicate likely success at Oakland University: high school work, letters of recommendation, test scores, or an interview with a university admissions adviser.

Every transfer candidate must complete an application and request the registrar of each college or university previously attended to send an official transcript of record to Oakland University's admissions office. The university will review these transcripts and determine the number of credits which are applicable to the student's proposed program. (A subsequent change in program may result in an

adjustment of transfer credits applicable to the new program.) Credits will be accepted in transfer only from institutions accredited by one of the nationally recognized regional agencies and only for courses in which a grade of C (or equivalent) or better was earned. Oakland University will transfer the number of semester-hour credits for which a course was taken, regardless of the number of credits a similar course at Oakland University may carry.

A student who has completed 62 semester-hour of credits from any accredited institutions, including Oakland University, may not transfer additional credits from a community or junior college. Technical and applied science courses will be granted credit only where the courses relate directly to the intended major.

Special Note for Transfer Students from Michigan Community Colleges

Oakland University's baccalaureate programs are designed to accommodate students from community colleges. Early application is recommended so that candidates can take advantage of the services extended to community college transfer students. Transfer students from community colleges are eligible for the same financial aid programs and other services available to students who enter the university directly from high school.

Oakland University participates in the Michigan Association of Collegiate Registrars and Admissions Officers (MACRAO) Articulation Agreement. Graduates of participating Michigan public community colleges whose transcripts bear the stamp "MACRAO Agreement Satisfied" are considered to have met most, and in some programs all, of Oakland University's general education requirements. Prospective transfer students should consult their community college counselor or an Oakland University admissions adviser for further information.

Admission of Students Whose Formal Education Has Been Interrupted for Three or More Years

The admission of individuals whose formal education has been interrupted for three years or more, and who would not normally meet other admission criteria, may be based on one or more of the following: sustained employment record; recommendations from employers, educators, and other professionals; success in formal training programs; and standardized test results. An interview with a university admissions adviser is required for such applicants to be considered for admission.

Admission of Students Who Are Not Citizens of the United States

A foreign student should write to the admissions director at least one year before he/she wishes to be admitted. The candidate will be sent instructions and an application form to be completed and returned at once. When the application is approved, the candidate will receive a certificate of admission and form I-20 to enter the university. These are to be used to apply for the appropriate visa. Prior to the student's official registration, proof of adequate medical insurance plus a signed authorization for emergency medical treatment must be on file in the university health center.

Students who are not U.S. citizens and who are transferring from other institutions must apply for permission to do so through the immigration office nearest them. Before applying for permission to transfer, the candidate must have form I-20 from Oakland University and form I-538 from the school from which he/she is transferring.

Admission to Guest Status

Students enrolled at accredited Michigan colleges and universities may apply for guest admission by filing the Michigan Uniform Undergraduate Guest Application form, which is available from the registrar's office at their home institution. It should be submitted to the admissions office six weeks before the beginning of each semester or session in which the student plans to attend as a guest. Students attending Michigan colleges or universities are not required to submit transcripts.

Students attending accredited colleges and universities outside of Michigan may apply for guest admission by filing Oakland University's guest application form six weeks before the beginning of each semester or session in which they plan to attend. These applications may be obtained from Oakland University's admissions office and must be accompanied by a transcript of grades from the institution to which the student plans to return.

Admission to Post-Baccalaureate Status

Post-baccalaureate (PB) status indicates that you presently hold a baccalaureate degree, or higher, and wish to enter college for the purpose of pursuing undergraduate classes. Under PB status, you are admitted as a special nondegree candidate and your previous academic work will not be evaluated by our registrar. Tuition and fees for PB status will be assessed at undergraduate upper-division rates.

Admission to Second Degree Status

Second degree status indicates that you presently hold a baccalaureate degree but wish to earn a second undergraduate degree with a different major. Tuition and fees for second degree status will be assessed at undergraduate upper-division rates (see "Additional Undergraduate Degrees and Majors").

Reapplication

Failure to complete a credentials file prior to registration or failure to enroll once admitted invalidates the application for admission. Reactivation of such files must be requested in writing. This notification must be received at least thirty (30) days prior to the first day of registration for the semester immediately following the term of original application. An additional application fee is not required. A new application and fee are required of students who delay reapplication for more than one term.

Readmission

For students who previously enrolled and whose attendance at Oakland University was interrupted, see "Policies and Procedures."

Advanced Placement

Credit toward graduation is granted to students presenting evidence of satisfactory completion in high school of examinations under the Advanced Placement Program of the College Entrance Examination Board. Oakland University gives credit for grades "5" or "4" in the advanced placement examinations. If a grade of "3" is achieved, the examination is subject to review by the department concerned, which may grant advanced placement with or without credit toward graduation.

Credit by Examination (CLEP)

Credit toward graduation can be granted to students demonstrating competence in the various areas tested in the College-Level Examination Program administered by the College Entrance Examination Board, Princeton, New Jersey 08540. (Candidates who wish to use CLEP tests as admissions credentials should have their scores forwarded to the director of admissions.)

CLEP examinations are of two types, general and subject. General examinations are offered in English composition, humanities, mathematics, natural sciences, social sciences and history. Oakland University grants 6 credits for each examination passed with a score of at least 600, no subscore below 55, and an average of subscores of at least 60, provided that:

a. the student has not accumulated 32 credits at the time of the examination; and
b. the student has not previously done work for college credit in the field of the examination.

Credit for CLEP subject examinations is granted according to the following stipulations:

a. Nontransfer students must not have accumulated 64 credits at the time of the examination; transfer students must not yet have earned 32 Oakland credits.
b. Examinations must have scores of 60 or better, and each subscore must be at least 60.
c. The student must not previously have taken more advanced work in the field of the examination.
d. The amount of credit shall be either 3 or 6 semester hours, at the discretion of the academic unit responsible for the subject.

Financial Assistance

Oakland University offers two programs of financial assistance to students: scholarships for achievement and need-based grants-in-aid. Scholarship opportunities which are based upon achievement are not contingent upon financial need; however, students may qualify for both types of assistance.

Need-Based Grants-in-Aid

Students without sufficient funds to finance their education may qualify for assistance under one or more of these programs: Pell Grant, Supplemental Education Opportunity Grant, National Direct Student Loan, College Work Study Program, and Oakland University Grant-in-Aid.

These programs, along with the federally insured Guaranteed Student Loan and the Michigan State Direct Student Loan, allow Oakland University to assist students so that no person needs to be denied the opportunity for higher education due to inability to pay.

Procedures for Applying for Need-Based Aid

Entering freshmen and transfer students must submit a Financial Aid Form to the College Scholarship Service. They also must file with the university financial aid office (161 North Foundation Hall) an Oakland University application for financial aid and a copy of the family's most recent federal income tax form 1040 and the corresponding W2 forms. Continuing students or those applying for readmission should follow the same procedure, and application must be made each year that aid is desired. Transfer students must provide a financial aid transcript from each post-secondary educational institution attended prior to entering Oakland University.

All students requesting Oakland University need-based aid must apply for the federal Pell Grant.

All application materials may be obtained from the financial aid office. The Financial Aid Form is also available from high school counselors.

Financial assistance ranges from full tuition, room and board, to a minimal amount depending on the degree of financial need shown in the application.

Short-Term Loans

Short-term, no-interest loans are available for personal and emergency needs, but not for payment of regular university fees for tuition, room and board, or any

other fees that can be anticipated. These loans are made possible by gifts to the university from the following individuals and groups:

Century Brick Loan Fund
Civitan Loan Fund
H.H. Corson Loan Fund
Kenneth B. Covert, Jr. Memorial Loan Fund
Pat Dandurand Memorial Loan Fund
Greater Pontiac Centennial Student Loan Fund
W. Everett Grinnell Loan Fund
C. Allen Harlan Loan Fund
George N. Higgins Loan Fund
Insurance Women of Detroit, Inc. Loan Fund
Lathrup Village Woman's Club Fund
John A. MacDonald Loan Fund
James Mangrum Loan Fund
Emily Moses Memorial Loan Fund
Oakland County Engineering Society Loan Fund
Oakland University Alumni Loan Fund
Eric Pelzner Memorial Loan Fund
Piety Hill Chapter of the Daughters of the American Revolution of Birmingham Loan Fund
Mark Platt Memorial Loan Fund
Pontiac Kiwanis Club Loan Fund
David R. Robson Memorial Loan Fund
Li Russ Club Student Loan Fund
Joan Selby Memorial Loan Fund
Paul Solonika Loan Fund
William Spickler Memorial Loan Fund
Student Activities Coordinating Council Loan Fund
Henry Tiedemen Loan Fund
Warren Tope Memorial Loan Fund
Michael Werenski Memorial Loan Fund
Walter K. Willman Loan Fund
Women's Literary Club of Pontiac Loan Fund

Scholarships for Achievement

The wide range of scholarship opportunities at Oakland University indicates the scope of the university's commitment to academic excellence and student leadership. Scholarships are awarded on the basis of accomplishment and are not contingent upon financial need. Most awards are made in early spring for the next academic year.

Applicants for admission to the university who wish to be considered for an achievement scholarship should send a scholarship application to the director of admissions. Maximum consideration is given to applications received before April 1.

Many scholarships are renewable if the holder sustains the excellence which led to the original award. Renewal is not automatic, however, and scholarship recipients should apply for renewal to the financial aid office before March 1.

A limited number of new scholarships is awarded each year to continuing students. Application should be made to the financial aid office before March 1.

Major scholarships based upon achievement are:

American Association of University Women (Farmington branch) Scholarships: Awarded to mature students with family responsibilities whose undergraduate education has been interrupted.

Athletic Scholarships: Awarded to men and women athletes with ability in one of the intercollegiate sports offered at Oakland University. Stipends vary and are renewable for a maximum of eight semesters.

Boys' Club of Royal Oak Scholarship: Awarded to a student recommended by the director of the Boys' Club of Royal Oak. The award is $300 per semester for a maximum of eight successive semesters.

Carmine Rocco Linsalata Memorial Scholarship: Two awards of $300-500 to students who are majoring or intend to major in a foreign language. One scholarship is granted to an entering student, the other to an Oakland University student with a minimum of 28 credits. Scholarship recipients are selected by the faculty of the Department of Modern Languages and Literatures. The scholarship is a memorial to Carmine Rocco Linsalata, professor of Spanish and Italian at Oakland University from 1966 to 1980.

Community College Scholarships: Recognize academic achievement of students transferring from accredited community or junior colleges in Michigan. Candidates should have a minimum grade point average of 3.00 for all college credit earned with at least 55 semester hours of transferable work. Stipends are $500 per semester, for a maximum of four successive semesters. Students must maintain a 3.00 grade point average.

Edith Harris Memorial Scholarship: Awarded to mature students with family responsibilities whose undergraduate education has been interrupted. Awards are based on academic excellence. Candidates must have completed 28 credits in the academic year preceding the award, and recipients must enroll for at least 12 credits in each semester in which the award is received. Stipend is one-half tuition for the academic year.

Engineering Scholarships: Awarded to entering engineering students based on high school grades and scores on a standardized test. Stipends are $600 per academic year and may be renewed for a total of eight successive semesters as long as a student maintains a 3.00 grade point average and continues to major in engineering.

Honors Scholarships: Awarded to students with a 3.75 grade point average in high school. Stipend is $100 or $200, and is not renewable.

Isaac Jones Memorial Scholarship: Awarded to a promising student from Pontiac. Stipends are $800 per academic year and may be renewed for up to eight successive semesters.

James Morrison Thompson Chemistry Scholarship: Awarded to eligible chemistry majors for one year. Students selected must have completed their sophomore year with a minimum overall grade point average of 3.00 and a minimum grade point average of 3.50 in chemistry and mathematics courses.

Kurtis Kendall Memorial Scholarship: Recognizes achievement in the sciences for men and women entering Oakland University with further goals of research in the medical areas. Candidates should have a minimum 3.40 grade point average in academic high school classes. Stipends are $1,500 per academic year and may be renewed for up to six additional semesters as long as the student maintains a 3.25 grade point average, continues to major in the sciences, and is making satisfactory progress towards graduation.

The Mary Fogarty Anibal and Eleanor Anibal Burgum Memorial Scholarship: Awarded to students who have demonstrated in high school that they are capable of superior scholarship at Oakland University. Stipends are $2,000 per academic year and are awarded for up to eight successive semesters. The student must maintain a cumulative grade point average of 3.25 to be eligible for renewal of this scholarship.

Music Scholarships: Awarded to freshmen or community college transfers with exceptional music performance ability. Candidates must audition with the Department of Music. Stipends normally are $250 or $500 per academic year for a maximum of eight successive semesters for students who enter as freshmen or four successive semesters for students who enter as transfer students. Additional awards are available to students selected as members of performing ensembles. Students must continue to major in music.

Oakland County Medical Society Women's Auxiliary Scholarship: Awarded on the basis of merit to three eligible nursing students.

Oakland University Competitive Scholarships: Awarded to freshmen based on high school grades and scores on the OU Competitive Scholarship Exam, normally administered each February. Stipends are $400 to $800 per academic year and may be renewed for a maximum of eight successive semesters as long as a student maintains a 3.00 grade point average.

The Oakland University Foundation Scholarship: Awarded each year to a high school student of exceptional ability and achievement to permit residence at Oakland University while pursuing full-time study. Candidates must be nominated by their high school principal. Stipends are $2,500 per academic year for a maximum of eight successive semesters. A recipient must complete 30 credits each academic year with a cumulative grade point average of at least 3.25 to be eligible for renewal of this scholarship.

Student Life Scholarships: Awarded to students who have shown leadership potential, either in high school or community college. Students must have a minimum 3.00 average and be active in cocurricular or extracurricular activities. Stipends are for room and board only and range up to $1,000 per year. They may be renewed for a total of eight successive semesters.

United Auto Workers Golf Classic Scholarship: Awarded in the amount of $1,000 to an eligible student who shows promise of fulfilling a socially worthwhile career and contributing to the advancement of the quality of life for people in our society. Recipients are chosen by UAW Golf Classic Scholarship Committee.

Mr. and Mrs. Roger M. Kyes Scholarship: A tuition scholarship for one year awarded for academic excellence to an undergraduate English-major student. Scholarship recipients are selected by the English faculty.

William Morris Scholarship: Awarded to upperclass undergraduate students in recognition of academic excellence and effective citizenship. Scholarship recipients are recommended by the faculty and selected by the William Morris Scholarship Committee. The award is for one year, and stipends range from $250 to $1,000.

Upper Class Scholarships for Achievement: Awarded to continuing Oakland University students based on scholastic achievement. Candidates must have a 3.50 grade point average at the end of the previous winter semester and must have earned at least 32 credits at Oakland University during the previous academic year. Recipients must be enrolled for 16 credits each in fall and winter semesters. Stipends are $250 per academic year.

All scholarships listed above are contingent upon maintaining normal progress toward graduation. Other scholarships awarded annually include the Sally Borus Piano Award, the Lee Grekin Memorial Scholarship, the John Engerson Memorial Scholarship, and the Friends of Teruko Yamasaki Award.

Funds for the Oakland University scholarship programs are derived from the general budget, gifts from individuals, groups, and corporations, and from the fund-raising efforts of the Oakland University Scholarship Committee for Macomb County. The special scholarship funds are:

Mr. and Mrs. Benjamin Anibal Scholarship Fund
Marshall Page Atkinson Memorial Scholarship Fund
Campbell-Ewald Scholarship Fund
George H. Gardner Scholarship Fund
C. Allen Harlan Scholarship Fund
Herbert M. Heidenreich Scholarship Fund
Ormond E. Hunt Scholarship Fund
Harry A. MacDonald Memorial Scholarship Fund
Mildred Byars Matthews Memorial Scholarship Fund
Oakland University Women's Club Scholarship Fund
Village Women's Club of Birmingham Scholarship Fund
Ruth E. Wagner Scholarship Fund
A. Glen Wilson Scholarship Fund

Matilda R. Wilson Memorial Honor Scholarship Fund
Thomas E. Wilson Scholarship Fund

TUITION/FEES

The Board of Trustees of Oakland University reserves the right to change any and all fees and rates of charge when circumstances make change necessary. Tuition and fees quoted in this catalog are from the 1982-83 academic year. The registrar's *Schedule of Classes* for each semester or session carries a listing of current charges.

All fees are assessed and payable in U.S. dollars, at registration. Students are urged to use checks or money orders payuable to Oakland University, rather than cash, for fee payment. If checks or money orders exceed the required payments, the balance will be given to the student. Master Card and Visa credit cards may be used for payments not exceeding $300.00 when payments are made in person. Nonpayment of fees will result in cancellation of registration. Checks returned by the bank will place a student in a nonpayment status.

Tuition and fees for upper-division undergraduate students also apply for post-baccalaureate students.

Course Fees: On-Campus Programs

All course fees and special fees must be paid in full before a registration is considered final.

Michigan residents who register as lower-division undergraduates are assessed $41 per credit. Upper-division undergraduates are assessed $47.50 per credit. Those who register as graduate students are assessed $71 per credit. All students who have not maintained Michigan residence for 12 consecutive months immediately prior to enrollment are assessed tuition at out-of-state rates: lower-division undergraduates, $110 per credit; upper-division undergraduates, $120 per credit; graduate students, $142 per credit.

Course Fees: Off-Campus Extension Programs

Students who register for off-campus extension courses are assessed at the following rates: lower-division undergraduates, $47 per credit; upper-division undergraduates, $52.50 per credit; graduate students, $75.50 per credit.

General Service Fees

Undergraduates who register for 10 or more on-campus program credits are charged an additional $67.50 ($23 Oakland Center fee, $6 transportation use fee, $7.50 activity fee, $20 enrollment fee*, $5 athletic fee, and $6 health service fee).

Undergraduates who register for less than 10 on-campus program credits are charged an additional $47.50 ($11.50 Oakland Center fee, $3 transportation use fee, $6 activity fee, $20 enrollment fee*, $3.50 athletic fee, and $3.50 health service fee).

Graduates who register for 8 or more on-campus program credits are charged an additional $55 ($23 Oakland Center fee, $6 transportation use fee, $20 enrollment fee*, and $6 health service fee).

Graduates who register for less than 8 on-campus program credits are charged $38 ($11.50 Oakland Center fee, $3 transportation use fee, $20 enrollment fee*, and $3.50 health service fee).

Students registered for off-campus courses are assessed a $20 enrollment fee*.

Special fees also are charged for applied music instruction and some special courses as follows:

*Nonrefundable

ED 455	$35.00
ED 597	$50.00
Applied Music:	
Individual Instruction	$85.00/2 credits
Group Instruction	$25.00

Course Competency by Examination Fee

Michigan residents who register as undergraduates for course competency by examination are assessed at the following rates: lower-division undergraduates, $21 per credit; upper-division undergraduates, $24 per credit; graduate students, $36 per credit.

Students who are not Michigan residents are assessed $60 per credit for course competency registrations.

Late Registration Fee

Students registering or paying initial fees after classes officially begin and up to the end of the late registration period must pay an additional nonrefundable late registration fee of $25. Students who take courses exclusively within a program scheduled to register after the beginning of classes are not required to pay the late registration fee if they register during the special registration session scheduled for such groups. Tuition checks returned by the bank are considered nonpayment and will result in cancellation of registration or assessment of the late registration fee.

Late Add Fee

Registered students who add classes after the end of the second week of classes (first week for spring and summer sessions) must pay a nonrefundable fee of $10 per class in addition to the cost of the credits added. Classes may not be added after the end of the fourth week of a semester (second week for spring and summer sessions and half-semester courses).

Late Penalty Payment

Late payment of outstanding balances due for tuition, fees, and/or housing will result in assessment of a late payment fee of $5 per billing. Balances due paid by checks that are returned by the bank are considered nonpayment and will result in assessment of the $5 fee.

Application Fee

A $20 fee must accompany all applications for admission to degree programs for a particular term. If an applicant decides to reapply for a later term, then a new application must be completed. In addition, another fee is to be submitted.

Enrollment Deposit

Students admitted for the fall semester must pay a nonrefundable $50 deposit by May 15 preceding their fall enrollment. Students admitted after May 15 for the next fall semester must pay the deposit within three weeks of admission. This deposit will be applied to the student's account and will offset future fee assessments.

Graduation Service Fee

Before or during their last semester or session, degree candidates must file an application-for-degree card with the Office of the Registrar and must pay a nonrefundable fee of $20 (see "General Undergraduate Degree Requirements,") by the deadline established in the Schedule of Classes for that semester or session.

Orientation Fee

A $40 orientation fee for freshmen ($15 for transfer students and exclusively evening students) is charged to cover the expense of orientation and the ongoing advising process. (New students whose registration consists entirely of off-campus courses are not assessed this fee.) These fees are nonrefundable.

Fees for Residential Services

The residence halls are financially self-supporting. Housing fees reflect the actual cost of operation and are established by the university's Board of Trustees. The rate is $2,345.00, which includes $2,304.00 for room and board, $11.00 hall government fee, and a $30 debt service reserve charge. Single rooms may be rented, as available, for an additional $480.00. A special option of room only ($1,473.00) is available to upper-division students.

If the student signs a housing contract before or during fall semester, that contract is binding for both fall and winter semesters. If the contract is signed during winter semester or spring or summer sessions, it is binding for that particular period only. The housing fee may be paid in full at registration or, in fall or winter semester, paid in equal installments as specified in the *Schedule of Classes*, the first due at registration.

If a student withdraws from the university, room and board fees are refunded on a prorated basis net of an early withdrawal assessment of $45. Formal notice of withdrawal must be given to the residence halls office.

Refund of Fees

A student who withdraws from the university or drops a course which reduces his/her total credit load is eligible to receive a refund of fees subject to a schedule printed in each schedule of classes, upon application to the appropriate office. Failure to drop or withdraw formally will result in forfeiture of any refund. Undergraduates withdrawing from the university should apply to the Office of Student Services. Graduate students withdrawing from the university should apply to the Office of the Dean of the Graduate School. Reductions in a student's credit load that would result in a refund are processed in the Office of the Registrar. The date that notification is received in the proper office determines the applicable refund. A specific schedule of refunds, with qualifying dates, is published each semester and session in the university's official schedule of classes.

Information regarding the method of calculating refunds for financial aid recipients can be found in the current Financial Aid Programs Pamphlet, available to financial aid students upon request.

Refund checks will be mailed approximately six weeks after application has been made to the appropriate office.

Out-of-State Tuition Regulations

Students enrolling at Oakland University shall be classified at the time of admission as in-state or out-of-state students for purposes of assessing tuition charges. It is the student's responsibility to register and make full payment each semester or session under the proper in-state or out-of-state classification. For the purpose of these regulations, an in-state resident shall be defined as a person who has a Michigan domicile and has resided in Michigan 12 months immediately preceding his/her enrollment.

A student who was originally classified as an out-of-state student may be reclassified as an in-state student only if he/she has become a bona fide domiciliary of Michigan for at least 12 consecutive months, primarily as a permanent resident and not merely as a student. A student shall not be considered domiciled in Michigan unless he/she is in continuous physical residence in this state and intends to make Michigan his/her permanent home, not only while in attendance at the university, but indefinitely thereafter.

An alien who has been lawfully admitted for permanent residence in the United States shall not, by reason of that status alone, be disqualified from classification as a resident, provided, however, that aliens who are present in the United States on a temporary or student visa shall not be eligible for classification as a resident.

Any student who has acquired a bona fide domicile in Michigan subsequent to being classified as an out-of-state student may apply for reclassification to in-state status by obtaining an application for reclassification from the university registrar. The student shall complete the application and list in detail the reason(s) he/she is a bona fide domiciliary of Michigan, primarily as a permanent resident and not merely as a student, and attach documentary data in support thereof, and return the application to the university registrar 30 days prior to the beginning of classes of the semester or session for which the reclassification shall be effective. The following facts and circumstances, although not necessarily conclusive, have probative value in support of a claim of a residence reclassification:

1. Continuous presence in Michigan when not enrolled as a student.
2. Reliance upon Michigan sources for financial support.
3. Domicile in Michigan of family, guardian, or other relative or persons legally responsible for the student.
4. Former domicile in the state and maintenance of significant connections therein while absent.
5. Ownership of a home.
6. Long-term military commitments in Michigan.
7. Acceptance of offer of permanent employment in Michigan.
8. Other factors indicating an intent to make Michigan the student's permanent domicile will be considered by the university in reclassifying a student.

The following circumstances, standing alone, shall not constitute sufficient evidence of domicile to effect reclassification of a student as a resident under these regulations:

1. Voting or registration for voting.
2. Employment in any position normally filled by a student.
3. The lease of living quarters.
4. A statement of intention to acquire a domicile in Michigan.
5. Domicile in Michigan of student's spouse.
6. Automobile registration.
7. Other public records such as birth and marriage records.

Any student desiring to challenge his/her classification under the foregoing regulations of the Board of Trustees shall have the right to petition an appeal of the determination. Petitions of appeal and inquiries regarding these out-of-state regulations should be addressed to Chairperson, Out-of-State Tuition Committee.

STUDENT AFFAIRS

The division of Student Affairs provides a variety of services and programs which complement and enhance students' educational experiences. A brief description of the major areas of the division follows.

Orientation

All students new to Oakland University are expected to attend an orientation session before their first registration. During orientation, students are advised on course selection, informed about important policies and procedures affecting students, given information on services and activities available, and introduced to the academic environment. At the conclusion of orientation, students select their first-semester courses. Before orientation, students are asked to attend an Oakland University placement testing session.

Orientations also are held for special groups—international students, non-traditional students entering college for the first time. In addition, orientation

programs are offered for parents of new freshman students.

A nonrefundable initial fee of $40 for freshmen and $15 for transfers is charged to all new students, whether or not they attend orientation. The fee covers not only orientation but all of the testing, advising, counseling, and other services available to Oakland University students through the Undergraduate Advising and Counseling Department.

Residence Hall Facilities

The university provides on-campus residence halls which relate to and enhance students' academic experiences. A communal living experience with one's peers has been likened to a "laboratory for living" and has value in the personal growth of Oakland University students. Students are encouraged to live on campus to take maximum advantage of the activities and resources of the university community.

The university maintains six residence halls which offer variety in program, accommodations, and size. They are attractively grouped on spacious wooded grounds overlooking a small lake, and are all within convenient walking distance of classroom buildings. Anibal and Fitzgerald houses are L-shaped buildings with 24 rooms in each wing; the wings are joined by a student lounge. Hill and Van Wagoner are six-story units containing 100 rooms, a lobby, lounge, and recreation room. Vandenberg is a seven-story, twin-tower structure. It contains 284 rooms, student lounges, multiple-use areas, study and seminar rooms, and recreation areas. Hamlin Hall houses 676 students. A nine-story hall, it has a main lounge, a lounge on each floor, classrooms, and several multipurpose areas.

Rooms are furnished with study desks and lamps, bookshelves, wastebaskets, bulletin boards, single beds, dressers, wardrobes, and venetian blinds. Residents provide their own blankets, linens, throw rugs, and draperies. Lamps, electric blankets, clocks, radios, television sets, and record players are allowed subject to safety regulations, limitations of space, and consideration of others in their use. Telephones are provided in each suite or room, and ticket-operated washers and dryers are available. Maintenance service is provided by the university in common areas. Residents assume responsibility for keeping their rooms cleaned and in order.

Food service for residents is managed by Saga, Inc., a professional catering service. The dining room in Vandenberg Hall provides cafeteria-style service for residents and their guests. Special dinners, often featuring ethnic or nationality foods, are planned regularly.

To be eligible for university housing, a student must be enrolled for at least 8 credits, except with the permission of the director of residence halls. All full-time unmarried students who have earned less than 59 credits and who do not commute from the residence occupied solely by a single-member family related to the student at the time of registration, must live in university residence halls. Exceptions to this policy will be processed by an administrative committee. Exceptions granted to students under age 18 must be accompanied by a written endorsement of exception from the parent or legal guardian of the student.

To apply for residence, students should request university housing through the admissions office. Upon a student's acceptance at Oakland University, his/her reservation will be processed by the residence halls office when a housing contract is submitted. Notification of assignment will be given approximately two weeks before the beginning of each semester. Returning students may renew housing contracts through the housing office.

Students may occupy their rooms the first day of registration for each semester and session. Room and board is not provided between semesters or during official recesses listed in the university calendar.

Dean of Students

The primary function of the Dean of Students is the advocacy for meeting developmental needs of students. To accomplish this the Dean of Students monitors

the university environment and provides personal assistance to individual students and groups of students. In addition, the administration of financial aid, the initiation of student programs and activities, cooperation with student government, and coordination of judicial systems are important functions of the Office of Student Life.

Many students desire to achieve personal goals while pursuing out-of-classroom educational experiences. Students, during the past year, have formed and/or participated in over 120 student organizations, including academic clubs, religious and political organizations, and a variety of special interest groups, such as The Women's Organization, Health Conscious Society, International Student Organization, Oakland Dance Theatre, Pre-Med Society, Association of Black Students, Ski Club, WOUX Radio Station, Music Forum, OU Student Nursing Association, *Oakland Sail* newspaper, and Society of Automotive Engineers. Any student who cannot locate a club which serves his/her particular interest is encouraged to form a new group through the Department for Campus Information, Programs, and Organizations.

Students may participate in the following music ensembles: Collegium Musicum, Oakland University Singers, University Chorus, Wind Ensemble, Jazz Band, Gospel Choir, University Orchestra, Opera Workshop, Opera Chorus, University Community Chorus, and Treble Chorus. These ensembles may be taken for academic credit or as an extracurricular activity.

The student enterprise organizations provide many opportunities for students to investigate their creative and artistic abilities. Student Enterprise Theatre productions emphasize drama, music, dance, and comedy. The developing Village concept aims to provide a unique facility through use of the Barn for Student Enterprise Theatre productions as well as to provide space for various crafts (pottery, stained glass, etc.) and a multipurpose recreation space.

University Congress is an elected, campus-wide government body which serves students' needs and opinions. In addition to its administrative duties, University Congress provides funding for the Student Activities Board, which allocates money to recognized student organizations, and for the Student Program Board, a student concert/lecture board.

Services for commuting students are provided through the Department for Campus Information, Programs, and Organizations. A variety of programs, including ride pools, student lounges, special interest groups, lockers, off-campus housing, transportation needs, and social and educational activities, are available for students.

Oakland Student Center

Oakland Student Center is the hub of campus activities. Provided in this facility are the campus food service, the bookcenter, indoor recreational activities, Charlie Brown's candy counter, student lounges, meeting spaces, and exhibit areas.

Student Services

The Office of Student Services is responsible for official undergraduate withdrawals from the university, undergraduate readmission, students' master records, and special student service programs for minority students, and Upward Bound students.

Career Advising and Placement

The Career Advising and Placement Department provides counseling services to all juniors and seniors interested in life planning and discussing the world of work and its relationship to the academic major and the undergraduate degree. The department presents many seminars to assist students in pursuing these interests and in developing skills for job market entry. During fall and winter semesters, the department provides a variety of career day programs and hosts employers who interview and recruit seniors on campus.

Occupational guidance and counseling materials, job vacancy announcements, and an extensive library of graduate and professional school catalogs are available to students in the department's career libraries. Forms for the following examinations are provided: PACE (Federal Civil Service), National Teacher Exam, Graduate Record Exam, Law School Admission Test, Medical College Admission Test, Graduate Management Admission Test, and Foreign Service Officer Examination. Other applications for similar tests are added to the library each year.

The Career Advising and Placement Department administers the Fulbright Hays Grants for Graduate Study Abroad Program and the Rhodes Scholarship Program. Information on other scholarship programs is on file in the career advising and placement office.

Cooperative Education

Cooperative education is a program that combines work experience with the education that comes from the classroom. First, students get a sample of what it will be like to work in the fields they have chosen, so they can decide, while still in college, whether or not they have made the right career choices. Second, students graduate from college with valuable experience as part of their backgrounds in addition to their college educations. They have the chance to get to know others in their chosen fields and to start a career with a particular organization. Often students receive job offers from their co-op employers at graduation. Third, all co-op jobs are paid positions. This compensation can help significantly in financing the student's education. There are two forms of co-op. In alternating co-op a student works full-time for a four-month period (a fall or winter semester or a spring-summer session) and then returns to the classroom for the next four months while a second student takes over the job. The students then alternate periods of work and study. In parallel co-op a student works half-time, or about twenty hours per week, and carries about half the normal course load.

Cooperative education programs are available for majors in the College of Arts and Sciences, the School of Economics and Management, and the School of Engineering and Computer Science. (For details about each, see the descriptions of programs offered by each school or college.)

Special Advising

The Office of Special Advising provides assistance to international, handicapped, and veteran students. Counselors are available to assist with benefits coordination, interagency communication as well as the personal and academic concerns of these students.

Veterans are advised to keep in close contact with this office which is responsible for reporting to the Veterans Administration and enforcing the VA Standards of Progress.

Special Programs

The Department of Special Programs provides academic support for students who need special help for a successful academic experience at Oakland University. This office implements the university's Special Services for Disadvantaged Students (TRIO) Program and is staffed with tutors, professional counselors, peer counselors, and a curriculum innovator. The office staffs and administers the Skill Development Center. The Skill Development Center provides, without cost to students, support seminars and tutorial assistance to maximize students' chances for success.

Although initiated to serve students assigned to the Summer Support Program at the time of admission, the center is open to all students. The Upward Bound Program, a precollege academic support program, is also part of the Department of Special Programs.

Equal Educational Opportunity programs are administered in the Office of Student Services for minority students. General counseling and other support services are available to black and Latino students. Other minority students should also consult this office for assistance.

Academic Advising and Counseling

The academic advising program provides for both faculty advising and for a variety of advising and counseling services through the Office of Academic Advising.

Each academic unit has a chief adviser who is responsible for academic advising in his/her area. Students should consult the faculty or staff adviser in the unit of their major and complete with him/her a program plan detailing the course of study to be pursued.

Advising for students who are "undecided" as to major is provided through the Office of Academic Advising, which aids such students in course selection and in choosing a major. "Undecided" students are encouraged to complete a special program plan with the aid of an adviser in that department.

The department makes available to all students a variety of information on employment requirements and opportunities. In addition, career counseling is provided to enrolled freshmen and sophomores. The department also provides several kinds of testing services. These include administration of interest tests, university placement tests, and national testing programs, including the ACT, GRE, MCAT, and the Miller Analogies Test.

Counselors are available to answer questions, make referrals, and generally to assist all undergraduate students to achieve their goals.

Athletics, Intramural Sports

Intercollegiate Sports—Oakland University is a member of Michigan's newest intercollegiate athletic conference—the Great Lakes Intercollegiate Athletic Conference (GLIAC). Other GLIAC schools include: Ferris State College, Grand Valley State College, Hillsdale College, Lake Superior College, Michigan Tech University, Northwood Institute, Saginaw Valley State College and Wayne State University.

Oakland University men's and women's athletic programs are active members of the National Collegiate Athletic Association (NCAA) Division II level. OU male student-athletes compete in intercollegiate basketball, cross country, golf, soccer, swimming, tennis, and wrestling. OU female student-athletes participate in basketball, golf, swimming, tennis, and volleyball.

Oakland University's men and women student-athletes have successfully competed in the GLIAC as well as on the national level. In the department's short history, more than 50 athletes have been named to All-American teams.

Intramural Activities—The Hollie L. Lepley Sports Center, named in honor of OU's former director of athletics, is open seven days a week for recreational participation. The well-rounded intramural program has thousands of students involved in it every year. Fall intramural activities include men's, women's and coed softball, men's and women's touch football, women's basketball, men's and women's floor hockey, and men's and women's singles racquetball. The winter program includes men's basketball, men's and women's swimming, and men's, women's and coed volleyball. Students, faculty, and staff participate on intramural committees for organization, implementation, and administration of the program.

The Hollie L. Lepley Sports Center has facilities for badminton, basketball, combatives, dance, fencing, golf, gymnastics, handball, paddleball, racquetball, squash, swimming, self-defense, weight-lifting, and wrestling. The outdoor areas include the 18-hole Katke-Cousins Golf Course, a golf practice and instruction area, softball and baseball diamonds, tennis courts, soft-surface quarter-mile track, soccer fields, touch-football fields, and acres of terrain for hiking, cross country running and skiing.

Health Services

Students, faculty, staff, alumni, and their spouses may receive medical services at the Graham Health Center, Monday through Friday, from 8 a.m. to 5 p.m. Services include physician coverage of most acute and chronic medical problems, laboratory facilities, and an emergency room equipped to handle minor trauma and to give initial treatment to more serious emergencies. The Graham Health Center staff includes a medical doctor, three registered nurses, and a medical technician. The Graham Health Center encourages the use of its facilities and welcomes visits at any time.

The basic physician's fee is $7 for currently enrolled students and $12 for faculty, staff, alumni, and spouses. There is no charge to see a nurse. Graham Health Center will bill most insurance companies for eligible services. Allergy injections are given while a physician is on the premises. The patient must have a doctor's written instructions and vaccine which may be stored at the health center. A weight-control program and information on nutrition, how to stop smoking, exercises, and many other topics are available by contacting one of the nurses.

Child Care

The School of Human and Educational Services operates the Matthew Lowry Early Childhood Center for students, faculty, and staff with child care needs. Located at Adams and Butler roads at the southeast corner of campus, the center houses four programs: Preprimary, Preschool, Toddler, and Infant-Parent. The Preprimary Program is for kindergarten-age children who need a full-day program. The Toddler Program is for children who are walking to 3 years old, while the Preschool Program serves children from 3 to 5 years old. These programs are designed to stimulate the developmental growth of children. The Early Childhood Center operates weekdays from 7:45 a.m. to 5:30 p.m. Registration for the programs coincides with university registration days, and parents are assessed an hourly rate that varies for students, faculty, and staff.

Psychology Clinic

The Counseling Center is staffed with clinical and counseling psychologists who provide specialized counseling, consultation, and psychotherapy to Oakland University students with personal and interpersonal problems. Marriage counseling, child therapy, and family therapy also are provided. Use of the center is voluntary and is available by appointment at a minimal charge.

The center also provides psychological testing, and vocational counseling. The vocational counseling program involves a set of in-depth interviews and testing, with focus on personal issues in career development. The psychological testing services are aimed at assessing developmental growth as well as the nature of personal problems.

All of these services are intended to support students in taking full advantage of their education. All personal material is held strictly confidential and does not become part of the student's academic record.

Services of the center are also available to the public at a higher fee. Fees are based on family income, and many insurance policies reimburse these services.

ACADEMIC POLICIES AND PROCEDURES

Student Responsibility

Each student must fulfill all general, procedural, and specific requirements and abide by all pertinent academic regulations in order to earn a degree at Oakland University. It is the student's responsibility to learn the requirements, policies, and procedures governing the program being followed and to act accordingly. Students should consult their faculty advisers regularly to verify that all degree requirements are being met in a timely fashion and to file program plans. Each semester's *Schedule of Classes* indicates the locations and telephone numbers of the undergraduate advising and counseling department as well as school and departmental advising offices.

Undergraduate Degree Requirements

Undergraduate degree requirements are of two kinds: general degree requirements determined by the university to be binding on all baccalaureate programs, and specific degree requirements established by the various colleges, schools, and other academic units empowered to offer degree-level programs of instruction. The graduation requirements—general education, major, and overall degree—for an undergraduate student shall be those stated in the university catalog extant at the time of graduation, unless the student specifies an earlier catalog. The specified catalog may not predate the one in effect during the first semester or session of the student's matriculation at Oakland University and not more than six years may have lapsed between the effective life of the catalog and the time of graduation. In addition, any school or college is free to specify that students changing enrollment into one of its programs from another school or college, or from undecided status, may not follow the requirements in a catalog earlier than that in effect at the time of this change in enrollment.

A student may establish credit in a course to meet degree requirements by earning a passing grade in the course, by passing a competency examination, or by receiving transfer credit from another institution. In certain circumstances a requirement may be formally waived by a successful Petition of Exception.

General Undergraduate Degree Requirements

Oakland University has established general undergraduate degree requirements applicable to all candidates for all undergraduate degrees. In order to earn a baccalaureate at Oakland University, a student must satisfy the following criteria:

1. **Residence Requirement:** A student must offer at least 32 credits successfully completed at Oakland University. The student also must take the last 8 (4 for Bachelor of General Studies candidates) credits needed to complete the requirement for a baccalaureate at Oakland University.
2. **Grade Point Average:** A student must have a cumulative grade point average in courses taken at Oakland University of at least 2.00. In certain programs, additional grade point average requirements must be met.
3. **Credit Rules:** A student must have completed successfully at least 32 credits in courses at the 300 level or above. If a student has accumulated 62 credits of work from any institution(s), that student may not transfer additional credits from a two-year institution.
4. **Writing Proficiency:** A student must demonstrate proficiency in writing at, or within a reasonable time after, entrance to Oakland University. Entering students transferring 32 or fewer credits must demonstrate writing proficiency

before they accumulate 48 credits in order to be permitted to register or receive credit for upper-level courses (those numbered 300 or above). Entering students transferring 33 or more credits must demonstrate proficiency before they complete 16 credits at Oakland University in order to be permitted to register for upper-level courses. (NOTE: Students admitted to Oakland University prior to fall 1978 are exempt from this restriction but must demonstrate writing proficiency prior to graduation.)

Proficiency may be demonstrated in several ways:

a. By completing RHT 101 with a grade of 2.00 or better.
b. By transferring two college-level English composition courses (at least 6 credits). Students who have completed such courses with grades of 2.00 or better may submit their transcripts to the registrar for evaluation. Transfer students who have credit for only one English composition course or for fewer than 6 hours must take RHT 101 or they may take the student-initiated Proficiency Test (see d. below).
c. By petitioning the Proficiency Committee of the Department of Rhetoric, Communications and Journalism with samples of proficient writing including three papers which have been completed as class requirements at Oakland University. One of those papers must indicate an ability to use some standard system of annotation. In addition to the writing samples, students must include supporting letters from two Oakland University instructors.
d. By demonstrating superior writing skills in a student-initiated proficiency examination administered by the Department of Rhetoric, Communications and Journalism. This examination is offered through the academic year, and students may contact the department (377-4120) or the Office of Undergraduate Advising and Counseling (377-3226) for a current testing schedule.

5. **Electives:** A student must present at least 8 credits of free electives.
6. **Procedural Requirements:**
   a. Students must be in substantial compliance with all legal curricular requirements.
   b. Before or during the semester or session in which they expect to complete all academic requirements, degree candidates must file an application-for-degree card at the cashier's office with a nonrefundable fee of $20. The deadline for filing each semester or session is indicated in the schedule of classes for that term. Failure to apply will result in deferred graduation. Application forms are available at the Office of the Registrar—Records, 102 O'Dowd Hall.
7. **Specific Requirements:** A student must fulfill all specific undergraduate degree requirements as stipulated by the various colleges, schools, and other academic units of the university empowered to present candidates for the undergraduate degree(s) over which they have authority. For further information concerning specific undergraduate degree requirements, consult the following areas in this catalog:
   a. Bachelor of Arts, Bachelor of Music, Bachelor of Fine Arts degree, and Bachelor of Science, College of Arts and Sciences;
   b. Bachelor of Science degree in management or economics, School of Economics and Management;
   c. Bachelor of Science degrees in Engineering and Computer Science, School of Engineering and Computer Science;
   d. Bachelor of Science degree in elementary education and Bachelor of Science degree in human resources development, School of Human and Educational Services;
   e. Bachelor of Science in Nursing degree, School of Nursing;
   f. Bachelor of General Studies degree, Division of Continuing Education;
   g. Bachelor of Science degrees in medical physics, medical technology, industrial health and safety, and physical therapy, Center for Health Sciences.

Additional Undergraduate Degrees and Majors

Under certain conditions a student may earn an additional baccalaureate or may earn a baccalaureate with multiple majors. General restrictions which apply to the awarding of more than one degree are:

1. The degrees either must have separate designations (for example, Bachelor of Arts and Bachelor of Science), or
2. The degrees must be earned in separate academic divisions (for example, the College of Arts and Sciences and the School of Engineering and Computer Science).

If a student at Oakland University wishes to pursue two Oakland University baccalaureates simultaneously, he/she must:

a. Meet all specified requirements for both degree programs.
b. Complete at least 32 credits at Oakland University beyond that required for one degree if the credit requirements are equal, or beyond that required for the degree requiring the greater number if the credit requirements are unequal. Of these, 16 credits must be at an advanced level (courses at 300 level or above).

If a student already holding a baccalaureate wishes to earn another baccalaureate, he/she must:

a. Receive written approval from the college or school concerned (and where appropriate from the department) as part of the admissions process to the new degree program.
b. Meet all specific requirements for the new degree as stipulated by the college, school, or other academic unit in which the person is a candidate.
c. Complete at least 32 additional credits at Oakland University.

A student holding a baccalaureate cannot have his/her undergraduate grade point average modified by additional work; however, a student who holds a baccalaureate may receive departmental and university honors provided that consideration for honors shall be based only upon the additional credits presented for the additional degree, such additional credits to total at least 62. All credits presented for an additional baccalaureate must have been earned at Oakland University.

A student who meets the specific requirements for more than one degree program but who is ineligible to receive separate degrees, due either to the general restrictions (1 and 2 above) or to an insufficient total number of credits earned, may have certified on his/her transcript that a single degree is awarded with more than one major.

Course and Credit System

The credit-hour value of each course (the number in parentheses following the course title) is specified in semester hours. One semester hour is equivalent to a total of three hours work per week including 50 minutes of scheduled instruction and the estimated time that an average student spends in outside preparation each week. Most Oakland University courses are 4 credits. A full academic load is 16 to 18 credits per semester. With his/her adviser's permission, a student who has completed 12 or more credits at Oakland University may register for as many as 21 credits if his/her cumulative grade point average is at least 2.60. All other students may take more than 18 credits only as a result of a successful Petition of Exception.

Regulations Governing Courses

1. A course sequence joined by a hyphen (e.g., FRH 114-115) must be taken in the order indicated. The first course in such a sequence is a prerequisite to that following.
2. Course numbers separated by commas (e.g., HST 214, 215) indicate related courses, which may be taken in any order. Departmental or program requirements may sometimes govern the order, however.

3. Course numbers 000 to 099 are for courses specially designed to enrich academic skills. Not more than 16 credits in such courses and in tutorial work may count toward graduation requirements. Courses numbered 100 to 299 are introductory undergraduate courses primarily for freshmen and sophomores. Courses numbered 300 to 499 are designed for juniors and seniors. Courses numbered 500 and above are primarily for graduate students; undergraduates must obtain permission of the teaching department in order to register for such courses.
4. The university reserves the right to cancel any course in which there is insufficient registration.
5. It is the student's responsibility to complete all prerequisites before registering for a course with such requirements. Departments may waive prerequisites in accordance with university policy.
6. Some courses are cross-listed between departments. In such cases, the course description is listed only in one department. The listing in the other department notes that the course is identical with the course in the primary department. When registering, students should select the listing under which they wish to receive credit.

Course Competency

Students may receive credit toward graduation designated as competency credit (graded S/N) on their transcripts for Oakland University courses, subject to the following provisions:

1. That they register for the course at registration with written permission of the departmental chairperson, dean, or program director of the academic unit responsible for the course.
2. That they pass an appropriate competency examination not more than six weeks after the term begins. Competency credit will not be permitted for a course when a student has received credit for more advanced courses in the same area. The repeat course rule applies to the repeating of competency examinations.

A student may apply up to 60 credits based on nonclassroom experience (course competency and/or CLEP credits) toward a degree program.

Petition of Exception

Any student may request a waiver or modification of specific academic requirements. Students may obtain a Petition of Exception form in the office of the dean of the student's school or college. The completed form should be signed by a faculty adviser in the student's major department or school. Petitions for modification of the normal requirements of a major in order to suit individual programs should be directed to the chairperson of the major department or school. Petitions for modification of general undergraduate degree requirements should be returned to the office of the dean of the student's school or college for referral to the appropriate committee on instruction. The student, the registrar, and the student's academic adviser or major department will receive a copy of the petition containing the action taken. Petitions of Exception relating to graduation requirements must be filed no later than the second week of the semester or session of intended graduation.

Change of Courses

If a student decides not to complete a course, the course may be dropped any time before the last week of instruction in that course, in accordance with the grading policies described in the next section. Courses dropped for which refund of fees is claimed must be processed in a drop-and-add form through the Registration Office, 100 O'Dowd Hall (see also refund of fees policy).

Previously registered students wishing to add a course should do so as early as possible in the semester or session. Courses may not be added after the fourth week

of instruction (second week in spring/summer sessions and for 2-credit, half-semester courses).

Grading System

1. The basic undergraduate grading system at Oakland University is a 31-point system of numerical grades from 1.0 through 4.0, by tenths, along with the nonnumerical grades W, WS, WN, I, P, S, R, N, and Z.
2. The first two weeks of a semester (one week in spring/ summer sessions) are a no-grade period for dropping and adding full-semester courses. The no-grade period for 2-credit, half-semester courses is the first week of instruction.
3. The meanings of the nonnumeric grades are as follows:
   a. W is assigned by the registrar if a student withdraws officially from a course between the end of the no-grade period and the midpoint of that course.
   b. The instructor assigns a WS or WN in a course from which a student withdraws officially after the midpoint of that course and before the last week of instruction in that course. WS is assigned if the student's performance at the time of withdrawal merits a grade of 2.0 or better; otherwise, a WN is assigned. To accomplish this assignment a student must obtain an appropriate form in the office of the department offering the course from which the withdrawal is being made. The student takes the form to the instructor and has it completed. The student and the instructor each keep one copy of the completed form. The instructor records the grade on the final grade report.
   c. The I grade is temporary and may be given only in the last week of a course in which a student is unable to complete the requirements because of a severe hardship beyond the control of the student. The work must be completed within the first four weeks of the next semester or session in which a student registers. Extensions are permitted on request of the instructor to the dean of the appropriate school or college. The I is changed to an N at the end of the four-week period if the work is not completed and an extension is not requested and approved. If more than three terms intervene before the student next registers at Oakland University, the I is changed to an N.
   d. The P grade is temporary and may be given only in a course that, by design, cannot be completed in one semester or session. Prior approval must be obtained from the dean of the appropriate faculty to assign a P grade in a particular course. The P grade is given only for work that is satisfactory in every respect. P grades must be removed within two calendar years from the date of assignment. If this is not done, the P is changed to an N.
   e. The N grade is assigned by the instructor in any course from which a student does not officially withdraw before the last week of instruction in the course and for which the student does not receive credit. The N means the student has completed the course unsuccessfully.
   f. The S grade is given in certain selected courses and implies 2.0 or better. Courses in which S/N grading is used must be approved by the appropriate committee on instruction.
   g. R is a temporary grade assigned by the registrar in the absence of a grade from the instructor.
   h. Z is assigned upon registration for a course as an auditor. The student's declaration of intention to audit is required and it is understood that **no** credit for the course is intended that term.
4. If none of the above applies, the course is considered to have been completed successfully, and the instructor assigns a numerical grade from 1.0 to 4.0, inclusive, by tenths. The University Senate has approved the following conversion for some external purposes:

3.6-4.0	A	2.0-2.9	C
3.0-3.5	B	1.0-1.9	D

5. All grades, other than WS and WN, including numerical grades and the non-numeric grades S, W, N, I, R, P, and Z, appear on a student's transcript. However, only numerical grades are used to determine the student's grade point average, which is computed to two decimal places.

Academic Misconduct Policy

All members of the academic community at Oakland University are expected to practice and uphold standards of academic integrity and honesty. Instructors are expected to inform and instruct students about the procedures and standards of research and documentation required of students to fulfill course work. A student is expected to follow such instructions and be sure the rules and procedures are understood in order to avoid inadvertent misrepresentation of his/her work. Students must assume that individual (unaided) work on exams and lab reports and documentation of sources is expected unless the instructor specifically says that it is not necessary. Students must also assume that if the instructor assigns as part of the course requirements a special project other than or in addition to exams, such as a research paper, an original essay, or a book review, he/she intends that work to be completed for his/her course only. Any such work students may have completed for a course taken in the past, or may be completing for another present course, must not be submitted in that instructor's course, unless they receive permission to do so.

Academic integrity means representing oneself and one's work honestly. Misrepresentation is cheating since it means a student is claiming credit for ideas or work not actually his/hers and is thereby seeking a grade that is not actually earned. The following definitions are examples of academic dishonesty:

1. Cheating on examinations by:
   a. using materials such as books and/or notes when not authorized by the instructor; b. taking advantage of prior information not authorized by the instructor regarding questions to be asked on the exam; c. copying from someone else's paper; d. helping someone else copy work; or e. other forms of misrepresentation.
   Students should be careful to avoid the appearance of cheating.
2. Plagiarizing from work of others. Plagiarism is using someone else's work or ideas without giving the other person credit; by doing this a student is, in effect, claiming credit for someone else's thinking. Whether the student has read or heard the information used, the student must document the source of information. When dealing with written sources, a clear distinction should be made between quotations (which reproduce information from the source word-for-word within quotation marks) and paraphrases (which digest the source information and produce it in the student's own words).

Both direct quotations and paraphrases must be documented. Just because a student rephrases, condenses, or selects from another person's work, the ideas are still the other person's, and failure to give credit constitutes misrepresentation of the student's actual work and plagiarism of another's ideas. Naturally, buying a paper and handing it in as one's own work is plagiarism.

3. Cheating on lab reports by:
   a. falsifying data; or b. submitting data not based on student's own work.
4. Falsifying records or providing misinformation regarding one's credentials.

If a student feels that practices by the instructor are conducive to cheating, he/she may convey this information either directly to the instructor or to the student ombudsperson of the University Congress, or to any member of the student-faculty University Committee on Academic Conduct (either directly or through the Office of the Dean for Student Services).

Instructors are expected to bring evidence of plagiarism, cheating on exams or lab reports, falsification of records, or other forms of academic misconduct before the Academic Conduct Committee of the University Senate for determination of the facts in the case and, if warranted, assessment of penalty. If academic miscon-

duct is determined, the committee assesses penalties ranging from academic disciplinary reprimand (which is part of the student's confidential university file), to academic probation, to suspension or dismissal from the university.

Instructors play at least three roles in maintaining proper standards of academic conduct:

1. To assist in recognizing the application of general standards of context of a particular course or discipline.
2. To take practical steps to prevent cheating and to detect it when it occurs.
3. To report academic misconduct to the dean of student services in 134 NFH for the Committee on Academic Conduct.

Auditing Courses

For students who wish to participate in a course on a nongraded basis, a formal audit option is available. With written permission of the instructor, students may register to audit a course during the late registration period each semester or session. Forms for auditing are available in the Office of the Registrar, Office of Admissions and Scholarships, Graduate School, and Undergraduate Advising and Counseling Office.

Audit registrations are governed by the following rules:

1. Regular tuition and fees apply to all courses.
2. The registrar will assign the final mark Z to all formal audits.
3. Changes of registration from credit-to-audit or from audit-to-credit will not be permitted once the no-grade add/drop period has ended for a given semester or session.
4. Students who wish to audit courses must have been admitted to the university by the Office of Admissions and Scholarships.
5. Students whose entire registration for a semester or session consists of formal audits will register during the late registration period each term. Late registration fees will be waived for such students.

Repeating Courses

Students may repeat a course up to two times, with the last grade (excluding non-numeric grades) earned in the course used in the grade point average computation. At the time of registration for a course taken previously, the student must file a "repeat card." Filing of this form is the responsibility of the student and will insure that proper adjustments to grade point average and degree credits are made.

Academic Honors

At the end of each fall and winter semester, undergraduates who have earned a semester grade point average of 3.00 or higher in at least 12 hours of numerically graded university credits and who have received no N or WN grades will be recognized for academic achievement. Notices of commendation will be sent to undergraduates with grade point averages of 3.00 to 3.59. Notices of academic honors will be sent to undergraduates with grade point averages of 3.60 to 4.00. Both the commendation and academic honors awards will be recorded on the official transcripts.

University Honors

The three levels of University Honors, Cum Laude, Magna Cum Laude, and Summa Cum Laude, may be awarded with the conferral of a student's earned baccalaureate with the following cumulative grade point averages: 3.60 to 3.74, Cum Laude; 3.75 to 3.89, Magna Cum Laude; 3.90 to 4.00, Summa Cum Laude.

The awarding of the degree with University Honors will be based only on Oakland University credits, and the student must earn at least 62 credits at Oakland University to become eligible for University Honors.

Academic Records

Academic records are maintained in the Records Office, 102 O'Dowd Hall. Standing reports are mailed to each enrolled student's permanent address of record at the end of each academic period. Transcripts of academic records may be obtained by completing a transcript request form at the Records Office, 102 O'Dowd Hall, or by writing Transcript Request, Office of the Registrar, Oakland University, Rochester, MI 48063. Requests should include the name under which the student attended, the Oakland University student number, the date of last attendance and date of degree (if applicable), the level of last course work, and the address to which the transcript is to be sent. A check or money order for $3 for each transcript ordered must accompany the request.

Academic Probation and Dismissal

An undergraduate who makes unsatisfactory progress toward a degree either by failing or withdrawing from courses will be placed on probation. Students on probation who fail to meet the minimal standard of progress established by the University Senate will be dismissed from the university. Students receive a report of their academic standing on a Report of Standings. Students whose continued enrollment in the university is questionable will receive a letter and an appeals form from the Office of the Dean for Student Services after semester grade reports are received. If the student is dismissed, an appeal petition must be filed with the dean for student services within 10 days of dismissal notification.

The Academic Probation and Dismissal Policy is administered by the dean for student services for the University Senate Committee on Academic Standing and Honors. The policy is based on the following principles or practices:

1. Each student should be encouraged to make responsible decisions concerning educational progress. A student who is apparently not benefiting sufficiently from the educational opportunities available at the university should be advised to consider other alternatives. A non-achieving student should take the initiative and turn to more productive or satisfying activities before the committee finds it necessary to dismiss the student.
2. The major share of a student's educational expense is provided by the State of Michigan, and it is the responsibility of the university to see that these funds are properly used. If a student fails to make satisfactory academic progress toward a degree, dismissal action must be taken by the Academic Standing and Honors Committee.
3. Some new students to the university need a period of adjustment (including transfer students); therefore, no students will be dismissed at the end of their first semester at the university. Furthermore, a student will not be dismissed without having been placed on probation in a previous semester.
4. A student must have a 2.00 average for graduation, and the probation policy specifies that the student must make satisfactory progress toward this goal. Students who have fewer than 80 credits toward graduation and with averages below 2.00 are normally allowed to continue in the university on probation if it is reasonable to expect that they can sufficiently raise their cumulative grade point average.
5. The policy stipulates that students complete for credit most of the courses for which they register. N or WN grades received will be used to determine academic standing. While most students may receive an occasional N or WN grade, the Academic Standing and Honors Committee feels that an excessive accumulation of N or WN grades indicates serious academic difficulty.
6. The Academic Standing and Honors Committee attempts to assemble and review pertinent information on each student who is in academic difficulty. Sometimes, however, there is information which would modify the decision if it were available. Consequently, students are advised to appeal the action of the

committee if they feel there are valid reasons for rescinding probation or dismissal actions.

7. Students are notified on their grade reports of their academic standing.
8. Students who have been dismissed may appeal by completing an official Academic Standing Appeal Form and submitting it to the Academic Standing and Honors Committee within 10 days of receipt of the dismissal notice. The forms are available in the Student Services Records Office, 154 North Foundation Hall.

Specific Procedures

There are two conditions which a student normally needs to satisfy to stay in good academic standing. The student must not receive a disproportionate number of N or WN grades, nor allow the cumulative grade point average to drop below 2.00.

Stipulations for new students enrolled in Oakland University beginning in fall semester 1976 or after:

1. Any student who has accumulated more than 32 credits of N/WN grades is liable for dismissal.
2. The academic standing of a student whose accumulation of N/WN grades is less than the above limit is based on a numerical approximation of progress toward graduation called an Academic Progress Indicator (API).
3. In the computation of the API, W grades are not used.
4. In the computation of the API, S/WS grades are assigned the numerical value of 2.0; N/WN grades are assigned the numerical value of 0.0.
5. The computation of API depends on the number of credits of N/WN grades received and the number of credits earned toward graduation. There are three different cases:
   a. More than 27 credits toward graduation and more than 12 credits of N/WN grades: The API is the ratio of the sum of the honor points of the numerical equivalents of all grades received to the total number of credits attempted.
   b. More than 27 credits toward graduation and less than 13 credits of N/WN grades: The API is the ratio of the sum of the honor points of the numerical equivalents of all grades earned toward graduation to the number of credits earned toward graduation.
   c. Less than 28 credits earned toward graduation: The API is computed as in a. above.
6. A student with 80 credits or more toward graduation whose API is less than 2.00 is liable for dismissal. A student with (T) transfer credits and (E) earned credits at Oakland University with T + less than 80 whose API is less than 1.4 + 0.6E (80-T) is liable for dismissal.
7. A student who is liable for dismissal at the end of a probationary semester is dismissed.
8. A student is placed on probation at the end of a semester if:
   a. The student is not liable for dismissal, but the API is less than 2.00 or
   b. The student is liable for dismissal but is not already on probation.
9. A student who has successfully appealed a dismissal is placed in the Dismissal Option Program.
10. A student in the Dismissal Option Program returns to good standing at the end of the semester in which the API is greater than or equal to 2.00.
11. A student in the Dismissal Option Program is continued in that program if the API of that semester's work (computed as in 5a.) continued over succeeding semesters until 124 credits are completed would result in an API of at least 2.00. Otherwise, the student is dismissed.

Students enrolled prior to the fall of 1976 are governed by a different dismissal policy. Details regarding that policy are available at the Student Services Records Office.

Dismissal from the University

An undergraduate who is dismissed from the university for any reason does not retain the privilege of a registered student. A student who has been dismissed must apply for readmission through the Student Services Records Office unless he/she has been informed that readmission will not be considered.

Undergraduate Withdrawals

A student who leaves the university for any reason must follow the withdrawal procedure. Undergraduates withdrawing from the university must do so through the Student Services Records Office. When a student withdraws from the university after the second week of classes (first week in spring and summer sessions) and before the end of the refund period, a W grade will be assigned in all courses. Students withdrawing between the end of the refund period and the beginning of the last week of classes may receive course grades of WS or WN, provided that students contact instructors individually for such grading. Official withdrawal from the university is not permitted once the last week of classes has begun.

Undergraduates who plan to return to the university should consult the readmission policy below.

Readmission

An undergraduate whose attendance at Oakland University is interrupted may be required to make formal application for readmission. The regulations are:

1. Students whose attendance has been interrupted for a total of six or more years must apply for readmission.
2. Students who withdraw from the university and who are not in good academic standing at the time of withdrawal must apply for readmission.
3. Students who have been dismissed from the university for any reason must apply for readmission.
4. All other undergraduates may return and register for classes without seeking formal readmission.

Students who must apply for readmission should request an application from the Student Services Records Office at least one month before the beginning of the semester or session the undergraduate expects to re-enter. (Failure to apply early could result in not being able to register.)

OTHER ACADEMIC PROGRAMS

This catalog is devoted to undergraduate degree offerings at Oakland University. The university has two other academic units that are central to the university's mission. So that the reader may understand the entire institution, brief descriptions of these units are given in this section.

UNIVERSITY LIBRARY

OFFICE OF THE DEAN

Indra M. David, Acting Dean
Bernard L. Toutant, Assistant to the Dean

PROFESSOR: *George L. Gardiner*

ASSOCIATE PROFESSORS: *Indra M. David, Robert G. Gaylor, Eileen E. Hitchingham, Janet A. Krompart, Elizabeth A. Titus*

ASSISTANT PROFESSORS: *William Cramer, Linda L. Hildebrand, Nancy S. Kleckner, Mildred H. Merz, Richard L. Pettengill, Ann M. Pogany, Daniel F. Ring*

VISITING ASSISTANT PROFESSORS: *Sharon Bostick, Daniel F. Harrison*

Library Facilities

Most university library materials and services are housed in Kresge Library. The magazines are on the third level, circulating books on the second level, reference works and major library services on the main level, and the microfilms and government documents on the lower level.

The Instructional Technology Center, in Varner Hall, provides media services for the university's instructional films, as well as designs and produces instructional programs ranging from slide presentations to audio-video tape presentations requiring the television studio. It also maintains the performing arts collection of books, journals, acting editions of plays, musical collection scores and recordings.

Library Collections

The University Library holds 1,015,861 pieces of library material, plus unprocessed materials, manuscripts, memorabilia, and museum pieces. Included are 540,453 microforms, 9,549 records and phonotapes, 43,399 periodical volumes, approximately 159,895 government documents, and 262,565 cataloged circulating and reference books.

With a $100,000 fund, established by Oakland University students in memory of Matilda R. Wilson, the library now has an excellent reference collection. This includes atlases, bibliographies, dictionaries, encyclopedias, indexes, yearbooks, and other reference materials. In 1979, with the depletion of Wilson Funds, OU students have begun to assess themselves voluntarily to continue augmenting this highly used collection.

The library receives some 2,133 paid serial subscriptions. Periodicals and other serials are generally uncataloged and shelved alphabetically by title on the third floor of the library.

Since 1964 the library has been a U.S. Government depository and receives about 80 percent of the depository items published each year. The library also is a depository for Michigan documents. These collections are indexed, respectively, by the *Monthly Catalog of U.S. Government Publications* and *Michigan Documents.*

Several of the library's special collections are listed below:

William Springer Collection of Lincolniana and Civil War Materials, secondary source materials.

Hicks Women in Literature Collection, several hundred volumes written by or about women in the seventeenth through twentieth centuries.

James Folklore Collection, 550 folklore monographs, some very scarce.

Anglo-Irish Collection, rare monographs, journals runs, literary works in the original typescripts, signed poems and reviews, and original letters to and from literary figures.

Billie Sunday Farnum Collection, papers from Farnum's terms in Congress and as Michigan auditor general and other public and political offices.

Alternative (Underground) Press Collection, one of the largest anywhere, focuses on the Midwest.

University Archives Collection, materials of historical or legal significance to Oakland University.

Faculty Publications Collection, monographs produced by Oakland University.

Library Services

Periodicals are arranged alphabetically on shelves and are not cataloged. Most other library materials are classified under the Library of Congress system and indexed through the public card catalog.

The reserved book collection is a collection of materials that faculty members have reserved for use by specific classes.

Reference librarians help students find materials or use the library. Bibliographic instruction and data-base services supplement these traditional reference services. As part of some regular credit courses, teaching and library faculty collaborate on lectures and demonstrations for using the library. The library's online literature search service aids in retrieval of citations of published articles in the fields of education, engineering, medicine, psychology, and natural and social sciences.

Through interlibrary lending, members of the university community may obtain materials that are unavailable in the university library. Interloan systems share books, periodicals and newspaper articles, theses and dissertations, films and documents in microform, music scores, and research papers.

GRADUATE SCHOOL

OFFICE OF THE DEAN

George F. Feeman, Vice Provost and Dean of the Graduate School
Elizabeth L. Conner, Assistant to the Dean

Course offerings and programs of study at the graduate level constitute a major Oakland University enterprise. Most schools and departments offer some form of graduate work. These offerings comprise courses and research sufficient to satisfy requirements for advanced degrees.

All of the graduate programs have their philosophical underpinning in the university's role and mission statement. Through them, the intellectual and educational needs of students are served, in relation to specific careers, cultural heritage is preserved and extended, and new knowledge is produced which is directed toward the extension of frontiers and/or the solution of problems and issues that confront society as a whole. Programmatic balance is sought to assist in the achievement of these varied outcomes. Students are assumed to be full partners in the process of program implementation. Through this partnership the goals and purposes of graduate education are fulfilled.

Details of the programs and regulations of the Graduate School, which governs graduate work, appear in the *Oakland University Graduate Catalog.* Copies of

the catalog are available from the University Bookcenter. Prospective students should also consult the school or department in which they wish to study.

Graduate Degree Programs

Doctor of Philosophy:
Medical Physics; Reading; Systems Engineering.

Master of Arts:
Clinical Psychology; English; Counseling; History; Linguistics; Sociology.

Master of Business Administration.

Master of Music.

Master of Public Administration.

Master of Science:
Applied Mathematics; Applied Statistics; Biology; Chemistry; Computer and Information Science; Electrical and Computer Engineering; Mechanical Engineering; Physics; Systems and Industrial Engineering.

Master of Arts in Teaching:
Early Childhood Education; Elementary Education; English; Mathematics; Reading; Special Education.

COLLEGE OF ARTS AND SCIENCES

OFFICE OF THE DEAN

Brian P. Copenhaver, Dean
Sheldon Appleton, Associate Dean
Isaac Eliezer, Associate Dean
Robert C. Howes, Director of the Honors College
Thomas F. Kirchner, Assistant to the Dean

The College of Arts and Sciences offers instruction leading to the degrees of Bachelor of Arts, Bachelor of Music, Bachelor of Science, Master of Arts, Master of Music, Master of Science, and Doctor of Philosophy. Jointly with the School of Human and Educational Services it offers instruction leading to the degree of Master of Arts in Teaching.

REQUIREMENTS FOR THE DEGREES OF BACHELOR OF ARTS AND BACHELOR OF SCIENCE

I. General Requirements

A student must:

A. Have completed 124 credits; the Bachelor of Music degree and the Bachelor of Science degree in environmental health require completion of 128 credits. No more than 8 credits in physical education will count toward a degree in the College of Arts and Sciences, except for students taking a secondary teaching minor in physical education, who are allowed up to 20 credits in physical education.
B. Have completed at least 32 of these credits at Oakland University, of which at least 16 credits must be in the elected major.
C. Have completed at least 32 credits in courses at the 300 level or above.
D. Have taken the last 8 credits needed to complete baccalaureate requirements at Oakland University.
E. Have cumulative grade point averages of at least 2.00 in the major(s), in any elective minor(s), and in all courses taken at Oakland University.
F. Be in substantial compliance with all legal curricular requirements.

II. Writing Proficiency

The student must satisfy this requirement as described on page 23.

III. The General Education Requirement

The student must complete the total number of general education credits required by his/her degree program. These credits must be chosen from the lists of designated courses given below for each of six fields. **But courses in the student's major department may not be used to satisfy a general education requirement** unless they are designated differently from the student's major field (for example, anthropology for sociology majors, Russian for Spanish majors). Cross-listed courses are considered to be in the department in whose listing the course description is given in full; for example, LIN/SCN 207 is a linguistics course for the purpose of this ruling, since a full description of this course is given only under the Department of Linguistics listing.

Thus candidates for the B.A. must complete a total of 40 credits of general education; B.S. candidates, 36 credits; and those pursuing a secondary teaching

credential, 24 credits as recapitulated in the following table:

Distribution Fields	Credits for B.A.	Credits for B.S.	Credits for Secondary Teaching Credential
Arts	4	4	4
History, Philosophy, Area Studies	8	8	4
Language and Thought	8	8	4
Literature	4	4	4
Mathematical and Natural Sciences	8	8	4
Social Sciences	8	4	4
Total	40	36	24

Each candidate for the B.A. or B.S. degree must take one or more courses from each of the field groupings listed below. Students pursuing a secondary teaching credential in social studies should take one course (4 credits) from each of the six groupings. Candidates for the Bachelor of Music or for the Bachelor of Science in Music Education must meet the somewhat different general education requirement outlined on page 164.

Students are encouraged to obtain advice concerning the general education requirements from the College of Arts and Sciences advising office or from departmental advisers.

A. **Distribution Fields and Designated Course Requirements**

1. ARTS—ONE COURSE (4 credits) REQUIRED FOR B.A. AND B.S. DEGREES

Our visual and auditory environment constitutes an essential component of our cultural heritage. No civilization exists which has no form of music, art, or theatre. Familiarity with and appreciation of these forms of expression broaden our understanding of society and enrich our lives.

AH 100	Introduction to Western Art I
AH 101	Introduction to Western Art II
AH 316	Art Historical Archaeology
AMS 201	Approaches to American Culture*
CIN 150	Introduction to Film
DAN 173	History and Appreciation of Dance
MUS 100	Introduction to Music
MUS 300	Music Appreciation
THA 100	Introduction to Theatre
THA 268	Theatre History I
THA 269	Theatre History II

2. HISTORY, PHILOSOPHY, AND AREA STUDIES—TWO COURSES (8 credits) REQUIRED FOR B.A. AND B.S. DEGREES, ONE COURSE (4 credits) FROM THE WESTERN AND ONE FROM THE NON-WESTERN GROUP. STUDENTS PURSUING A SECONDARY TEACHING CREDENTIAL IN SOCIAL STUDIES ARE REQUIRED TO TAKE ONLY ONE COURSE, WHICH MUST BE FROM THE NON-WESTERN GROUP.

Knowledge of the historical developments which have shaped the modern world is essential to a general education. A comprehensive study of ancient or modern Western civilizations is offered by the disciplines of history and philosophy. This, together with the contrasting cultural study of a very different civilization, provides perspectives which enhance our understanding of our own culture. To satisfy this distribution field, one of the courses listed below in the Western Group **and** one of the courses listed below in the Non-Western Group must be completed satisfactorily.

Western Group

AMS 202	Approaches to American Culture*
HST 150	History of Western Civilization
HST 200	European History to 1300
HST 201, 202	European History, 1300-1815; 1815-present
HST 214, 215	Introduction to American History

PHL 101	Introduction to Philosophical Thinking
PHL 103	Introduction to Ethics
PHL 204	Ancient Greek Philosophy (beginnings to Aristotle)
PHL 205	Hellenistic and Medieval Philosophy (to Renaissance)
PHL 206	Early Modern Philosophy (to Kant)

Non-Western Group

AS 210	Introduction to China
AS 220	Introduction to Japan
AS 230	Introduction to Africa
AS 240	Introduction to India
AS 250	Introduction to Latin America
AS 260	Introduction to the Slavic World
AS 270	Introduction to the Middle East
PHL 250	Philosophies and Religions of Asia

3. LANGUAGE AND THOUGHT—CANDIDATES FOR THE B.A. AND B.S. DEGREES MUST COMPLETE *EITHER* 8 CREDITS IN A FOREIGN LANGUAGE *OR* ALS 176 The Humanity of Language (4 credits) plus *one* of the following 4-credit courses: LIN/SCN 207 Semantics; SCN 303 Introduction to Communication Theory; PHL 102 Introduction to Logic; PHL 170 Introduction to Formal Logic.

STUDENTS PURSUING A SECONDARY TEACHING CREDENTIAL must complete *either* a second-semester (115 level) foreign language course *or* ALS 176.

4. LITERATURE—ONE COURSE (4 credits) REQUIRED FOR B.A. AND B.S. DEGREES

Through great literary works, we can move beyond individual experience and empathetically share the intellectual, emotional, and spiritual experience of others. The study of that imaginative combination of form and content which is a literary work cultivates sensitivity to language and awareness of the strengths and weaknesses of human beings. The study of literature offers a way of expanding our understanding of the wonder and anguish of human experience and of ordering and evaluating our individual place in that experience.

AMS 203	Approaches to American Culture*
ENG 100	Masterpieces of World Literature
ENG 105	Shakespeare
ENG 111	Modern Literature
ENG 224	American Literature
ENG 241	British Literature
LIT 281	Continental European Literature I
LIT 282	Continental European Literature II
NCC 121	Images of Humanity

5. MATHEMATICAL AND NATURAL SCIENCES—TWO COURSES (8 credits) REQUIRED FOR B.A. AND B.S. DEGREES. Both courses may be in mathematics, both in the natural sciences, or one course in each. STUDENTS PURSUING A SECONDARY TEACHING CREDENTIAL need to take only *one* course (4 credits) chosen from among the mathematical *or* natural science courses listed here.

BIO 104, 105	Biology of the Human
BIO 150	The Human Body
BIO 190, 200	Biology
BIO 300	Biology and Society
CHM 104	Introduction to Chemical Principles
CHM 110	Chemistry in the Modern World
CHM 144, 145	General Chemistry
ENV 308	Introduction to Environmental Studies
MTH 121	Linear Programming, Elementary Functions
MTH 122	Calculus for the Social Sciences
MTH 154, 155	Calculus
MTH 185	Mathematics—An Exploration into Undergraduate Topics
NCC 141	Twentieth-Century Science
PHY 101, 102	General Physics
PHY 104, 105	Astronomy

PHY 106, 107	Earth Sciences
PHY 125	The Physics of Music
PHY 127	Human Aspects of Physical Science
STA 225	Probability and Statistics

6. SOCIAL SCIENCES—TWO COURSES (8 credits) REQUIRED for B.A. degrees; one course (4 credits) required for B.S. degrees or for students pursuing a secondary teaching credential.

Individual human behavior is influenced by other human beings and by the social institutions that have evolved as means of regulating varied behaviors. Each academic discipline in the social sciences provides a unique perspective from which to examine the influence of social and cultural factors on individual and group attitudes, values, and behaviors.

AMS 204	Approaches to American Culture*
AN 101	Evolution of Man and Culture
AN 102	Man in Culture and Society
AN 307	Cultural Anthropology and the Ethnographic Film
ECN 150	Basic Economics*
or	
ECN 200	Principles of Macroeconomics*
or	
ECN 210	Principles of Economics*
PS 100	Introduction to American Politics
PS 115	U.S. Foreign Policy
PS 131	Foreign Political Systems
PS 250	Politics of Survival
PS 372, 373	Western Political Thought
PS 377	Communism
PSY 100	Foundations of Contemporary Psychology
PSY 130	Psychology and Society
SOC 100	Introduction to Sociology
SOC 206	Self and Society

*Note: Only one course from the sequence AMS 201, 202, 203, and 204 may be taken for credit toward a degree. Students receive general education credit for only one of the following courses: ECN 150, ECN 200, ECN 210. ECN 210 is a 6-credit course. Students who complete ECN 210 successfully must complete another of the courses listed above in the social sciences to satisfy the distribution requirement in the social sciences.

B. **Special Provisions:**

1. Students transferring from other institutions may meet a 4-credit field requirement with a 3-credit transfer course, and an 8-credit field requirement with two 3-credit transfer courses. Such students, however, must take additional courses from the courses listed in *any* of the above distribution fields to bring the total number of general education courses up to the number required for their degree—40 credits for the B.A., 36 for the B.S., 24 for students pursuing a teaching credential.
2. Transfer students holding an associate's degree from a community college participating in the Michigan Association of College Registrars and Administrative Officers (MACRAO) agreement with Oakland University will be considered to have fulfilled our general education requirements with one exception: Course work in English composition is considered part of community college general education. English composition (rhetoric) is required in addition to general education requirements at Oakland University. Therefore, *transfer students under the MACRAO agreement must complete two additional general education courses at Oakland University* approved by a faculty adviser and chosen from those designated in the distribution fields.
3. Students with double majors which fall in different distribution fields may offer courses taken in one (but not both) of these majors to fulfill a distribution field requirement, if the courses are listed as acceptable in that distribution field.

4. The general education requirement is considered to be satisfied automatically by students successfully completing the Honors College program.

IV. **Requirement of a Departmental Major or an Independent Major**

The student must fulfill all requirements of his/her elected major as described in the departmental entries. The student may also satisfy this requirement by completing an independent major as described below. A cumulative grade point average of 2.00 in the major or independent major is required for graduation.

A. **The Major**

The majors offered in or accepted by the College of Arts and Sciences are listed below. For specific requirements see the departmental entries.

Anthropology
Area Studies
Art History
Biochemistry
Biology
Chemistry
Chinese language and civilization
Communications
Economics
English
Environmental Health
French
German
History
Journalism
Latin American languages and civilization
Linguistics
Mathematics
Music
Philosophy
Physics
Political science
Psychology
Public administration and public policy
Russian
Russian language and civilization
Social Studies
Sociology
Sociology and anthropology
Spanish

The College of Arts and Sciences offers a secondary teaching major in social studies. Requirements for this major are given on page 146. In addition to the requirements, all secondary education majors must take the following courses: ED 100, ED 200, ED 338, ED 344, ED 345, ED 427, ED 428, and ED 455. For descriptions of these courses, see the course listings under the School of Human and Educational Services. The college also offers a Bachelor of Science in Music Education. For specific requirements, see page 167 and the *Music Handbook*, obtainable from the Department of Music.

There are no college-wide regulations governing admission to major standing or retention on these areas. Each department controls its own procedures in these areas. *Students should maintain close contact with faculty advisers in the department in which they wish to major; students who fail to do so risk delay in graduating.*

1. **Multiple Majors**

Students who elect to major in more than one major in the College of Arts and Sciences must satisfy the specific requirements of *each* of the majors they choose. Such students are single-degree candidates with more than one major and must satisfy the general and specific requirements applicable to the awarding of *one* degree, either a Bachelor of Arts or Bachelor of Science.

Under certain conditions a student may earn more than one *degree.* Such students are double-degree candidates. For information on the restrictions that apply to the awarding of more than one degree and the requirements that double-degree candidates must satisfy, please see page 25.

2. **Independent Major**

Students interested in academic areas in which no suitable major program is available may petition the Committee on Instruction of the College for an individually tailored independent major in place of one of the departmental majors listed above. An independent major also may be taken as part of a double-major program in conjunction with a regular departmental major, provided that no course counted toward completion of the departmental major may be counted also toward completion of the independent major. Students will be admitted to the independent major only after completing 32 credits but before completing 90 credits. For the specific requirements for an independent major, consult the College of Arts and Sciences advising office.

SPECIAL INSTRUCTIONAL PROGRAMS OF THE COLLEGE

Minors for Liberal Arts Degree Programs

Minors are not required by the College of Arts and Sciences for the baccalaureate programs, but the college offers a number of liberal arts minors which the student may pursue in addition to the required major. A minimum grade point average of 2.00 is required in all courses in a minor for successful completion of the minor. The college offers or accepts the following minors, described in detail under departmental entries:

Accounting
Anthropology
Area Studies
Art History
Biology
Chemistry
Communications
Computer and Information Science
Dance
Economics
English
Finance
History
Human Resources Development
International Economics
Journalism and Advertising
Linguistics
Management
Mathematics
Modern Languages
Music
Philosophy
Physics
Political Science
Psychology
Quantitative Methods (Management)
Sociology
Studio Art
Theatre Arts

These minors do not count toward either an elementary or secondary teaching credential.

Secondary Teaching Minors

Secondary teaching minors are not required by the College of Arts and Sciences for the baccalaureate programs, but they are required of prospective secondary

school teachers seeking certification by the Michigan Department of Education. A minimum grade point average of 2.00 is required in all courses in a minor for successful completion of the minor. Only programs entitled "Secondary Teaching Minor" will be certified by the Michigan Department of Education. The college offers the following secondary teaching minors, which are described in detail under departmental entries:

Art
Biology
Chemistry
English
History
Mathematics
Modern Languages
Music
Physics
Science
Speech
*Political Science
*Psychology
*Sociology

*for social studies majors only

The college accepts a secondary teaching minor in physical education offered by the School of Human and Educational Services. Students not completing this minor may count no more than 8 credits in physical education towards the total number of credits required for graduation.

Interdepartmental Programs/Concentrations

The college offers a number of interdepartmental programs and concentrations which the student may pursue in addition to a departmental major. These concentrations are described in departmental entries, in the area studies program, or in the interdepartmental program entries of this catalog. Concentrations are elective and are not required for graduation. Unlike the elective liberal arts minor, no specific grade point average is required for completion of any given concentration. A course may be counted toward more than one major, minor, or concentration only when the department or program coordinator responsible for each program involved approves. As a general rule, no more than 8 credits of course work may be used toward more than one program in this way, but exceptions to this rule may be allowed with the written approval of the program coordinators.

As of June 1, 1983 the College of Arts and Sciences offers the following interdepartmental programs and concentrations:

Afro-American Studies
American Studies
Applied Statistics
Archaeology
Energy Studies
Environmental Studies
Film Aesthetics and History
Folklore and Popular Culture
Gerontology
Michigan Studies
Neurosciences
Pre-Law Studies
Pre-Professional Studies in Medicine, Dentistry, and Optometry
Religious Studies
Social Justice and Corrections
Social Studies
Urban Studies
Women's Studies

Interschool M.B.A. Program

For superior undergraduate students in any major in the college, the School of Economics and Management offers the Master of Business Administration (M.B.A.) degree. This is a two-year professional program in management designed for students with nonbusiness undergraduate majors. Undergraduate business or management majors may take a variation of the standard M.B.A. program.

For arts and sciences undergraduates working on a major other than one of the management areas, there is the possibility of obtaining both the undergraduate degree and the M.B.A. in an accelerated program. To be eligible, students should have a grade point average in the top fifteen percent of their class. Students should apply to the School of Economics and Management for admission to this accelerated program in their junior year (see the *Oakland University Graduate Study Catalog*).

ACADEMIC ADVISING AND PROGRAM PLANNING

All students are responsible for planning their academic programs so as to meet all requirements for the degrees they are pursuing. Students should maintain their own records concerning course work completed, grades received, credits earned, and requirements met. To assist students with this responsibility, academic advisers are available in the College of Arts and Sciences advising office and in each academic department. *Students who neglect to consult with these advisers risk delay in the awarding of their degrees.*

FIELD EXPERIENCE PROGRAM

The college offers, by means of departmental courses numbered 399, opportunities for students to obtain academic credit related to concurrent field work experience. Emphasis is on the academic aspect of this program, which incorporates student performance in the field. Students are required to make an intellectual analysis of the field experience based on their academic program. The 399 courses carry 4 credits each, are numerically graded, and may not be repeated for additional credit. Students wishing to participate in this program are expected to be at the junior or senior level, and must have completed at least 16 credits in the department in whose 399 course they wish to enroll. Individual departments may have specific prerequisites in addition to these. For details, consult one of the departments participating in this program: art and art history, biological sciences, English, history, modern languages and literatures, philosophy, psychology, and sociology and anthropology.

COOPERATIVE EDUCATION

Students majoring in one of the arts and sciences disciplines have the opportunity to participate in the cooperative education program (co-op). Co-op offers students the chance to obtain work experience related directly to their chosen careers or chosen fields of study. For example, chemistry majors might work in chemistry laboratories, pre-law students might work in law offices, and journalism and communications majors might work at various writing jobs. The co-op program involves students in an on-the-job experience that helps them to make decisions about their future careers. Not only does the co-op program provide students with practical experience to augment classroom work; it also offers payment to help defray the cost of college.

To participate in the co-op program, students should have junior or senior standing, a 3.00 grade point average, and the approval of their faculty advisers. Students must agree to accept employment for at least two semesters and should not expect to work only during the spring and summer terms. Interested students should contact the Cooperative Education Office.

AREA STUDIES PROGRAMS

CHAIRPERSON: *Carlo Coppola (Modern Languages-Linguistics—South Asia)*

AREA STUDIES EXECUTIVE COMMITTEE: *Carlo Coppola (Modern Languages), DeWitt S. Dykes (History—Afro-America), James D. Graham (History—Africa), Robert C. Howes (History—Slavic), Kathryn M. McArdle-Pigott (Modern Languages—Latin America), Munibur Rahman (Modern Languages—South Asia), C. Franklin Sayre (Art and Art History—East Asia)*

Drawing on faculty from its various disciplines, the College of Arts and Sciences sponsors a distinctive offering of area studies programs. Area studies involves the examination of living world civilizations (other than those of Western Europe and North America) from an interdisciplinary point of view. The various aspects of these civilizations—art, government, history, language, literature, music, religion, and social organization—are studies in the traditional departments of the university. A major in one of these areas offered might be considered by a student who, from intellectual curiosity or from career choice, seeks an integrated view of a civilization. Career opportunities in area studies are available in businesses and industries with international dimensions, international agencies and foundations, government service, translation, journalism, teaching, and graduate study.

The college offers a major in African studies, East Asian studies (China and Japan), South Asian studies (India, Pakistan, and Bangladesh), Slavic studies (Russia and Eastern Europe), and Latin American studies. A minor in area studies is also offered, as well as a concentration in AfroAmerican studies. Courses labeled AS are described at the end of this section. All other courses applicable to area studies programs are offered by college departments, and descriptions of those courses are found in the respective departmental listings.

Requirements for the Liberal Arts Major in Area Studies

The area studies major consists of 40 credits, of which 28 credits must be taken in the area of major concentration (African studies, East Asian Studies, South Asian studies, Slavic studies, or Latin American studies), 12 credits in a complementary area of study, and a corequisite of language proficiency equivalent to 8 credits of work at the third year of study in an appropriate language. The complementary area of study ordinarily consists of the appropriate introductory course and two additional courses appropriate to the area, which may be either area studies courses or departmental courses. Duplication of course credits in the area of major concentration and the complementary area is not permitted.

Requirements for the Liberal Arts Minor in Area Studies

The minor in area studies consists of 20 credits in a given area of study distributed as follows: appropriate introductory course, appropriate special topics course, appropriate seminar; and 8 additional credits chosen from the offerings under the appropriate program.

African Studies Program

COORDINATOR: *James D. Graham (History)*

FACULTY: *William C. Forbes (Biological Sciences), Karl D. Gregory (Economics and Management), Marvin D. Holladay (Music), James W. Hughes (Education), David Jaymes (Modern Languages), Mary Karasch (History), Vincent B. Khapoya (Political Science), Charlotte Stokes (Art History)*

Course requirements for the major in African studies are: AS 230, AS 300, AS 384, and 16 additional credits distributed as widely as possible from the courses listed below. The complementary area of study may be either Latin American studies or Islamic civilization. The appropriate language is French or Spanish. Some anthropological linguistics may be allowed to fulfill partially the language requirement.

COURSE OFFERINGS

AH 305	African Art
AN 352	Survey of African Peoples and Cultures
BIO 309	Parasitology
BIO 365	Medical Parasitology and Mycology

HST 285	African History
HST 365	Colonialism and Nationalism in the Modern World
HST 386	Contemporary African History
LIN 410	Studies in the Structure of a Language: African Languages
MUS 251	African through Afro-Caribbean Music
NCC 215	African Music as Oral Culture
PS 332	Politics of the Middle East and North Africa
PS 333	African Politics
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

East Asian Studies Program

COORDINATOR: *C. Franklin Sayre (Art and Art History)*

FACULTY: *Sheldon L. Appleton (Political Science), Robert C. Howes History), Janet Krompart (East Asian librarian), John Marney (Modern Languages), Paul M. Michaud (History), Richard B. Stamps (Anthropology), Amitendranath Tagore (Modern Languages), S. Bernard Thomas (History), Robert J.J. Wargo (Philosophy)*

Course requirements for the major in Chinese studies are: AS 210, AS 300, AS 381, and 16 additional credits distributed as widely as possible from the courses listed below. The complementary area of study may be either Japanese or South Asian studies. The appropriate language is Chinese. The area studies program periodically sponsors summer study-tours to China.

COURSE OFFERINGS

AH 300	Chinese Art
AH 305	Buddhist Art
AN 362	Peoples and Cultures of China
HST 370	China: Beginnings through Han to A.D. 200
HST 371	China: From the Three Kingdoms through Ming, 200-1644
HST 373	China: The Final (Ch'ing) Imperial Phase, 1644-1912
HST 374	China: The Nationalist Republican Period, 1912-1949
HST 376	History of Chinese Communism, 1921-Present
HST 385	Environment and Politics in Modern Asia
PHL 250	Philosophies and Religions of Asia
PHL 351	Chinese Philosophy
PS 318	Foreign Policies of Communist Systems
PS 338	Modern Chinese Politics
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

Course requirements for the major in Japanese studies are: AS 220, AS 300, AS 381, and 16 additional credits distributed as widely as possible from the courses listed below. The complementary area of study may be either Chinese or South Asian studies. The appropriate language is Japanese. Students wishing to study in Japan may do so through an exchange program between Oakland University and Nanzan University, Nagoya, Japan.

COURSE OFFERINGS

AH 301	Japanese Art
AH 303	Buddhist Art
HST 270	History of Modern Japan
PHL 250	Philosophies and Religions of Asia
PHL 353	Japanese Philosophy
HST 385	Environment and Politics in Modern Asia
AS 361, 362	Japan Exchange Program
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

South Asian Studies Program

COORDINATOR: *Munibur Rahman (Modern Languages)*

FACULTY: *Peter J. Bertocci (Sociology and Anthropology), Richard W. Brooks (Philosophy), Thomas W. Casstevens (Political Science), Carlo Coppola (Modern Languages), Paul M. Michaud (History), Amitendranath Tagore (Modern Languages), Richard P. Tucker (History)*

Course requirements for the major in South Asian studies are: AS 240, AS 300, AS 382, and 16 additional credits distributed as widely as possible from the courses listed below. The complementary area of study may be either Chinese or Japanese studies, or Islamic civilization. The appropriate language is Hindi or Urdu.

COURSE OFFERINGS

AH 303	Buddhist Art
AH 320	Islamic Art
AN 361	Peoples and Cultures of India
HST 282	Introduction to the History of India
HST 381	History of Early India
HST 385	Environment and Politics in Modern Asia
PHL 250	Philosophies and Religions of Asia
PHL 352	Indian Philosophy
PS 334	Political Systems of Southern Asia
REL 304	The Islamic Tradition
SOC 301	Social Class and Mobility
AS 270	Introduction to the Middle East
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

Slavic Studies Program

COORDINATOR: *Robert C. Howes (History)*

FACULTY: *Alice C. Gorlin (Economics), Helen Kovach-Tarakanov (Modern Languages), Lawrence D. Orton (History), James R. Ozinga (Political Science)*

Course requirements for the major in Slavic studies are: AS 260, AS 300, AS 383, and 16 additional credits distributed as widely as possible from the courses listed below. The complementary area of study may be either Chinese or Japanese studies or Islamic civilization. The appropriate language is either Russian or Polish. The area studies program periodically sponsors summer study-tours to the Soviet Union.

COURSE OFFERINGS

ECN 341	The Soviet Economy
HST 250	History of Russia
HST 254	Eastern European History
HST 353	Imperial Russia
HST 354	Soviet Russia
HST 359	Russian Intellectual History to Peter the Great
HST 360	Russian Intellectual History since Peter the Great
PS 318	Foreign Policies of Communist Systems
PS 337	The Soviet Political System
PS 377	Communism
AS 386	Slavic Folk Studies
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

Latin American Studies Program

COORDINATOR: *Kathryn McArdle-Pigott (Modern Languages)*

FACULTY: *William C. Bryant (Modern Languages), James W. Dow (Sociology and Anthropology), Lucinda Hart-Gonzalez (Linguistics),Edward J. Heubel (Political Science), Joel Horowitz (History), Mary C. Karasch (History), Richard Mazzara (Modern Languages), Charlotte Stokes (Art History)*

Course requirements for the major in Latin American studies are: AS 250, AS 300, AS 385, and 16 additional credits distributed as widely as possible from the courses listed below. The complementary area of study is African studies. The appropriate language is Spanish or Portuguese. The area studies program periodically sponsors summer study programs in Mexico.

COURSE OFFERINGS

AH 307	Pre-Columbian Art
AN 370	Archaeology of Mesoamerica
AN 371	Peoples and Cultures of Mexico and Central America
AN 372	Indians of South America
HST 261, 262	Introduction to Latin American History
HST 363	History of Southern South America
HST 365	Colonialism and Nationalism in the Modern World
HST 366	Slavery and Race Relations in the New World
HST 367	History of Mexico
PS 335	Politics of Latin America
SPN 420	Spanish-American Literature before 1888
SPN 421	Spanish-American Literature since 1888
AS 368	Summer Program in Mexican Studies
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

Afro-American Studies Program

COORDINATOR: *DeWitt S. Dykes (History)*

FACULTY: *Johnetta Brazzell (Urban Affairs), Robert L. Donald (English), James D. Graham (History), Karl D. Gregory (Economics and Management), Marvin D. Holladay (Music), Mary C. Karasch (History), Vincent B. Khapoya (Political Science), Nahum Medalia (Sociology and Anthropology), Carl Osthaus (History)*

The area studies program sponsors a concentration in Afro-American studies, which consists of 28 credits. It is offered in conjunction with a major in any department. Required courses are AS 230, HST 292, and one course from each of the following groups:

1. ENG 342, MUS 347 and MUS 348, or AH 208.
2. PS 103, or SOC 331.
3. AS 300, AS 380, AS 390, AS 490, HST 319, HST 323, HST 366, MUS 346, or NCC 327.

COURSE OFFERINGS

AH 208	Afro-American Art
ENG 342	Black American Writers
HST 292	History of the Afro-American People
HST 319	History of the American South
HST 323	Topics in Afro-American History
HST 366	Slavery and Race Relations in the New World
MUS 346	The Music of Black Americans
MUS 347	History of Jazz
MUS 348	Advanced Jazz History
PS 103	Black Politics

SOC 331	Racial and Ethnic Relations
AS 230	Introduction to Africa
AS 300	Special Topics in Area Studies
AS 380	Seminar in Afro-American Studies
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

AREA STUDIES COURSE OFFERINGS

AS 210-270 Introductory Courses (4 each)
An interdisciplinary study of the peoples of a specific area and their traditional and modern civilizations. Students should enroll in the course number corresponding to a specific area:

AS 210 Introduction to China

AS 220 Introduction to Japan

AS 230 Introduction to Africa

AS 240 Introduction to India

AS 250 Introduction to Latin America

AS 260 Introduction to Russia and Eastern Europe

AS 270 Introduction to the Middle East

AS 300 Special Topics in Area Studies (4)
Interdisciplinary study of a foreign area for which no regular course offerings exist. May be repeated once for a total of 8 credits.
Prerequisite: Appropriate AS introductory course.

AS 361-362 Japan Exchange Program (16-18)
Course work is taken at Nanzan University in Nagoya; includes Japanese language study and additional appropriate courses with English as the language of instruction.

AS 368 Summer Program in Mexican Studies (8)
Oakland faculty and Mexican faculty present summer courses focusing on Mexican culture: history, art, political and social problems, folk arts, archaeology, Chicano studies, intensive language, and Mexican literature. Courses conducted in both Spanish and English. May be repeated once for additional credits with consent of the Latin American studies coordinator.

AS 380-385 Seminars (4)
Selected topics dealing with a specified area, to supplement departmental area courses. Students enroll under the number corresponding to a specific area. May be repeated once for a total of 8 credits.
Prerequisite: Senior standing and permission of instructor.

AS 380 Seminar in Afro-American Studies

AS 381 Seminar in East Asian Studies

AS 382 Seminar in South Asian Studies

AS 383 Seminar in Russian and Eastern European Studies

AS 384 Seminar in African Studies

AS 385 Seminar in Latin American Studies

AS 386 Slavic Folk Studies (2)
An intensive survey of the traditional music, songs, dances, and costumes of selected Slavic cultures. Includes participation in the Slavic Folk Ensemble. May be repeated once for a total of 4 credits. Graded S/N.

AS 390 Directed Readings in Area Studies (2, 4, 6, or 8)
Readings from diverse disciplines with focus on a student's area of specialization. Conducted as a tutorial by an instructor chosen by the student.
Prerequisite: Appropriate AS introductory course and permission of program chairperson and instructor.

AS 490 Directed Research in Area Studies (2, 4, 6, or 8)
Research relating to area of specialization including a senior essay or research paper. Supervised by an area studies instructor.
Prerequisite: Senior standing and permission of program chairperson and instructor.

DEPARTMENT OF ART AND ART HISTORY

CHAIRPERSON: *John B. Cameron*

PROFESSORS: *Carl F. Barnes, Jr. (Art History and Archaeology), John B. Cameron (Art History)*

ASSOCIATE PROFESSOR: *John L. Beardman (Studio Art)*

ASSISTANT PROFESSORS: *C. Franklin Sayre (Art History), Janice G. Schimmelman (Art History), Charlotte V. Stokes (Art History)*

VISITING INSTRUCTOR: *Janice G. Schimmelman (Art History)*

LECTURERS: *Louisa Brantigan (Art History), Judy Toth (Art History), Paul Webster (Studio Art)*

Art history is an ideal curriculum for students who wish to investigate a broad range of humanistic disciplines. The visual arts are studied in their historical context in terms of the cultural, economic, philosophical, political, religious, social, and technological conditions which determine content and form. The art history program provides both majors and nonmajors with a thorough introduction to the visual arts of various cultures throughout history. The art history program is strengthened by visiting lecturers in special fields, by group visits to the Detroit Institute of Arts and to other public and private collections of art in metropolitan Detroit, and through study of special exhibits of art historical interest in Oakland University's Meadow Brook Art Gallery. The department cooperates with the concentrations in American studies, archaeology, area studies, film, and women's studies.

The department offers a program of study leading to the Bachelor of Arts degree with a liberal arts major in art history. This program is intended for students who wish directed study in art history and for students who contemplate a career in one of the fields for which art history is a basis: aesthetics and criticism, archaeology, architecture, college teaching, directorship of special library collections, editorial work in art publishing firms, fine arts, conservation, museum curatorship, and urban design.

Requirements for the Liberal Arts Major in Art History

A total of 40 credits in art history courses, distributed as follows, are required to complete the major:

1. AH 100 and 101.
2. 20 credits from the following: At least one course must be selected from each category except non-Western, from which category two courses must be selected:
   Non-Western: AH 300, 301, 305, 306, 307, 308, and 320
   Ancient/Medieval: AH 312, 314, 316, 322, 326
   Renaissance/Baroque: AH 330, 340
   American/Modern: AH 350, 363, 364, 365
3. 8 elective credits from AH courses
4. One AH course at the 400 level
5. One studio art course (4 credits) is required as a cognate to the major, the course to be SA 100 or any SA 200- or 300-level course.

Majors are advised that department faculty will not recommend for graduate work anyone who has not completed, in addition to the above requirements, AH 480 and AH 491, and at least one year of college-level German or French.

Departmental Honors in Art History

Majors who wish to be considered for departmental honors must petition for such consideration and submit a significant research paper prepared for any 300- or 400-level art history course they successfully complete at Oakland University. A faculty committee will judge this paper. There is no minimum grade point average required for honors, but consideration will normally be given only to students who have completed 20 credits of art history at Oakland University with a grade point average of 3.60 or above.

Requirements for the Liberal Arts Minor in Art History

A total of 20 credits in art history courses, to be distributed as follows:

1. AH 100 and 101
2. A total of 8 credits, 4 each from any two of the following three categories:
   Ancient/Medieval: AH 312, 314, 316, 322, 326
   Renaissance/Baroque: AH 330, 340
   American/Modern: AH 350, 363, 364, 365
3. 4 elective credits from AH courses

Requirements for the Liberal Arts Minor in Studio Art

A total of 20 credits in studio art courses, to be distributed as follows:

1. SA 100 and one of the following: SA 101, SA 107, SA 109.
2. Two courses from the following: SA 200, SA 209, SA 214.
3. One course from the following: SA 307, SA 309, SA 314.

Requirements for the Secondary Teaching Minor in Art

A total of 20 credits in art history and studio art courses, distributed as follows, are required to complete the minor. For additional information, consult the School of Human and Educational Services. The North Central Accreditation Association requires 24 credits for a minor in art.

1. AH 100 and 101
2. 8 credits in studio art
3. 4 credits in art history

ART HISTORY COURSE OFFERINGS

AH 100 Introduction to Western Art I (4)
History and analysis of the visual arts of western Europe from prehistoric times until the Renaissance, ca. A.D. 1400.

AH 101 Introduction to Western Art II (4)
History and analysis of the visual arts of western Europe from the Renaissance, ca. A.D. 1400 to the present.

AH 203 Buddhist Art (4)
Stylistic, iconographical, sectarian, and historical aspects of Buddhist architecture, sculpture, and painting in Asia from earliest examples in India through Zen painting in Japan.

AH 208 Afro-American Art (4)
The arts of black Americans of African descent produced in the United States since ca. A.D. 1700.

AH 300 Chinese Art (4)
The development of architecture, sculpture, and painting in China from the Shang Dynasty, ca. 1550 B.C. until the founding of the Chinese Republic, A.D. 1912.

AH 301 Japanese Art (4)
The development of architecture, sculpture, and painting in Japan from the fifth to the nineteenth century A.D.

AH 303 Buddhist Art (4)
Stylistic, iconographical, sectarian, and historical aspects of Buddhist architecture, sculpture, and painting in Asia from earliest examples in India through Zen painting in Japan.

AH 305 African Art (4)
The arts of the indigenous peoples of West, Central, and East Africa.

AH 306 Oceanic Art (4)
The arts of the indigenous peoples of the South Pacific Islands and Australia.

AH 307 Pre-Columbian Art (4)
The arts of the Indians of Mexico, Central America, and South America prior to the Spanish Conquest.

AH 308 North American Indian Art (4)
The arts of the Eskimo and the Northwest Coast, United States, and Canadian Indians.

AH 312 Greek Art (4)
The development of architecture, sculpture, and painting in the pre-Hellenic, Aegean civilizations and in Classical Greece from ca. 3000 B.C. until the period of Roman domination in the Mediterranean area, ca. 100 B.C.
Prerequisite: AH 100.

AH 314 Roman Art
The development of architecture, sculpture, and painting in Etruria and in the Roman Republic and Empire from ca. 600 B.C. until the relocation of the capital at Constantinople in A.D. 330.
Prerequisite: AH 100.

AH 316 Art Historical Archaeology (4)
Development of art historical archaeology from the fifteenth century A.D. to the present, with emphasis on artistic documentation and interpretation of major discoveries in Mesoamerica and Europe, especially the Mediterranean area.

AH 320 Islamic Art (4)
The development of architecture and painting in Islam from the seventh to the eighteenth century A.D. with reference to the countries of the Fertile Crescent, North Africa, Arab and Moorish Spain, Egypt, Persia, Turkey, and Muslim India.

AH 322 Early Medieval, Byzantine, and Romanesque Art (4)
The development of architecture, sculpture, and painting in Christian Europe from A.D. 330 through the apex of monasticism, ca. A.D. 1150.
Prerequisite: AH 100.

AH 326 Gothic Art (4)
The development of architecture, sculpture, and painting in western Europe from ca. A.D. 1150 through the period of the Crusades and medieval urbanism, ca. A.D. 1400.
Prerequisite: AH 100.

AH 330 Renaissance Art (4)
The development of architecture, sculpture, and painting in western Europe during the Renaissance and Reformation from A.D. 1400 to 1600.
Prerequisite: AH 101.

AH 340 Baroque Art (4)
The development of architecture, sculpture, and painting in western Europe and colonial South America during the period of absolute monarchy and the Counter-Reformation from A.D. 1600 to 1800.
Prerequisite: AH 101.

AH 350 American Art (4)
The development of architecture, sculpture, and painting in the United States from the American Revolution, A.D. 1776, until World War I, A.D. 1914.
Prerequisite: AH 101.

AH 351 Women in Art (4)
The traditional image of woman in art and the contribution of women artists in Europe and the United States from the Middle Ages until the present.
Prerequisite: AH 101.

AH 355 Michigan Architecture (4)
The development of the commercial, domestic, industrial, public, and religious architecture of Michigan from the period of early settlement to the present.

AH 360 History of Automobile Design (4)
The effects of aesthetic, social, and technological change on automobile design from the nineteenth century A.D. to the present. Identical with EGR 360.

AH 363 Modern Architecture and Urban Design (4)
The development of architecture and urban design in Europe and the United States from the Industrial Revolution, ca. A.D. 1750, to the present. Identical with EGR 363.
Prerequisite: AH 101.

AH 364 Nineteenth-Century Art (4)
The development of sculpture, painting, and printmaking in the western world from the French Revolution to A.D. 1900.
Prerequisite: AH 101.

AH 365 Twentieth-Century Art (4)
The development of sculpture, painting and related media in the western world from A.D. 1900 to the present.
Prerequisite: AH 101.

AH 366 History of Photography (4)
The development of still photography as an art and its relationship to other visual arts since ca. A.D. 1830.

AH 367 Film and the Visual Arts (4)
The relationship between films and various plastic arts such as still photography, sculpture, and painting, as they reflect some twentieth-century artistic movements (pop art, surrealism, cubism, expressionism, etc.).

AH 380 Museology and Patronage (4)
The study of modern museums (collections, conservation, organization), historical societies, corporate patronage, and private collecting. The course format will include illustrated lectures and field trips.
Prerequisite: 16 credits in art history of which at least 8 must be at the 300-400 level.

AH 390 Topics in Art History (4)
Specific topics in art history for which no regular course offerings exist. Topic, instructor, and prerequisite will be announced before each offering.
Prerequisite: Permission of instructor.

AH 391 Readings in Art History (2)
Specific reading projects in art history, art criticism, connoisseurship, and conservation. May be repeated in a subsequent semester under a different instructor for a total of 4 credits.
Prerequisite: 16 credits in art history of which at least 8 must be at the 300-400 level; and permission of instructor.

AH 399 Field Experience in Art History (4)
Field experience in art history under faculty supervision. An academic project which incorporates student performance in an occupational setting. May not be repeated for credit or taken by students who have received credit for SA 399.
Prerequisites: 16 credits in art history, of which at least 8 must be at the 300-400 level; and permission of instructor.

AH 480 The Bibliography and Methodology of Art History (4)
The history and criticism of art as disciplines from classical antiquity to the present, with emphasis on the principal approaches to the study of art since A.D. 1500. Students will read selections from the major contributors to these disciplines.
Prerequisite: 12 credits of art history.

AH 490 Problems in Art History (4 or 8)
Seminar in specific subject areas of, or approaches to, art history. May be taken in different semesters under different instructors for a total of 8 credits or, with permission of instructor and department chairperson, may be taken in one semester for a total of 8 credits.
Prerequisite: 12 credits of art history.

AH 491 Directed Research in Art History (4 or 8)
Directed individual research for advanced art history majors.
Prerequisite: Permission of instructor.

Studio Art

The departmental program of study leading to the Bachelor of Arts degree with a liberal arts major in studio art has been temporarily suspended, and no new candidates for this major will be accepted during the 1983-1984 academic year. The department will continue to offer courses in studio art; several studio art courses are offered as general electives for all students, or as a complement to the art history program.

STUDIO ART COURSE OFFERINGS

SA 100 Drawing, Painting, and Visual Thinking (4)
Exploration of the possibilities of translating observations into visual structures, including drawing from nature. Emphasis is on process rather than product. Theory and historical background will be given.

SA 101 Introduction to Sculpture (4)
Exploration of means of creating three-dimensional structures.

SA 107 Drawing Skills I (4)
Introduction to the tools and methods of drawing as a means to observe the physical world accurately and to develop visual ideas more clearly. Emphasis is on skill development.

SA 108 Figure Drawing Skills I (4)
Traditional approaches to figure drawing, including anatomy, line and shading to depict the figure in illusionistic space. Emphasis is on skill development.

SA 109 Color Skills (4)
Study and analysis of the properties, theory, and use of color as an expressive and structural element in painting.
Prerequisite: SA 100 or 101.

SA 200 Basic Studio I (4)
Continuation of SA 100 with more emphasis on conceptualization. Continues to deal with the process of creating structures, but the product will be more important than in SA 100.
Prerequisite: SA 100 or 101.

SA 209 Painting I (4)
Introduction to painting, its technique, history, and expressive possibilities. Includes the making of and experimentation with paint.
Prerequisite: SA 100.

SA 211 Printmaking I (4)
Basic techniques and visual ideas inherent in the medium.

SA 214 Sculpture II (4)
Continuation of SA 101.
Prerequisite: SA 101.

SA 215 Weaving and Tapestry (4)
Basic weaving techniques involving loom-woven fabrications.

SA 266 Photography (4)
Basic black and white picture taking, film processing and darkroom procedure. Concepts and techniques of photography.

SA 307 Drawing Skills II (4)
Continuation of SA 107. Emphasis is on translation of visual ideas from drawing into other media. May be taken in different semesters for a total of 8 credits.
Prerequisite: SA 107 and 200.

SA 309 Intermediate Painting (4)
Treats the problem-solving possibilities of painting, the expressive potential unique to the individual, and the relationship of these factors to contemporary issues.
Prerequisite: SA 200 or SA 209.

SA 311 Printmaking II (4)
Continuation of SA 211.
Prerequisite: SA 211.

SA 314 Intermediate Sculpture (4)
Treats the problem-solving possibilities of sculpture, the expressive potential unique to the individual, and the relationship of these factors to contemporary issues.
Prerequisite: SA 200 or SA 214.

SA 321 Silk-Screen Printing (4)
Multi-color silk-screen printing, methodology, and techniques.
Prerequisite: SA 100 or SA 101.

SA 322 Photo Silk-Screen (4)
Methodology and techniques of photo silk-screen printing.
Prerequisite: SA 100 or SA 101.

SA 399 Field Experience in Studio Art (4)
Field experience in studio art under faculty supervision. An academic project which incorporates student performance in an occupational setting. May not be repeated for credit or taken by students who have received credit for AH 399.
Prerequisites: 16 credits in studio art, of which at least 8 must be at the 300 level.

SA 490 Special Problems in Studio Art: Independent Studies (4)
Independent investigation of specific problems in the visual arts including their relationships with other disciplines. May be taken for a maximum of 8 credits.
Prerequisite: Permission of instructor.

DEPARTMENT OF BIOLOGICAL SCIENCES

CHAIRPERSON: *Nalin J. Unakar*

PROFESSORS: *Francis M. Butterworth, William C. Forbes, John R. Reddan, Arun K. Roy, Nalin J. Unakar, Walter L. Wilson*

ASSOCIATE PROFESSORS: *John D. Cowlishaw, Esther M. Goudsmit, Egbert W. Henry, R. Douglas Hunter, Paul A. Ketchum, Charles B. Lindemann, Virinder K. Moudgil, Asish C. Nag, Moon J. Pak*

ASSISTANT PROFESSORS: *George J. Gamboa, Martins Linauts, Daphna R. Oliver, Ann K. Sakai*

ADJUNCT PROFESSORS: *Clifford V. Harding, James R. Wells*

ADJUNCT INSTRUCTOR: *Robert Baran*

VISITING ASSISTANT PROFESSOR: *Nalini M. Motwani*

VISITING INSTRUCTOR: *Inez Devlin-Kelly*

The Department of Biological Sciences offers programs of study leading to the degrees of Bachelor of Arts, Bachelor of Science, and Master of Science. The undergraduate programs prepare the student for graduate studies in the life sciences, laboratory work and research in industries concerned with biological materials, professional careers in medicine, dentistry, nursing or other allied health areas. This liberal arts program in biology is particularly suited to the needs of the premedical student. For further information on the graduate program in the department, see the *Oakland University Graduate Study Catalog.*

The Department of Biological Sciences offers a diversified selection of courses and research programs in cell biology, biochemistry, physiology, morphology, genetics, botany, ecology, invertebrate zoology, developmental biology, microbiology, plant physiology, and evolutionary biology. The student selects courses that suit his/her goals and interests and, with permission, may elect to participate in

the research laboratories of individual faculty members for which they can receive course credit (BIO 490). In the past many such students have appeared as coauthors on scientific publications resulting from the work in which they participated. Such opportunities are of particular value to students preparing for graduate study or research positions. Since modern biology requires physicochemical insight, training in chemistry, physics, and mathematics is also required.

ADMISSION TO MAJOR STANDING

To be eligible for a major in biology students must be admitted to major standing by the department at least three semesters before graduation (to take effect for students graduating after December, 1984). This procedure ensures that an appropriate program of study is completed by the date of graduation. Students may be admitted to major standing after filing a satisfactory curriculum plan and completion of one year of introductory biology plus two other BIO courses, one year of general chemistry, and mathematics through MTH 105.

Requirements for the Liberal Arts Major in Biology, B.A. Program

This curriculum is for students intending to incorporate a biology major into a broader liberal arts program possibly leading to careers in technical fields, business, or post-graduate programs. Students in the B.A. curriculum who wish to apply to medical or dental schools are advised to also complete the Concentration in Preprofessional Studies.

Forty credits in biology (from BIO 190 and above) are required, including at least seven lecture courses. These must include BIO 190, 195, 200, and three courses from the following: 1. Physiology (BIO 321, or 207, or 333); 2. Biochemistry (BIO 325); 3. Morphology (BIO 323, 305, 313, 205); 4. Genetics (BIO 341, 387); 5. Ecology (BIO 301). Students must also, in consultation with their biology adviser, select at least one course in organismic biology (botany—BIO 303, 311, 327, 373; or zoology—BIO 309, 315, 317, 353; or microbiology—BIO 319) and at least one 400-level course other than BIO 497. Corresponding lecture and lab courses should normally be taken simultaneously. In addition, 14 credits of chemistry (CHM 144, 145, 149, and 203, or 234, or 201), 10 credits of physics (two semesters of general physics and lab), and mathematics through MTH 105 plus one of the following: MTH 122, 154, STA 225, 226 are required. One semester of computer programming (CIS 122 or 130) is recommended as an elective.

Requirements for the Major in Biology, B.S. Program

This curriculum is for students who wish to follow a career in the sciences, including medicine and health-related fields, and/or those planning to enter post-graduate professional schools.

Forty credits in biology (from BIO 190 and above) are required, including at least seven lecture courses and a minimum of four BIO laboratory courses. These must include BIO 190, 195, 200, and three courses from the following: 1. Physiology (BIO 321, or 207, or 333); 2. Biochemistry (BIO 325); 3. Morphology (BIO 323, 305, 313, 205); 4. Genetics (BIO 341, 387); 5. Ecology (BIO 301). Students must also, in consultation with their biology adviser, select at least one course in organismic biology (botany—BIO 303, 311, 327, 373; or zoology—BIO 309, 315, 317, 353; or microbiology—BIO 319), and at least one 400-level course other than BIO 497. Corresponding lecture and lab courses should normally be taken simultaneously. In addition, two years of chemistry (CHM 144-145, 149, 234-235 or 203-204, and 209) and one year of physics (PHY 101, 102, 158 or 151, 152, 158 depending on MTH option) are required. Mathematics is required through MTH 105 plus one of the following options: 1. MTH 154, 155; 2. STA 226 and either STA 322, or 323, or 324; 3. MTH 122 and either STA 225 or 226. One semester of computer programming

(CIS 122 or 130) is recommended as an elective. Finally, in addition to the formal course requirements, the student must complete a senior paper based either on research performed under BIO 490, or literature search of a research-oriented topic taken as BIO 405.

Requirements for Departmental Honors in Biology

Departmental honors may be granted to students who have been nominated by a faculty member on the basis of high academic achievement and excellence in either independent research or teaching assistance.

The specific requirements are:

1. 3.20 grade point average minimum overall and 3.50 grade point average minimum in BIO courses
2. at least one 400-level BIO lecture course (BIO 405, 455, 490, and 497 do not qualify)
3. excellence in one of the following two service roles:
   a. assisting in teaching laboratory course(s) (either for pay or credit)
   b. performing independent laboratory study or serving as a laboratory research assistant

Requirements for a Modified Major in Biology (B.S.) with a Specialization in Anatomy

Adviser: Martins Linauts.

Students should elect this specialization in their sophomore year. Biology courses required for the anatomy specialization are: BIO 205, 206, 305, 306, 317, 323, 324, 429, 430, 445, 446 and 460. The selection of all courses should be planned by consultation with the adviser.

Requirements for a Modified Major in Biology (B.S.) with a Specialization in Microbiology

Adviser: Paul A. Ketchum.

Students may elect this specialization in their sophomore or junior year. Biology courses required for the microbiology specialization are: BIO 319, 320, 421, 422, 433 and 434. The selection of all courses should be planned by consultation with the adviser.

Requirements for the Modified Major in Biology with a Concentration in Applied Statistics

This concentration is open to students pursuing either a B.A. or a B.S. in biology.

Students should elect this concentration in their sophomore year. Required courses are STA 321, 322, and either 323 or 324, as well as BIO 490 (4 credits).

Concentration in Preprofessional Studies in Medicine, Dentistry, and Optometry

The B.S. degree in biology provides students with all the requirements for a Concentration in Preprofessional Studies; however, refer to page 153 for suggestions regarding course selection. Students in the B.A. degree program will need two semesters of organic chemistry and laboratory in addition to their other science requirements.

Biochemistry Program

In cooperation with the Department of Chemistry, the Department of Biology offers a B.S. degree program with a major in biochemistry. See page 00.

Requirements for the Liberal Arts Minor in Biology

Students in other departments who wish to minor in biology must take a minimum of 20 credits in biology, including BIO 190, 195, and 200. At least 8 credits must be taken in courses numbered 301 or higher.

Requirements for the Secondary Teaching Minor in Biology

Twenty credits in biology (from BIO 190 and above) are required.

COURSE OFFERINGS

The following courses are designed particularly for nonscience majors and are not counted toward biology major or minor requirements.

BIO 104 Biology of the Human (4)
The biology of man. Cells, tissues, organs, conduction, contraction, and circulation of blood and lymph and breathing. Offered fall and winter semesters.

BIO 105 Biology of the Human (4)
Digestion, excretion, the endocrine system, and reproduction. Offered fall and winter semesters.

BIO 150 Human Body (4)
A study of the human body and its behavior with reference to aging and disease. Emphasis will be given to important structural components of the body and their relation to functions of the various systems.

BIO 300 Biology and Society (4)
Survey of important biological principles, their implications for life in modern society. Human function and energy, health and disease, the impact of evolutionary thought and the requirements for ecological balance.

The following courses are designed particularly for the biology major and minor and for other majors in the sciences.

BIO 190 Biology (4)
Introduction to the structure and functions of plants and animals; nutrient acquisition, gas exchange, internal transport, excretion, chemical and nervous control, reproduction, behavior, ecology, evolution, a synopsis of the major phyla.
Offered fall and winter semesters.

BIO 195 Biology Laboratory (1)
Laboratory and field experience emphasizing scientific method, scientific writing, Mendelian genetics, vertebrate anatomy, and animal and plant diversity. To accompany BIO 190 or 200.

BIO 200 Biology (4)
Cell ultrastructure, enzymology, metabolism, genetics, cell division. A year of high school chemistry and/or CHM 140 is strongly recommended. May be taken before BIO 190. Offered fall and winter semesters.

BIO 205 Human Anatomy (4)
The integration of organs into systems and systems into the organism. Selected aspects of developmental, comparative, and microanatomy also will be discussed. Relevant to students in health sciences, biological science, and liberal arts studies.
Prerequisite: BIO 200.

BIO 206 Human Anatomy Laboratory (1)
To accompany BIO 205.

BIO 207 Human Physiology (4)
A detailed study of general physiological principles and mechanisms with emphasis on systemic physiology. Normal physiology of individual organ systems will be explored, with stress on the role each plays in the human homeostatic balance.
Prerequisite: BIO 200.

BIO 208 Human Physiology Laboratory (1)
To accompany BIO 207.

BIO 250 Biology of Aging (4)
Introduction to the phenomenon of aging at both cellular and organ levels. Topics include roles of nutrition, exercise, drugs, diseases, hormones, and theories of aging. Offered winter semester alternate years.
Prerequisite: One semester of introductory biology.

BIO 300 Biology and Society (4)
See description above under nonmajor courses.

BIO 301 Ecology (5)
Basic ecological concepts, energy and materials flow, growth and regulation of populations, community interactions, chemical ecology, and environmental biology. Includes laboratory experience. Offered fall semester.
Prerequisite: BIO 190, 195, 200.

BIO 303 Field Biology (4)
An ecologic and taxonomic study of the flora and fauna of Oakland University's setting. Aims include competence in use of illustrated handbooks and keys, and skills in collecting, preserving, and identifying.
Prerequisite: BIO 190, 195.

BIO 305 Histology (4)
The microscopic anatomy and histochemistry of vertebrate tissues and organs in relation to tissue function.
Prerequisite: BIO 190, 200.

BIO 306 Histology Laboratory (2)
To accompany BIO 305.

BIO 307 Introduction to Medical Microbiology (4)
Infectious diseases and their control. Bacterial, mycotic, protozoan, viral infections; immunology; epidemiology; pathogenic mechanisms; antimicrobial agents, chemotherapy. Required of students in the nursing program. Not open to students who have taken BIO 319.
Prerequisite: BIO 205.

BIO 309 Parasitology (5)
A survey of parasitic relationships: taxonomy and anatomy of organisms, life cycles, epidemiology, pathology and control methods. Includes laboratory experience.
Prerequisite: BIO 190, 200.

BIO 311 Botany (4)
A course in plant biology including topics on gross and microscopic structure, physiological processes, reproduction, and development. Diversity within the plant kingdom and evolutionary history are also discussed.
Prerequisite: BIO 190, 195, 200.

BIO 312 Botany Laboratory (1)
To accompany BIO 311.

BIO 313 Plant Morphology (4)
Structure, reproductive mechanisms, and evolutionary relationships of the plant groups. Ultrastructure of cells and their walls. Preparation of plant materials for microscopic examination. Cytochemistry and histogenesis of selected specimens.
Prerequisite: BIO 190, 195, 200.

BIO 314 Plant Morphology Laboratory (1)
To accompany BIO 313.

BIO 315 Invertebrate Zoology (4)
Invertebrates comprise a large part of the earth's population and have vast potential as research material. Lectures will stress metabolism, neural functioning, reproduction, and adaptations to environmental conditions.
Prerequisite: BIO 190, 200. Corequisite: BIO 316.

BIO 316 Invertebrate Zoology Laboratory (1)
A survey of the functional anatomy of the major invertebrate phyla. Living material will be observed whenever possible.
Corequisite: BIO 315.

BIO 317 Vertebrate Zoology (5)
A comparative study: gross and histological anatomy, taxonomy, unique physiological adaptations to habitats, evolution, and paleontology. Includes laboratory experience.
Prerequisite: BIO 190, 200.

BIO 319 General Microbiology (4)
Microbial metabolism, growth, genetics, molecular biology, genetic engineering, classification, aseptic techniques, host-parasite relationships, a survey of human bacterial and viral pathogens. The impact of non-pathogenic microbes on natural processes is emphasized. Not open to students who have taken BIO 307.
Prerequisite: BIO 200, CHM 145.

BIO 320 General Microbiology Laboratory (1)
The techniques for growing, isolating, handling, and identifying microbes.
To accompany BIO 319.

BIO 321 Physiology (4)
A detailed study of physiological principles; the internal environment, bioenergetics, transport, osmoregulation, respiration, conduction, contraction, and circulation.
Prerequisite: BIO 190, 200.

BIO 322 Anatomy and Physiology Laboratory (1)
A detailed study of vertebrate anatomy and physiology. To accompany BIO 321.

BIO 323 Developmental Biology (4)
Topics include: gametogenesis, fertilization, cleavage, morphogenesis, differentiation, organogenesis, regeneration. Each topic is examined from the morphological to the molecular level.
Prerequisite: BIO 190, 200. Highly recommended: BIO 324.

BIO 324 Developmental Biology Laboratory (1)
A series of observations and experimental exercises on a variety of organisms designed to expose the student to basic patterns of development, embryonic structures, and techniques to analyze developmental processes.
Corequisite: BIO 323.

BIO 325 Introductory Biochemistry (4)
The principles and techniques of molecular biology which are basic to discussions in the intermediate and advanced courses. Topics include: structure and function of macromolecules, cellular organization, biological energy, molecular genetics.
Prerequisite: BIO 200 and one year of general chemistry. CHM 201 or 203 recommended.

BIO 326 Introductory Biochemistry Laboratory (1)
To accompany BIO 325.

BIO 327 Woody Plants—Biology and Ecology (4)
The study of trees and shrubs; their identification, biology, and ecology, the importance of woody plants to man.
Prerequisite: BIO 190 or 200.Corequisite: BIO 328.

BIO 328 Woody Plants Laboratory (1)
Laboratories stress local field experience in the ecology, natural history, and identification of native woody plants.
Corequisite: BIO 327.

BIO 333 Plant Physiology (4)
Hormonal relationships, inorganic nutrition, water relations, metabolism, photosynthesis, and tropisms.
Prerequisite: BIO 190, 200.

BIO 334 Plant Physiology Laboratory (1)
Corequisite: BIO 333.

BIO 341 Genetics (4)
The physical and chemical basis of inheritance. Selected topics in human genetics, microbial genetics, biochemical genetics, and cytogenetics. Two lab options are available; see BIO 342 and 345. Offered winter semester.
Prerequisite: BIO 190, 200. BIO 325 recommended.

BIO 342 Genetics Laboratory (1)
A series of short experiments to demonstrate basic genetic principles; to be offered with BIO 341.

BIO 345 Experimental Genetics (2)
An innovative approach to learning genetics. The student working on an individual research project not only will learn some basic principles of genetics but also will obtain preliminary experience in biological research. To be offered with BIO 341.

BIO 351 Neurobiology (4)
Topics include nerve excitation, synaptic transmission, spinal cord functions, cerebral cortical activity, sleep and consciousness, biochemical and pharmacological properties of nerve cells.
Prerequisite: BIO 190, 200. CHM 145.

BIO 353 Animal Behavior (4)
The genetics, physiology, ecology, and evolution of animal behavior. A behavioral ecology approach that emphasizes the behavior of invertebrates, especially the social insects.
Prerequisite: Sophomore standing.

BIO 354 Animal Behavior Laboratory (1)
A field-oriented course to acquaint students with experimental design, quantitative data retrieval and data analysis. A large part of the course will consist of an independent behavioral field study supervised by the instructor.
Prerequisite: Sophomore standing. Corequisite: BIO 353.

BIO 365 Medical Parasitology and Mycology (4)
Animal and mycological parasites of man: clinical manifestations, laboratory methods for identification, life cycles, pathogenesis, epidemiology and control.
Prerequisite: BIO 190 or equivalent.

BIO 373 Field Botany (4)
A local flora course in identifying vascular plants occurring naturally in Michigan. Emphasis is on flowering plants, although ferns and coniferous species are also treated. Includes field trips to representative natural areas in southeast Michigan.
Prerequisite: BIO 190, 200.

BIO 375 Limnology (2)
An introduction to freshwater biology; lake classification, biogeochemical cycles, lake and stream ecology, seasons, flora and fauna, plankton and benthos, lake origins, and evolution. Offered every other winter.
Prerequisite: BIO 190, 200.

BIO 377 Marine Biology (2)
Flora and fauna of the shore and open ocean, ocean seasons, tides, food webs, adaptations, feeding, locomotion, community interactions, fisheries biology, and aquaculture. Offered every other winter.
Prerequisite: BIO 190, 200.

BIO 381 Gross Human Anatomy (4)
Combined lectures and laboratories primarily for upper-level health science majors. Study of human body systems with emphasis on the musculoskeletal system; morphological correlate of human physiological functions; dissection of cadaver.
Prerequisite: BIO 321 and permission of instructor.

BIO 387 Evolution and Systematics (4)
Exploration of the processes of evolution and their past and current influence on organisms of today. Topics include origin of variability, natural selection, differentiation of populations, speciation, phylogenetic concepts, evolutionary ecology, and sociobiology.
Prerequisite: BIO 190, 200. BIO 341 recommended.

BIO 390 Laboratory Techniques in Biological Sciences (4)
Laboratory techniques cover a broad spectrum of the current research assay methods normally used in the biological sciences. Students concentrate on developing competence in areas of their own special interest.
Prerequisite: Four semesters of natural science and permission of instructor.

BIO 393 Endocrinology (4)
The interrelationship of various endocrine systems with vertebrate physiology; examination of control processes, the mechanism of hormone action, the role of hormones in cancer,

reproduction, differentiation, growth.
Prerequisite: BIO 321, 325, or permission of instructor. Offered winter semester alternate years.

BIO 394 Endocrinology Laboratory (2)
To accompany BIO 393. Individual research projects.
Prerequisite: Permission of instructor.

BIO 399 Field Experience in Biology (4)
Field experience in biology with faculty supervision which incorporates student performance in an occupational setting.
Prerequisite: 16 credits in biology of which 8 must be at the 300-400 level.

BIO 401 Advanced Human Physiology (4)
Lectures and discussion emphasizing the human organism and the experimental basis for current concepts and techniques. Topics include: reproduction, circulation, respiration, electrophysiology, and cellular mechanisms in physiological processes.
Prerequisite: BIO 207 or 321.

BIO 405 Special Topics (2, 3, or 4)
Prerequisite: Permission of instructor.

BIO 407 Cellular Biochemistry (4)
Advanced discussion of cellular control mechanisms emphasizing recent developments in the biochemistry of proteins and nucleic acids.
Prerequisite: BIO 325, CHM 204, and PHY 102.

BIO 408 Cellular Biochemistry Laboratory (1)
To accompany BIO 407. Modern research techniques; chromatography (paper, column, thin layers, etc.), electrophoresis, immunoelectrophoresis, ultracentrifugation and cell fractionation, isolation and density gradient analysis of the nucleic acids, etc.

BIO 421 Medical Microbiology (4)
Bacterial and viral human pathogens, emphasizing their etiology, physiology, pathogenesis, epidemiology, control and diagnosis.
Prerequisite: BIO 200.

BIO 422 Medical Microbiology Laboratory (2)
Basic skills of handling pathogenic bacteria and their diagnosis.
Prerequisite: BIO 421.

BIO 423 Immunology (3)
The human immune system. Topics include antigens, antibodies, immunophysiology, serology, immunochemistry, immunobiology, immunogenetics, hypersensitivity, immunities to infectious agents, and disorders of the immune system.
Prerequisite: BIO 207 or BIO 321.

BIO 425 Biophysics (4)
The physical basis of biological phenomena, and the nature of biophysical theories. Biological structure and function are studied in the context of the hierarchical, cybernetic systems theory. Offered winter semester of alternate years.
Prerequisite: BIO 325 or equivalent, calculus, and general physics.

BIO 426 Biophysics Laboratory (1)
Mathematical modeling of biological phenomena.
Prerequisite: To accompany BIO 425.

BIO 427 Human Genetics (4)
Key aspects of classical and molecular genetics of humans. Topics are: inborn errors of metabolism, cytogenetics, somatic cell genetics, biochemical genetics, immunogenetics, and the genetics of cancer.
Prerequisite: BIO 341 and permission of instructor.

BIO 429 Cytochemistry (4)
A survey of techniques currently used in microscopy to analyze the distribution and quantity of specific chemicals within cells and their organelles. Techniques include: specific staining reactions, enzyme digestion, metabolic inhibition, and autoradiography.
Prerequisite: BIO 305 and 306. Corequisite: BIO 430.

BIO 430 Cytochemistry Laboratory (2)
Individual research projects using cytochemical techniques to study and compare chemical compositions of several types of cells.
Corequisite: BIO 429.

BIO 433 Advanced Microbiology (3)
Microbial physiology, structure, and function. The impact of these subdisciplines on microbial classification and microbial ecology are emphasized.
Prerequisite: BIO 319 and CHM 203. Corequisite: BIO 434.

BIO 434 Advanced Microbiology Laboratory (2)
Selective enrichment, isolation, and characterization of micro-organisms from natural sources.
Corequisite: BIO 433.

BIO 435 Developmental Genetics (4)
Modern aspects of genetics derived from molecular and microbial systems and their application to problems of development in multicellular organisms. Topics include gene structure, gene regulation, recombinant DNA, and immunogenetics.
Prerequisite: BIO 341 and 325 or equivalent.

BIO 436 Developmental Genetics Laboratory (1)
To accompany BIO 435.

BIO 437 Virology (4)
The molecular biology of viruses that governs their interactions with cells and organisms. Emphasis on bacterial and animal viruses. Offered winter semester of alternate years.
Prerequisite: BIO 325, 341, or 433.

BIO 438 Virology Laboratory (1)
Experiments with bacterial viruses, utilizing bioassay, genetic, and inactivation techniques.
Prerequisite: To accompany BIO 437.

BIO 439 Biochemistry of the Gene (4)
Biochemistry and expression of the eukaryotic gene with emphasis on recent developments in gene cloning, expression of cloned genes, and applications of recombinant DNA technology in biology and medicine.
Prerequisite: BIO 407 or CHM 453.

BIO 440 Biochemistry of the Gene Laboratory (2)
Laboratory exercises and short projects involving nucleic acids and protein synthesis. Specific experiments include isolation and characterization of RNA and DNA, translation of mRNA and enzymology of nucleic acids.
Corequisite: BIO 439.

BIO 445 Ultrastructure (4)
A consideration of the fine structure of cells and cell products as revealed by electron microscopy and other procedures. Offered winter semester.
Prerequisite: BIO 305 and permission of instructor.

BIO 446 Ultrastructure Laboratory (2)
To accompany BIO 445.

BIO 450 Visual Physiology (2)
Structure and function of the visual system with emphasis on the processing of visual information from the retina to the visual cortex and associative structures.
Prerequisite: BIO 321 and permission of instructor.

BIO 455 Seminar (1)
Discussion of recent publications in the biological sciences.

BIO 460 Neuroanatomy (4)
The brain, brain stem, spinal cord and associated structures with respect to their morphology, development, function, and the integration of these functions in motor activity. Certain lesions and their clinical significance will be discussed.
Prerequisite: BIO 205 or 381 or permission of instructor.

BIO 463 Cell Biology (4)
Prerequisite: BIO 305 and permission of instructor.

BIO 464 Cell Biology Laboratory (1)
To accompany BIO 463.

BIO 480 Biochemical Pharmacology (2)
Classification of drugs and a survey of their use, abuse, and side effects. Structure-activity relationship and biochemical basis of drug action on biological systems will be emphasized.
Prerequisite: BIO 321 and 325 or equivalents. CHM 203.

BIO 481 Topics in Physiological Ecology (2)
Physiological responses of individual organisms and populations to their environment, including regulation of the internal environment, reproductive strategies, bioenergetics, and chemical ecology.
Prerequisite: One course in physiology or ecology.

BIO 482 Topics in Evolutionary Biology (2)
Advanced topics in evolutionary biology including coevolution of plants and animals, life history strategies, rates of evolution and sexual selection.
Prerequisites: One course in ecology or evolution or permission of instructor.

BIO 483 Topics in Applied Ecology (2)
The role of ecological science in solving human problems. Specific topics in agriculture, natural resources management, industrial biology, and environmental protection.
Prerequisite: One course in ecology or permission of instructor.

BIO 484 Topics in Community and Population Biology (2)
Analytic and synthetic approaches to the biology of communities and populations utilizing both plant and animal studies. Topics will include experimental design, statistical methods, sampling techniques, dynamics, production, distribution, and species interactions.
Prerequisite: One course in ecology, evolution, or permission of instructor.

BIO 490 Independent Research (2, 3, or 4 credits)
Directed undergraduate research in laboratory, field or theoretical biology. May be taken more than once. Graded numerically or S/N by written arrangement with biology faculty supervisor. A maximum of 8 credits may be numerically graded.
Prerequisite: Written agreement with a biology faculty supervisor.

BIO 497 Apprentice College Teaching (2)
Assisting in presenting a course, usually a laboratory course, to undergraduates. May be taken more than once.
Prerequisite: Written agreement with a biology faculty supervisor.

DEPARTMENT OF CHEMISTRY

CHAIRPERSON: *Paul Tomboulian*

PROFESSORS: *Gottfried Brieger, Isaac Eliezer, Kenneth M. Harmon, Lewis N. Pino, Joel W. Russell, Peter Schmidt, Michael D. Sevilla, R. Craig Taylor, Paul Tomboulian*

ASSOCIATE PROFESSORS: *Denis Callewaert, Julien Gendell, Steven R. Miller, Robert L. Stern*

ASSISTANT PROFESSORS: *Bandana Chatterjee, Kathleen Moore, Willard St. John*

ADJUNCT PROFESSOR: *Philip Weiss*

LECTURERS: *Janet Bennett, William Bradford, Gerald G. Compton, Cynthia Sevilla*

The Oakland University chemistry programs offer students the laboratories and equipment typically found in larger universities while retaining strong emphasis on undergraduate education and informal student-faculty relations characteristic of smaller liberal arts colleges. Research opportunities are available to qualified undergraduates. The department offers highly professional chemistry programs while retaining the liberal arts dedication to developing the highest intellectual and creative potential of its students. The Department of Chemistry offers programs of study leading to the degrees of Bachelor of Arts, Bachelor of Science, and Master of Science.

Planning a Program in Chemistry

Curricula leading to a major in chemistry are quite structured, since knowledge is developed cumulatively in a four-year sequence. This leads to a fairly prescribed order of course presentation with a number of specific course prerequisites. Students interested in pursuing a program of study in chemistry should consult with a departmental adviser and file a program plan as early as possible in their college career.

Admission to Major Standing

To be eligible for a major in chemistry the student must be admitted to major standing by the department at least three semesters before graduation. Admission to major standing and the accompanying program certification guarantee that the student's program plan will meet the requirements for either the B.A. or the B.S. degree. Students may apply through the departmental office or faculty adviser. A student may be admitted to major standing after filing a satisfactory curriculum plan and completion of 30 total credits in chemistry, physics, and mathematics, including CHM 225, 234, MTH 155, and PHY 151, with an average grade of 2.00 or better.

Core Curriculum (36 credits)

The core courses for the B.A. and the B.S. programs consist of CHM 144-145, 149, 225, 234-235, 237, 238, 342-343, 348, and two semesters of CHM 400. Also included in the core are MTH 154-155, PHY 151-152, and CIS 327.

Requirements for the Liberal Arts Major in Chemistry, B.A. Program

This curriculum is for students who wish to incorporate a science major in a broader liberal arts program, or who wish a foundation in chemistry as a basis for studies in chemical physics, medicine and related fields, environmental studies, and technical-legal or technical-business careers. Students interested in sales or management careers in the chemical industry might consider taking the minor in management of the School of Economics and Management.

Forty-one credits in chemistry and admission to major standing are required for the Bachelor of Arts degree, including the core curriculum plus two credits of CHM laboratory, one additional CHM lecture course above 400, and two semesters of CHM 400.

Requirements for the Major in Chemistry, B.S. Program

The Bachelor of Science chemistry degree program consists of a core curriculum plus a set of advanced courses. The program provides the graduate with American Chemical Society Certification. The requirements are admission to major standing and a minimum of 48 credits in chemistry consisting of the core curriculum and an advanced course program.

Advanced Course Program: In selecting advanced courses students may tailor their programs to fit specific career objectives, such as industrial chemistry, biochemistry, graduate study, research, medicine, or dentistry. Students should plan their programs in consultation with a faculty adviser; advanced course programs must be approved as part of the application for major standing. In addition to the core curriculum, the B.S. degree requires CHM 444 and 9 additional credits in chemistry courses numbered above 300. These 9 credits must include at least 2 credits of laboratory. Also, 4 or more credits of BCM, BIO, APM, MTH, STA, or PHY courses numbered above 250 are required.

Research

The Department of Chemistry offers exceptional opportunities year-round for interested and qualified students to participate in faculty research. Course credit for

research may be earned in CHM 290 and 490. Also, employment opportunities or fellowships are often available. Such research experience is of particular value to students preparing for graduate study or industrial employment.

Students should feel free to discuss research opportunities with members of the chemistry faculty. Specific arrangements with an individual faculty member must be made before enrollment in CHM 290 or 490.

Departmental Honors

Departmental honors may be awarded to graduating seniors in chemistry who have been recommended for honors by their research advisers and have completed all required science courses with high grades.

Advanced Courses in Chemistry

Chemistry majors take one or more advanced courses in areas of interest. In addition to the courses listed in this catalog, the following advanced courses are open to qualified undergraduates: CHM 521, 522, Advanced Analytical; CHM 534, 535, Advanced Organic; CHM 540, Symmetry in Chemistry; CHM 541-542, Advanced Physical; CHM 553, 554, Advanced Biochemistry; CHM 563, 564, Advanced Inorganic; and CHM 570, Industrial Chemistry. Course details are listed in the *Graduate Catalog.*

Biochemistry Program

In cooperation with the Department of Biology, the Department of Chemistry offers a B.S. degree program with a major in biochemistry. (See page 142.) Courses used to fulfill the requirements for a major in biochemistry may not be used simultaneously to fulfill the requirements for a major in chemistry.

Requirements for the Liberal Arts Minor in Chemistry

Students in other departments who wish to minor in chemistry must take CHM 144-145, 149, 203-204, 225, or 234-235, and 342.

Requirements for the Secondary Teaching Minor in Chemistry

Twenty credits in chemistry courses are required.

Concentration in Preprofessional Studies in Medicine, Dentistry, and Optometry

Students can take a concentration in preprofessional studies by adding the required biology courses to a regular chemistry major program. Consult a departmental adviser before planning this concentration.

ENGINEERING CHEMISTRY PROGRAM

The program in engineering chemistry, which is offered by the Department of Chemistry in cooperation with the School of Engineering and Computer Science, leads to the Bachelor of Science degree with a major in engineering chemistry. It is intended for well-qualified students who seek a basic preparation in engineering along with a highly professional chemistry program.

Program requirements for the Bachelor of Science degree in engineering chemistry include:

The following mathematics, physics, and computer science courses: MTH 154-155; MTH 254; APM 257; PHY 151-152, CIS 327.

The following chemistry courses: CHM 144-145; CHM 149; CHM 234-235; CHM 237; CHM 342-343; CHM 344 (to be offered in future years); CHM 348;

CHM 471; choice of 6 credits from CHM 462-463, CHM 472, CHM 477, CHM 570.

The following engineering courses: EGR 101; ECE 171; ECE 222; ME 221; ME 331; SYS 325; choice of 8 credits from ME 438, ME 448, ME 455, ME 482, SYS 431.

General education credits in the following areas: 4 each in arts, literature, and social sciences; 8 in language and thought; and 4 in history, philosophy, and area studies.

For a complete description of the program see the listing under the School of Engineering and Computer Science.

American Chemical Society Certification

The Department of Chemistry faculty, facilities, and curriculum meet the criteria of the American Chemical Society. This allows the department to certify chemistry students as eligible for society membership. Certification is granted to students who have successfully completed the requirements for the Bachelor of Science major in chemistry.

Placement in Introductory Chemistry Courses

The various introductory courses (CHM 104, 140, 144, and 164) are for students in different majors and with different levels of mathematical and physical science preparation. In order to assure the best choice of course, *each student must take the Chemistry Placement Test before registering for any of these courses.* Placement is based on the test results, student's declared major, and high school science and mathematics experience. Consult the department office or the class schedule for additional details and test dates and times.

UNDERGRADUATE COURSE OFFERINGS

Credit will not be allowed for more than one course from each of the following pairs: CHM 206-207 and 238, 203 and 234, 204 and 235. Credit will not be allowed in major and minor programs for degrees in chemistry, biology, or physics for the following courses: CHM 104, 110, 140, 201, 341, and 497 (except for secondary education).

CHM 104 Introduction to Chemical Principles (4)
CHM 104-201 constitutes a complete two-semester sequence in general, organic, and biological chemistry. Recommended preparation is two years of high school mathematics, including algebra, and one year of high school science.
Prerequisite: Chemistry Placement Test. Corequisite: MTH 102, or placement in MTH 103 or higher.

CHM 110 Chemistry in the Modern World (4)
Designed for students without science background who seek an understanding of the chemical nature of our world. Both historical perspectives and current applications are considered.

CHM 140 Foundations for Chemistry (4)
Basic chemical facts and concepts providing background and problem-solving skills in general chemistry. Intended especially for students needing additional preparation before enrolling in CHM 144.
Prerequisite: Chemistry Placement Test. Corequisite: MTH 102, or higher MTH course.

CHM 144-145 General Chemistry (4 each)
Stoichiometry, states of matter, atomic and molecular structure, thermochemistry, equilibrium, and kinetics. CHM 144-145 are prerequisite to all other chemistry courses except CHM 201. Recommended preparation is three years of high school mathematics and one year of high school chemistry.
Prerequisite: Chemistry Placement Test. Corequisite: MTH 104 or higher.

CHM 149 General Chemistry Laboratory (2)
Introduction to the basic techniques of chemistry experimentation.
Prerequisite: Grade of 2.0 or higher in CHM 144. Corequisite: CHM 145.

CHM 164-165 General Chemistry (Honors) (4 each)
Intensive introduction to general chemistry for the well-prepared student. Recommended preparation as for CHM 144-145, plus high school physics.
Prerequisite: Chemistry Placement Test or by invitation. Corequisite: MTH 154-155.

CHM 167-168 General Chemistry Laboratory (Honors) (1 each)
Selected experiments emphasizing modern laboratory practice.
Corequisite: CHM 164-165.

CHM 201 Introduction to Organic and Biological Chemistry (4)
Brief study of organic chemistry, emphasizing biochemical applications.
Prerequisite: CHM 104.

CHM 203-204 Organic Chemistry (4 each)
Structure, properties, and reactivity of organic compounds. Intended primarily for majors in biology and health sciences. Preprofessional students should take CHM 234-235.
Prerequisite: CHM 145.

CHM 209 Organic Chemistry Laboratory (2)
Basic techniques of synthesis, degradation, and identification of organic substances.
Prerequisite: CHM 149 and CHM 203. Corequisite: CHM 204.

CHM 225 Analytical Chemistry (4)
Theory and techniques of analytical chemistry, including gravimetric, titrimentric, electrochemical, and spectrophotometric methods. Two hours lecture and eight hours laboratory per week.
Prerequisite: CHM 149.

CHM 234-235 Organic Chemistry (4 each)
A comprehensive introduction to organic chemistry, with emphasis on modern theory and synthetic methods. Intended primarily for chemistry majors and preprofessional students.
Prerequisite: CHM 145.

CHM 237 Separations and Spectroscopy Laboratory (2)
Practical applications of spectroscopy (IR, NMR, UV, mass-spectrometry) and chromatography (GC, HPLC) to the study of organic compounds.
Prerequisite: CHM 225 and 234. Corequisite: CHM 235 or 204.

CHM 238 Organic Synthesis Laboratory (2)
Synthesis and characterization of aliphatic and aromatic compounds.
Prerequisite: CHM 235 and 237.

CHM 290 Introduction to Research (1, 2, 3, or 4)
Introduction to laboratory research for students with no previous research experience. May be repeated for credit. Graded S/N.
Prerequisite: Permission of instructor.

CHM 341 Mathematical Techniques for Chemistry (1)
Study and practice in applications of calculus to chemical problems. Graded S/N.
Prerequisite: CHM 145 and MTH 155. Corequisite: CHM 342.

CHM 342 Physical Chemistry I (3)
Applications of thermodynamics to chemical systems and equilibria.
Prerequisite: CHM 145 or 165. Corequisite: MTH 155 and PHY 151.

CHM 343 Physical Chemistry II (3)
Macroscopic studies of kinetics, electrochemistry, and transport phenomena as applied to chemical systems, and introduction to quantum mechanics.
Prerequisite: CHM 342. Corequisite: PHY 152.

CHM 348 Physical Chemistry Laboratory (2)
Experiments in thermodynamics, kinetics, phase equilibria, and advanced spectroscopy with emphasis on mathematical treatment of experimental data.
Prerequisite: CHM 225 and 342. Corequisite: CIS 327 and CHM 343.

CHM 400 Seminar (0)
Discussions of recent advances and topics of current interest; reports. Graded S/N.
Prerequisite: Senior standing.

CHM 428 Analog Electronics for Chemistry (2)
Introduction to basic circuit theory, with emphasis on practical electronic understanding of

instrumentation and simple electronic techniques. Construction of modern circuitry for chemical measurement. Lecture and lab.
Prerequisite: CHM 225. Corequisite: MTH 154.

CHM 429 Digital Electronics for Chemistry (2)
Laboratory course emphasizing basic understanding of logic theory, digital devices, A/D and D/A conversion, logic programming, microprocessor operation, and interfacing.
Prerequisite: CHM 428. Corequisite: CIS 327.

CHM 444 Physical Chemistry III (3)
Introduction to statistical mechanics. Applications of quantum and statistical mechanics to chemical bonding, molecular structure, and spectroscopy.
Prerequisite: CHM 343 and MTH 254.

CHM 453-454 Biochemistry (3 each)
A comprehensive introduction to molecular biology and biochemistry, including the structure and function of nucleic acids, proteins, enzymes, carbohydrates and lipids, enzyme kinetics, metabolism, and metabolic controls. Identical with BCM 453-454.
Prerequisite: CHM 204 or 235.

CHM 457 Biochemistry Laboratory (2)
Techniques of extraction, separation, identification, and quantification of biomolecules, including electrophoresis, chromatography, and radioisotope techniques, with emphasis on mathematical treatment of experimental data.
Prerequisite or corequisite: CHM 453.

CHM 458 Biochemistry Projects (2)
Advanced project-oriented instruction in biochemical laboratory techniques.
Prerequisite: CHM 457 and permission of instructor.

CHM 462-463 Inorganic Chemistry (2 each)
Structure, bonding, and reactivity of inorganic compounds, with emphasis on transition metals and selected main group elements.
Prerequisite: CHM 342.

CHM 466 Inorganic Synthesis Laboratory (2)
Synthesis, analysis, and characterization of inorganic and organometallic compounds.
Prerequisite: CHM 238. Corequisite: CHM 462.

CHM 471 Macromolecular Chemistry (3)
Preparation, properties, and structure of selected inorganic and organic polymers. Both chemical theory and technological applications will be discussed.
Prerequisite: CHM 204 or 235.

CHM 472 Mechanical Properties of Polymers (3)
Relationship between structure and mechanical behavior for polymeric, polymer-reinforced, and composite materials.
Prerequisites: CHM 204 or 235, and 471.

CHM 477 Macromolecular Laboratory (2)
Introduction to the synthesis and physical characterization of synthetic polymers.
Prerequisite: CHM 238.

CHM 480 Selected Topics (1, 2, 3, or 4)
Advanced study in selected areas; normally involves preparation of a term paper or presentation of a seminar. May be repeated for credit.
Prerequisite: Permission of instructor.

CHM 486 Physical-Analytical Projects (1 or 2)
Advanced experimentation in physical or analytical chemistry, with at least four hours per week per credit.
Prerequisite: Permission of instructor.

CHM 487 Synthesis Projects (1 or 2)
Advanced synthesis work emphasizing modern techniques, with at least four hours per week per credit.
Prerequisite: Permission of instructor.

CHM 490 Research (1, 2, 3, 4, or 6)
Laboratory practice in undergraduate research, with at least four hours per week per credit.

May be repeated for credit. Graded S/N.
Prerequisite: Permission of instructor.

CHM 497 Apprentice College Teaching (2 or 4)
Directed teaching of selected undergraduate chemistry courses. May be repeated for credit. Graded S/N.
Prerequisite: Permission of instructor.

DEPARTMENT OF ECONOMICS

PROFESSORS: *Eleftherios N. Botsas, Karl D. Gregory, Robbin R. Hough, Sid Mittra*

ASSOCIATE PROFESSORS: *David P. Doane (area head for economics), Alice C. Gorlin, Oded Izraeli, Martha R. Seger, Miron Stano, John E. Tower*

ASSISTANT PROFESSORS: *Augustin K. Fosu, James E. Mallett, Thomas R. McCarthy, Scott A. Monroe, Gerald V. Post, Leonard C. Schwartz, Ronald L. Tracy*

INSTRUCTOR: *Laura Stern*

ADJUNCT PROFESSOR: *Theodore O. Yntema*

VISITING ASSISTANT PROFESSOR: *Satnarine Heeralall*

LECTURERS: *David W. Essig, Douglas R. Munro, Dennis M. Polak*

The curriculum for the major or minor in economics combines the concepts and tools of economic analysis, a broad general education, and the freedom to take several courses in other areas of interest to the student. The student learns how economic analysis can be applied to major problems facing individuals, businesses, the nation, and the world today.

An education in economics is excellent preparation for entry into law school, a graduate school of public administration or management, or a Master of Business Administration (M.B.A.) program. Economics is a flexible choice for the student seeking a rigorous, well-respected, and relevant major without specializing in a narrowly defined area. To be employed as a professional economist or to teach economics, a student normally will need to proceed to graduate school and obtain at least a master's degree in economics and preferably a doctorate.

The four economics programs offered are: Bachelor of Arts with a major in economics; Bachelor of Science with a major in economics (offered by the School of Economics and Management); and minors in economics and international economics. Program descriptions are offered in the School of Economics and Management listings of this catalog.

The economics faculty and program are an integral part of the School of Economics and Management, which is responsible for establishing the curriculum, advising, and other administrative matters.

Requirements for the Liberal Arts Major in Economics

To obtain a background in mathematics, statistics, and computers, the economics major must complete each of the following cognate courses with a grade of 2.0 or better:

		Credits
MTH 102/103	College Algebra (if necessary)	0-4
MTH 121 and	Linear Programming, Elementary Functions	
MTH 122 or	Calculus for the Social Sciences	
MTH 154, 155	Calculus	8
CIS 122 or 123 or	BASIC Programming	
CIS 130	Introduction to Computer Science I	4
QMM 250	Statistical Methods	6
		18-22

The required core courses for the economics major are:

ECN 210 or	Principles of Economics (a six-credit course that covers the material of both ECN 200 and ECN 201)	
ECN 200	Principles of Macroeconomics	
ECN 201	Principles of Microeconomics	6-8
ECN 301	Intermediate Microeconomics	4
ECN 302	Intermediate Macroeconomics	4
ECN 418 or	Seminar in Economic Policy	
ECN 480	Seminar in Economic Theory	4
		18-20

The economics elective requirement is 16 additional credits in courses numbered ECN 300 or higher. Eight of these economics elective credits must be in courses numbered ECN 400 or higher. No more than 4 credits in ECN 490 may be counted as economics electives.

Requirements for Major Standing

Admission to major standing in economics requires:

1. Certification of writing proficiency.
2. Completion of the following courses, or their equivalents, with a grade of 2.0 or better in each course: MTH 121-122, CIS 122 or 123, ECN 210 (or ECN 200-201), and QMM 250.
3. Completion of 56 credits or more with a cumulative overall grade point average of 2.00 or better.
4. Approval of an "Application for Major Standing in Economics."

Admission to major standing in economics is required before a student may take 400-level courses and graduate.

Departmental Honors

Economics majors are eligible for departmental honors if their grade point average in all economics and other courses taken from the School of Economics and Management is 3.33 or higher. Promising economics students may be invited to join Omicron Delta Epsilon, a national economics honors society.

Minor in Economics

The economics faculty believe strongly in their role as providers of education in economics to a broad range of students in other majors. Even a moderate contact with the concepts and applications of economics will be valuable to most students. The minor in economics provides recognition to the student who does not want a major in economics, but who has taken several courses in the area.

The minor in economics is open to all students except those pursuing a major in economics or an area of management. It consists of a minimum of 18 credits in ECN courses. For program details see the School of Economics and Management listing.

COURSE OFFERINGS

A detailed description of the economics courses is given in the School of Economics and Management section of this catalog. The following is a general description of economics courses.

ECN 150 is an introductory economics course for students not majoring in economics or management. After ECN 150 students may take certain economics courses numbered less than ECN 350. ECN 150 may be used to meet part of the college's general education requirement in social sciences.

ECN 200 and ECN 201 are introductory courses for students who intend to major in economics or management or any students who desire a more complete development of economics. The accelerated course, ECN 210, combines the material of ECN 200 and ECN 201 into a single-semester, six-credit course. Highly motivated

and well-prepared students should consider ECN 210 instead of ECN 200-201.

The intermediate economic analysis courses (ECN 301 and ECN 302) are designed for students who intend to major in economics or an area of management. Students may be admitted to these courses if they are pursuing a minor in economics.

Economics electives numbered 309 through 347 are applications of economics that are open to students who have taken ECN 150. Economics electives numbered 350 through 385 are intermediate courses in applications of economics intended for majors or minors in economics or management.

Economics courses numbered 405 or higher are advanced courses. Enrollment in these courses is limited to students with major standing in economics or an area of management. Other students may take these courses with the permission of the instructor.

A detailed description of the economics courses is given in the School of Economics and Management section of this catalog. The following is a list of economics courses.

ECN 150	Basic Economics (4)
ECN 200	Principles of Macroeconomics (4)
ECN 201	Principles of Microeconomics (4)
ECN 210	Principles of Economics (6)
ECN 301	Intermediate Microeconomics (4)
ECN 302	Intermediate Macroeconomics (4)
ECN 309	Urban Economic Problems (4)
ECN 310	Economics of the Environment (4)
ECN 321	Money, Credit, and the Economy (4)
ECN 326	Economic Development (4)
ECN 328	American Economic Development (4)
ECN 338	Economics of Human Resources (4)
ECN 341	The Soviet Economy (4)
ECN 347	Problems in Health Economics (4)
ECN 350	Comparative Economic Systems (4)
ECN 356	Public Finance (4)
ECN 373	International Trade and Finance (4)
ECN 378	Economic Analysis of Law (4)
ECN 385	Industrial Organization (4)
ECN 405	Econometrics (4)
ECN 409	Urban Economics (4)
ECN 414	Engineering Economics (2)
ECN 418	Seminar in Economic Policy (4)
ECN 467	Economics of Health Care (4)
ECN 468	Labor Economics (4)
ECN 480	Seminar in Economic Theory (4)
ECN 490	Independent Study (2 or 4)

DEPARTMENT OF ENGLISH

CHAIRPERSON: *Robert T. Eberwein*

PROFESSOR EMERITA: *Gertrude M. White*

PROFESSORS: *Maurice F. Brown, John P. Cutts, Joseph W. DeMent, Peter G. Evarts (English and Rhetoric), Thomas Fitzsimmons, James F. Hoyle*

ASSOCIATE PROFESSORS: *Herbert Appleman, Robert L. Donald, Jane D. Eberwein, Robert T. Eberwein, Nigel Hampton, David W. Mascitelli, Brian F. Murphy, Joan G. Rosen, Helen J. Schwartz*

ASSISTANT PROFESSORS: *Melodie J. Monahan, Mark E. Workman*

ASSOCIATED FACULTY: *Professor Donald E. Morse (Rhetoric and English), Professor William Schwab (Linguistics and English), Associate Professor Daniel H. Fullmer (Linguistics and English)*

The Department of English offers courses in British and American literature, introducing students to literary history, genre studies, critical theory, and intensive study of major authors. Courses in language, mythology, folklore, and film broaden the field of literary inquiry in ways that associate imaginative writing with the other arts, with popular culture, and with various academic disciplines. The department also provides frequent opportunities for training in writing: creative writing courses, writing tutorials, courses in advanced expository and persuasive writing, technical writing courses, and written assignments for literature courses.

By majoring in English, a student can enhance appreciation of literary masterpieces, gain critical understanding of imaginative writing, and develop sensitivity to the uses of language while developing skills in analysis, research, and communication. Such knowledge enriches all aspects of life, while such skills prepare students for careers in law, business, publishing, medical professions, library science, journalism, government, and education. The curriculum is flexible; by seeking regular departmental advice, the English major can plan a program leading to many different professional and academic goals. The department encourages its students to balance their programs with such concentrations as American studies, comparative literature, environmental studies, film aesthetics and history, and women's studies, computer science, or with minors in linguistics, journalism, theatre arts, management, modern languages, and other related fields. Majors from other university programs are welcome in English courses, many of which have no prerequisites. Evening students can complete the liberal arts English major entirely through night courses.

For description of each semester's course offerings, students should consult the *Advising Memo,* available in preregistration periods in the department office. Faculty advisers provide specific guidance or help the student develop a comprehensive educational plan; students should consult their advisers regularly. For information about the English major and associated programs students should consult *English: The Undergraduate Major,* available in the English department office.

Listed below are undergraduate programs of study leading to the degree of Bachelor of Arts with a major in English, a major with concentrations, a secondary teaching minor in English, and a liberal arts minor. The department offers programs leading to the degrees of Master of Arts in English and (in cooperation with the School of Human and Educational Services) Master of Arts in the Teaching of English. Programs and course offerings in these programs are described in the *Oakland University Graduate Study Catalog.*

Requirements for the Liberal Arts Major in English

ENG 140 (to be taken in either semester of the first year), two courses in British literary history chosen from among ENG 354, 355, 356 and 357, and an additional 28 credits from offerings in English are required. Of these, at least 12 credits must be taken at the 300 level or above, and at least 4 of these must be in a 400-level seminar. Only one course at the 100 level (in addition to ENG 140) will be accepted for credit toward the major.

Departmental Honors

Candidates for departmental honors in English must have a 3.60 or better average in English courses at the end of their next to last semester, and must submit an honors paper to the departmental Honors Committee by the end of the eighth week of their last semester. This paper may be creative writing, or a report of a secondary education project, or a paper from a 300- or 400-level course. The honors paper, which must be rewritten for this occasion, will be reviewed orally with the candidate at a meeting of the Honors Committee.

Requirements for the Modified Major in English with a Linguistics Concentration

The modified English/linguistics major, requiring 24 credits in English and American literature, including ENG 140, and 20 credits in linguistics, is listed under linguistics offerings of this catalog.

Requirements for the Liberal Arts Minor in English

English 140, plus 16 other credits in English courses (exclusive of composition courses used to satisfy the writing proficiency requirement) are required. At least two courses must be taken at the 300 or 400 level. Only one 100-level course will be accepted, in addition to ENG 140, as part of the minor.

Requirements for the Secondary Teaching Minor in English

Required for a minor are 24 credits from offerings in ENG, including ENG 140, one course in British literature, one course in American literature, and one course in writing, excluding ENG 213. At least two courses must be taken at the 300 or 400 level. All students planning on obtaining the minor should consult with an adviser in the department.

UNDERGRADUATE COURSE OFFERINGS

Courses in the 100s (except ENG 140) are directed to students seeking nontechnical liberally oriented courses to fulfill general education requirements or for use in minors and particular concentrations. Courses of the 200 level offer broad introductions to literary materials and approaches basic to the study of English. Reading is often extensive, and the classes are conducted primarily through lecture. Courses of the 300 level offer more intensive investigations into particular areas of English studies. These courses, the core of the program for majors, are open to advanced students according to their special needs and their preparation in related disciplines. Courses in the theory and methods of literary history, criticism, and research, applied to problems presented by a specific topic or writer, are offered at the 400 level. They are designed for upperclass majors. Graduate courses on the 500 level are open to senior majors by permission of the instructor and the departmental chairperson.

ENG 100 Masterpieces of World Literature (4)
A survey acquainting the student with some of the great books of the world. Emphasis on the Western literary tradition.

ENG 105 Shakespeare (4)
A general introduction to representative dramatic works of Shakespeare. For students seeking an English elective or a course to satisfy the distribution requirement in literature.

ENG 111 Modern Literature (4)
A general introduction to some phase of modern literature. Sample offerings might be: modern drama, modern American fiction, or continental literature. For students seeking an English elective or a course to satisfy the distribution requirement in literature.

ENG 120 Literature of Fantasy and Science Fiction (4)
May emphasize either fantasy or science fiction in any given term, and may present an historical view or deal with current trends in the literature.

ENG 140 Introduction to Literary Studies (4)
Practice in the techniques of reading literature and introduction to important basic concepts of criticism and commentary. Required of majors and minors in English.

ENG 200 Topics in Literature and Language (4)
Topics or problems selected by the instructor.

ENG 210 Expository Writing (4)
A systematic approach to writing designed to enhance the student's writing skills. Prerequisite: RHT 101 or equivalent.

ENG 211 The Bible as Literature (4)
Study of the types of literature found in the Old and New Testaments. Identical with REL 211.

ENG 213 Writing Laboratory (2)
Small group or individual instruction to improve writing skills and styles in ways applicable to college work as well as career goals. May be taken two semesters for credit. May be added through the seventh week of the semester. Graded S/N.
Prerequisite: RHT 101 or equivalent.

ENG 214 Introduction to Folklore (4)
The major forms of traditional artistic expression (folktale, myth, legend, proverb, ballad, ritual) studied in their literary and cultural contexts.

ENG 215 Fundamentals of Grammar and Rhetoric for Secondary Teachers (4)
A course treating the relationship of the study of language systems to composition and exploring various grammatical and rhetorical models useful in teaching writing. Required of all secondary education majors in English. Open to secondary education majors in other fields.
Prerequisite: RHT 101 or equivalent.

ENG 224 American Literature (4)
Introduction to literary analysis and appreciation through readings in the American literary tradition. Emphasis on such authors as Hawthorne, Melville, Dickinson, and James.

ENG 241 British Literature (4)
Introduction to literary analysis and appreciation through readings in the British literary tradition. Emphasis on such authors as Chaucer, Shakespeare, and Dickens.

ENG 250 Film: A Literary Approach (4)
Exploration of the dramatic and narrative content of classic and modern films, treating such elements as theme, motif, symbol, imagery, structure, and characterization, and cultural and philosophical implications.

ENG 300 Special Topics in Literature and Language (4)
Special problems or topics selected by the instructor.

ENG 301 Poetry (4)
The major forms of poetic expression studied from generic and historical points of view.

ENG 302 Popular Culture (4)
The major forms of popular expression (mystery, westerns, science fiction, romance) in literature and related media (film, television, music) studied in their cultural contexts.

ENG 303 Fiction (4)
The major forms of narrative fiction (short story, novella, novel) studied from generic and historical points of view.

ENG 304 Studies in Literary Mode (4)
A major literary mode (such as tragedy, comedy, epic, romance, satire) studied from generic and historical points of view.

ENG 306 Drama (4)
The major forms of dramatic expression studied from generic and historical points of view.

ENG 307 Modern Drama (4)
Studies in English, American, and Continental drama since Ibsen.

ENG 308 Playwriting (4)
A study of plays from various periods and theatrical styles, and an exploration of principles and techniques of dramatic writings. The last half of the course will be devoted exclusively to student scripts. Enrollment limited to 20.
Prerequisite: Permission of instructor.

ENG 309 Scriptwriting (4)
A study of screen plays and films, exploring principles and techniques of dramatic writing, with emphasis on problems posed by a primarily visual medium. The last half of the course will be devoted to student scripts. Enrollment limited to 20.
Prerequisite: Permission of instructor.

ENG 310 Workshop in Writing (4)
Intermediate-level workshop for apprentice writers in poetry or fiction, the emphasis varying from semester to semester.
Prerequisite: RHT 101 or equivalent.

ENG 311 Chaucer (4)
The major works, with emphasis on *The Canterbury Tales* and *Troilus and Criseyde.*

ENG 312 Classical Mythology (4)
The principal Greek and Roman myths and their uses in classical and post-classical art and literature.

ENG 313 Myth in Literature (4)
Study of the mythic content and/or structure of literature.

ENG 314 Folklore in Literature (4)
Reflection of folk themes, images, and structures in British and American literature by authors such as Twain, Faulkner, Hardy, and Joyce.

ENG 315 Shakespeare (4)
Reading and discussion of representative plays and poetry.

ENG 316 Milton (4)
His major poetry, with emphasis on *Paradise Lost* and some attention to his prose.

ENG 317 Early American Literature (4)
Studies in colonial and early national American literature with emphasis on such writers as Bradstreet, Taylor, Edwards, and Franklin.

ENG 320 American Poetry (4)
Studies in American poetry from its origins with emphasis on the major writers of the nineteenth and early twentieth centuries such as Poe, Whitman, Dickinson, Frost, Eliot.

ENG 322 Nineteenth Century American Fiction (4)
Readings in the novel, tale, and sketch with emphasis on major writers such as Hawthorne, Melville, Twain, and James.

ENG 324 Issues in American Literature (4)
Study of literary works ranging across period and/or genre in their relation to a central issue, theme, or problem in American literature. Representative topics are romanticism, the puritan tradition, American humor, and the writer and American society.

ENG 332 Modern American Fiction (4)
Studies in American fiction since the turn of the century with emphasis on such figures as Faulkner, Hemingway, West, Dos Passos, Steinbeck, and Fitzgerald.

ENG 333 Modern Poetry (4)
Studies in poetry since the turn of the century. The course may emphasize American or British in any given semester or discuss international currents in modern poetry.

ENG 340 Writing Now: (4)
Verbal arts in contemporary contexts. Writing and related arts—any or all combinations.

ENG 341 Selected Ethnic Literature (4)
Reading and critical analysis of representative selections from American ethnic literature. Special attention to groupings such as American-Jewish and Native American at discretion of instructor.

ENG 342 Black American Writers (4)
A study of black literary figures and the black experience in literature, with emphasis on the works of Gwendolyn Brooks, Ralph Ellison, James Baldwin, and other representative writers.

ENG 345 Varieties of Literary Experience (4)
Teaches the future elementary school teacher how to distinguish and analyze various types of literature as short stories, poems, and folktales. Attention to possible applications of materials and concepts to the teaching of language arts. (Not for English major credit.)

ENG 350 Topics in Film (4)
Topic or problem to be selected by the instructor.

ENG 354 British Medieval Literature (4)
Development of Old and Middle English literature to about 1500. Emphasis on the major works from *Beowulf* to Chaucer and Malory.

ENG 355 British Literature of the Renaissance (4)
Literature from about 1500 to 1660. Emphasis on the development of the sonnet and lyric, drama, prose, and epic. Consideration of such major authors as Sydney, Donne, Shakespeare, and Milton.

ENG 356 British Literature from the Restoration to Romanticism (4)
From 1660 to the Romantic revolution of the early nineteenth century. Consideration of such major authors as Dryden, Swift, Pope, Johnson, Burns, Blake, Wordsworth.

ENG 357 British Literature of the Victorian and Early Modern Periods (4)
From the Victorians to the 1920s. Among the major authors to be considered are Tennyson, Browning, Arnold, Carlyle, Rossetti, Hopkins, Shaw, Yeats, and Wilfred Owen.

ENG 369 The English Novel (4)
A study of the origin and development of the English novel from its beginnings to the early twentieth century. Among the novelists to be considered are Nashe, Fielding, Richardson, Austen, Dickens, Conrad, Lawrence, and Joyce.

ENG 375 Modern Literature (4)
Modern British, American, and/or Continental literature, with concentration on the work of a small number of writers.

ENG 376 History of the English Language (4)
A detailed survey of the English language from its beginning to modern times.

ENG 377 Modern English Grammar (4)
A survey of English structure, especially of syntax, with descriptions based on the work of important contemporary scholars.

ENG 380 Analytical and Persuasive Writing (4)
A practical course in analytical writing designed for preprofessional students. Emphasis will be placed on persuasion, argumentation, organization, and style.
Prerequisite: RHT 101 or equivalent.

ENG 382 Business and Technical Writing (4)
Instruction, practice, and critique in writing business communications (letters, memoranda, reports, and technical communications).
Prerequisite: RHT 101 or equivalent.

ENG 385 Interdisciplinary Issues (4)
The relationship of literature and literary study to one of the following disciplines: science, philosophy, psychology, religion, music, or the visual arts. The second area will vary from semester to semester.

ENG 390 Literary Theory and Critical Methods (4)
Studies in modern critical methods, with emphasis on formal analysis, structuralism, and myth criticism. Application of critical approaches and techniques.

ENG 391 History of Literary Criticism (4)
The development of literary criticism, presented as a survey with emphasis on major theorists. Significant applications of theory examined.

ENG 392 History and Theory of Film Criticism (4)
Study of major critical approaches to film such as those of Eisenstein, Kracauer, Arnheim, Bazin, Sarris, Wollen, and Metz.
Prerequisite: A course in film.

ENG 399 Field Experience in English (4)
Field experience in appropriate employment correlated with directed study assignments, planned by the student, in conjunction with the instructor and the cooperative education office, in the semester prior to enrollment. May not be repeated for credit.
Prerequisite: 16 credits in English, of which at least 8 must be at the 300-400 level.

ENG 400 Advanced Topics in Literature and Language (4)
Advanced topics and problems selected by the instructor.
Prerequisite: Four courses in English.

ENG 401 Studies in Literary Kinds (4)
The study of a single literary kind, whether genre (such as novel, lyric, or drama) or mode (such as tragedy or comedy).
Prerequisite: Four courses in English.

ENG 410 Imaginative Writing (4)
Designed for potential writers of fiction, poetry, and/or drama. The course may focus on one kind of writing, and the approach may shift from semester to semester.
Prerequisite: Permission of instructor.

ENG 451 Major American Writers (4)
Studies in one or two American writers to be selected by the instructor.
Prerequisite: Four courses in English.

ENG 452 Major British Writers (4)
Studies in one or two British writers to be selected by the instructor.
Prerequisite: Four courses in English.

ENG 453 Seminar: Studies in Major Authors (4)
Intensive study of a selected group of authors: British, American, or both.
Prerequisite: Four courses in English.

ENG 465 Shakespeare (4)
Analysis of four or five of the plays.
Prerequisite: Four courses in English.

ENG 490 Advanced Criticism (4)
Studies in criticism, often concentrating on a single school.
Prerequisite: Four courses in English.

ENG 498 The Theories of Teaching Literature, Language, and Composition (4)
Designed for the future teacher of English, this course focuses on materials and methods for teaching English in junior and senior high schools. Offered only during winter semester.A cadetship in a secondary school is required.
Prerequisite: English and language arts secondary education majors only.

ENG 499 Independent Study (2 or 4)
A proposed course of study must be submitted to the prospective instructor in the semester before the independent study is to be taken. Only 8 credits of 499 may apply toward the major. May be elected on an S/N basis.
Prerequisite: Four courses in English.

DEPARTMENT OF HISTORY

CHAIRPERSON: *John Barnard*

PROFESSORS: *Charles W. Akers, John Barnard, Brian P. Copenhaver, Robert C. Howes, George T. Matthews, W. Patrick Strauss, S. Bernard Thomas, Richard P. Tucker*

ASSOCIATE PROFESSORS: *De Witt S. Dykes, Jr., Leonardas V. Gerulaitis, James D. Graham, Gerald C. Heberle, Mary C. Karasch, Joseph A. Klaits, Roy A. Kotynek, Paul M. Michaud, Lawrence D. Orton, Carl R. Osthaus, Anne H. Tripp*

VISITING ASSISTANT PROFESSOR: *Joel Horowitz*

The study of history at the undergraduate level has traditionally been considered one of the major paths to informed and effective citizenship. Its emphasis on broad knowledge, critical reading, careful judgment, and precise writing offers excellent preprofessional preparation for many careers in business, government service, law, the ministry, journalism, and library and museum service. The department guides the student toward these careers and provides an opportunity to support academic preparation with field experience in the community (for example, in a historical society, a museum, or a private or public agency). Oakland University's teacher training program draws on history in the elementary education major and minor concentrations in history/social science, in the secondary teaching major in social studies, and in the secondary teaching minor in history. Careers in college teaching and other forms of professional historical scholarship usually require postgraduate training, toward which solid work in the undergraduate major is extremely important. Students interested in achieving a Ph.D. in history should be aware that most graduate schools require demonstrated competence in one or two modern foreign languages. Every history major should plan his/her course of study in close consultation with a faculty adviser.

The Department of History's undergraduate program leads to a Bachelor of Arts degree. The Department of History offers a Master of Arts program, which is described in the *Oakland University Graduate Study Catalog*. The department offers both undergraduate and graduate courses at night, and students can complete either the B.A. or the M.A. program entirely at night.

Requirements for the Liberal Arts Major in History

The major in history requires 40 credits in history courses. At least 20 of these credits must be in courses numbered 300 or above, and at least 4 credits in a 400-level course are required.No more than 16 credits in independent study (HST 391, 491) may be counted toward the history major.

Departmental Honors

Majors who wish to be considered for departmental honors must submit an application to the history Honors Committee with a paper prepared in connection with regular course work and significantly more ambitious in research and bibliographic scope than a book review. The committee will want the original of the paper, with the instructor's comments and grade. There is no statutory grade point minimum for honors, but the award is seldom made to students with less than a 3.50 average in their history courses.

Requirements for the Liberal Arts Minor in History

The minor requires 20 credits in history courses, including 8 credits in courses numbered 300 or above.

Requirements for the Secondary Teaching Minor in History

The secondary teaching minor requires 20 credits in history courses, including HST 214 and 215.

Course Prerequisites

100-299 Introductory and survey courses have no prerequisites.

300-399 More advanced courses have a general prerequisite of writing proficiency certification plus any special requirements listed beneath the courses.

400-499 Research courses on the most advanced undergraduate level have a general prerequisite of 20 credits in history courses plus any special requirements listed beneath the courses.

COURSE OFFERINGS

HST 100 Topics in History (4)
An introductory course to develop critical judgment regarding the nature and use of historical evidence. Recommended for students with little or no background in college-level history. May be repeated once for a total of 8 credits. Offered each semester.

HST 150 History of Western Civilization (4)
An introduction to significant cultural, social, and political themes in Western experience from ancient times to the present. Offered each semester.

HST 200 European History to 1300 (4)
Ancient and Medieval Europe to 1300: from classical Greece and Rome to the High Middle Ages.

HST 201 European History, 1300 to 1815 (4)
Early Modern Europe, 1300-1815: from the Renaissance and Reformation to the Age of the French Revolution.

HST 202 European History since 1815 (4)
Modern Europe, 1815-present: from Napoleon to the modern age of industrialism, nationalism, and global conflict.

HST 214, 215 Introduction to American History (4 each)
HST 214 is a survey of American political, economic, and social history from the colonial period through the Reconstruction era. HST 215 is a survey of American industrial growth, agricultural protest, experiments with imperialism, domestic reform, and world leadership from 1876 to the present. Both classes offered each semester.

HST 218 History of Michigan (4)
A survey of the political, economic, and social history of the state from the Indian and French settlement to the present. Offered in alternate years.

HST 219 United States since 1945 (4)
A survey of American political, economic, and social history since World War II.

HST 221 American Diplomatic History (4)
The origin, formulation, and development of American foreign policy from the Revolution to the present; topics include the Monroe Doctrine, manifest destiny and imperialism, the Civil War, World Wars I and II, the Cold War, and nuclear diplomacy.

HST 222 American Sport History (4)
The place of sport in American society from the colonial period to the present. Several sports are selected to illustrate developments of major historical significance.

HST 223 History of American Cities (4)
History of American cities from pre-industrial America to the present emphasizing the effect of such forces as industrialization, immigration, migration, trade, economic patterns, and transportation upon city organization and life.

HST 224 History of American Families (4)
History of American families as social institutions emphasizing the impact of historical events and trends upon family composition, family functions, and family life. Includes research in the student's personal family history.

HST 225 Introduction to Ancient History (4)
Surveys the history of the Ancient Near East and the Mediterranean area, including the civilizations of Mesopotamia, Egypt, Persia, Greece, and Rome up to the later Roman Empire.

HST 228 Introduction to Environmental History (4)
History of selected human societies' interaction with the natural environment, especially changing relations among population, food and natural resources. Includes the modern world-system and the acceleration of environmental decline.

HST 234, 235 Introduction to English History (4 each)
HST 234 surveys English history from the Middle Ages to the Glorious Revolution of 1688, emphasizing constitutional development and the Common Law. HST 235 surveys English history from 1688 to the present, emphasizing political, social, economic, and legal development.

HST 250 History of Russia (4)
An introduction to the political, social, and intellectual history of Russia and the Soviet Union from the Kievan State to the Brezhnev era. Offered every year.

HST 254 Eastern European History (4)
The historical development of the peoples and states of East-Central Europe and the Balkans — Poland, Ukraine, Czechoslovakia, Hungary, Rumania, Yugoslavia, and Bulgaria — from the Middle Ages to the present, with emphasis on the period since World War II.

HST 261, 262 Introduction to Latin American History (4 each)
HST 261 is a survey of pre-Columbian and colonial Latin America to 1825, stressing the Hispanization of the society, its socio-economic institutions, the influence of the Enlightenment, and the achievement of political independence. Offered fall semester. HST 262 surveys the national period of Latin America from 1825 to the present, emphasizing the problems of nation building and modernization, the emergence of nationalism and militarism, and the roots of social revolutionary ferment. Offered winter semester.

HST 270 History of Modern Japan (4)
History of Japan from the mid-nineteenth century to the post-World War II reform, recovery, and emergence as an economic power.

HST 282 Introduction to the History of India (4)
A survey of the history of India from the earliest emergence of a recognizable Indian identity

during the second millenium B.C. until the establishment of the Republic of India in 1948.

HST 285 African History (4)
An introduction to the range of African history, from human evolution and Egyptian civilization through the development of divine kingships and international trade, to colonialism, and African responses to European conquest.

HST 292 History of the Afro-American People (4)
Surveys the Afro-American experience from the African background through the Civil War and post-Civil War periods to the present.

HST 302 American Labor History (4)
The economic, social, and political history of the American work force with emphasis on the history of organized labor.

HST 303 American Constitutional History (4)
Origins and development of American constitutional doctrine and interpretation from the colonial period to the present, emphasizing constitutional controversy and change.

HST 306 Colonial and Revolutionary America (4)
The transplantation of European society to continental North America; the subsequent development of political, economic, and social institutions in the colonies; the Anglo-French struggle for the continent; and the American Revolution.

HST 307 American Religious History (4)
A study of American religious history, including religious elements in immigration, separation of church and state, denominationalism and sectarianism, religion and nationalism, religious leadership, and religion as a social force. Identical with REL 307.

HST 310 The Young Republic and the Age of Jackson, 1787-1850 (4)
The making of the Constitution, the social, political, and economic development of the new nation and the subsequent forces affecting expansion, social protest, and sectionalism to 1850. Offered in alternate years.

HST 312 The Civil War and Reconstruction, 1850-1876 (4)
The origins of secession, the wartime problems of the Union and the Confederacy, the principal military campaigns, the Reconstruction era and the creation of a new union, and the significance of the Civil War and Reconstruction in American history. Offered each year.

HST 313 American History, 1876-1900 (4)
The New South, industrial consolidation, the origins of the modern labor movement, the rise of the city, immigration, agrarian protest movements, the businessman's philosophy, and the challenge to laissez-faire.

HST 314 American History, 1900-1928 (4)
Social, political, and economic developments in the U.S. during the progressive era and the decade of the 1920s. Offered in alternate years.

HST 315 American History since 1928 (4)
The myth of the New Era, the social and political impact of the Great Depression, New Deal programs and radical alternatives, the isolationist-internationalist debate, modern Republicanism, and the New Frontier. Offered in alternate years.

HST 316 The American Mind to 1860 (4)
The history of American thought from the colonial period to the Civil War, emphasizing New England Puritanism, the transition from colonies to provinces, the era of the American Revolution, and the origins of modern America.

HST 317 The American Mind since 1860 (4)
Major intellectual trends in the United States from the Civil War to the present, including ideological conflict during the Civil War and Reconstruction, the impact of evolutionary thought, and responses to industrialization and urbanization.

HST 318 Topics in American Social History (4)
Selected topics in the history of popular beliefs, social structure and organization, and the process of social change, including movements of reform.

HST 319 History of the American South (4)
The South from colonial times to the 1960s, emphasizing the transition from the agrarian, slave South of the antebellum period to the modern South of the 20th century.

HST 321 American Diplomatic History in the Twentieth Century (4)
American foreign policy and diplomacy from the Spanish-American War to the present, including American imperialism, Caribbean and Far Eastern policies, involvement in the world wars and the Cold War, and nuclear diplomacy. Offered each year.

HST 323 Topics in Afro-American History (4)
The economic, social, and political activities, status, organizations, and institutions of Afro-American people, emphasizing the 20th century.

HST 325 Medieval Europe (4)
The European Middle Ages from about A.D. 400 to 1300, with special emphasis on intellectual developments. Offered in alternate years.

HST 326 The Italian Renaissance (4)
The European Renaissance period, with emphasis on the Italian experience. Offered in alternate years.

HST 327 The Northern Renaissance (4)
European humanism, with emphasis on the Lowlands, France, and Germany. Offered in alternate years.

HST 329 Europe in the Seventeenth Century (4)
A comparative analysis of European societies: the articulation of absolutism and constitutionalism, the emergence of the European states system, the origins and impact of modern science, the culture of the baroque, and the development of commercial capitalism.

HST 334 Victorian and Edwardian England (4)
The political, social, economic, and intellectual life of England from 1837 to the outbreak of World War I.

HST 335 Twentieth Century Britain (4)
British adjustment to global wars, the loss of empire, economic weakness, and social discord.

HST 338 The Origins of Modern Economics: Smith to Marx (4)
Ideas of the classical economists from Adam Smith to Karl Marx, and how they relate to social and political change in Britain's Industrial Revolution and to more recent economic issues. Offered in alternate years.

HST 341 Europe since 1914 (4)
An analysis of Europe in world perspective since World War I.

HST 343 Germany since 1848 (4)
The history of the German nation-state, concentrating on constitutional and political developments in their social context.

HST 345 France since 1789 (4)
The political development of modern France as a nation-state and the cultural and economic movements connected with French public life.

HST 346 European Witchcraft (4)
A scholarly investigation of witch beliefs and witch trials in Europe, England, and New England. The social and intellectual foundations of witchcraft prosecutions from the Middle Ages to the end of the seventeenth century. Offered in alternate years.

HST 347 Tools of Historical Research (4)
To acquaint history students with the auxiliary sciences of that discipline, with emphasis on historical bibliography and use of the library.
Prerequisite: Junior standing.

HST 348 Europe in the Eighteenth Century (4)
A comparative analysis of European societies: the old regime in Europe, beginnings of industrial development, the Enlightenment as a political and social movement, reform under the monarchy and the emergence of democratic ideologies, and the French Revolution.

HST 349 France in the Age of Absolutism and Enlightenment (4)
The *ancien règime* in France from the end of the wars of religion to the beginning of the Revolution (1589-1789). Offered in alternate years.

HST 350 The European Mind to 1700 (4)
Major developments in European thought from the God-oriented world views of the Middle Ages to the development of scientific concepts in the seventeenth century. Emphasis is on

reading original materials.

HST 351 The European Mind since 1700 (4)
European intellectual movements since the eighteenth-century Enlightenment, emphasizing the impact of evolutionary, utilitarian, and existentialist theories and the criticism of traditional rationalist assumptions. Emphasis is on reading original materials.

HST 353 Imperial Russia (4)
Russian history from Peter the Great to the Bolshevik Revolution: the growth of Russian national power, westernization, serfdom, and revolution.

HST 354 Soviet Russia (4)
Russia and the Soviet Union from 1917 to the present: revolution and civil war, collectivization and industrialization, Stalinism, World War II, de-Stalinization, the Soviet Union and the world communist movement. Offered in alternate years.

HST 359 Russian Intellectual History to Peter the Great (4)
Main intellectual and cultural developments in Russia before Peter the Great. The Russian Church and religious thought, literature, and the development of political ideology will be emphasized.

HST 360 Russian Intellectual History since Peter the Great (4)
Main intellectual and cultural developments since Peter the Great, with emphasis on the nineteenth century. Particular attention is devoted to the slavophiles, the westernizers, the populists and socialists, and several of the great realistic writers.

HST 363 History of Southern South America (4)
The social, political, and economic history of Argentina, Brazil, and Chile in the nineteenth and twentieth centuries; expansion and Indian warfare; slavery and Empire in Brazil; regionalism and nationalism; industrialization and urbanization; and international relations.

HST 365 Colonialism and Nationalism in the Modern World (4)
A comparative survey of selected European colonial systems and the responses of colonized peoples in Latin America, Africa, and Asia. Emphasis on themes such as economic expansion, acculturation, resistance movements, and state formation.
Prerequisite: AS 210 or AS 230 or AS 240 or AS 250.

HST 366 Slavery and Race Relations in the New World (4)
A comparative approach to the study of slavery in North America, Latin America, and the Caribbean, and to present race relations in these areas.

HST 367 History of Mexico (4)
The scope and achievements of pre-Columbian civilizations, the Spanish Conquest, the emergence of a multiracial society, the achievement of political independence and nation-building in the twentieth century.

HST 370 China: Beginnings through Han to A.D. 220 (4)
The history of China from most ancient times to the downfall of the Han Dynasty in 220 A.D.

HST 371 China: From the Three Kingdoms through Ming, 220-1644 (4)
The history of China to the eve of the Manchu conquest in 1644.

HST 373 China: The Final (Ch'ing) Imperial Phase, 1644-1912 (4)
China under Manchu rule, from the conquest to the collapse of the Confucian imperial order in the early twentieth century.

HST 374 China: The Nationalist Republican Period, 1912-1949 (4)
Revolutionary nationalism and political, social, and cultural change under the Chinese Republic from the warlord era to the establishment of the Communist-led People's Republic in 1949, and post-1949 developments in Nationalist-ruled Taiwan.

HST 376 History of Chinese Communism: 1921 to the Present (4)
The revolutionary history of the Chinese Communist movement from its beginning in 1921 to its accession to power in 1949, and the major lines of development under the Chinese People's Republic since 1949.

HST 379 The Ancient Near East and Mediterranean I (4)
The history of the ancient peoples in Mesopotamia, Egypt, Persia, North Africa, and the areas of Greek influence to the Hellenistic period of Alexander the Great.
Prerequisite: HST 225 recommended.

HST 380 The Ancient Near East and Mediterranean II (4)
The history of the ancient peoples in South Western Asia, Northern Africa, and Southern Europe from the Hellenistic Period to the age of Justinian (sixth century A.D.).
Prerequisite: HST 225 recommended.

HST 381 History of Early India (4)
The history of India from the most ancient times to the coming of the Mughals in the early 16th century. Offered winter semester in alternate years.

HST 385 Environment and Politics in Modern Asia (4)
Western imperialism and Asian nationalisms, centering on the struggle for control of natural resources in the principal ecosystems, nationstates and economies of Asia.

HST 386 Contemporary African History (4)
Colonial and postcolonial economic development, political ideologies, and social problems of contemporary Africa. Resistance and revolutionary movements, styles of leadership, and building of nations.
Prerequisite: AS 230 or HST 287.

HST 391 Directed Readings in History (2, 4, or 8)
Independent but directed readings for junior and senior majors in fields of history in which advanced courses are not available. Offered each semester.
Prerequisite: Permission of instructor.

HST 399 Field Experience in History (4)
Field experience in history, with faculty supervision which incorporates student performance in an occupational setting. May not be repeated for credit.
Prerequisite: 24 credits in history, of which at least 8 must be at the 300-400 level.

HST 400 Seminar: Advanced Topics in History (4)
Reading, research, and discussion on a selected historical topic or period. Since topics will vary from semester to semester, students should consult the schedule of classes every semester. Offered each year. May be repeated for credit.

HST 481 Seminar in Historiography (4)
Reading and research in topics analyzing the literature of historical inquiry and writing.

HST 491 Directed Research in History (4, 8, or 12)
Directed individual research for advanced history majors. Offered each semester.
Prerequisite: Permission of instructor.

DEPARTMENT OF LINGUISTICS

CHAIRPERSON: *William Schwab*

PROFESSOR: *William Schwab (Linguistics and English)*

ASSOCIATE PROFESSORS: *Peter J. Binkert (Linguistics and Classics), Daniel H. Fullmer (Linguistics and English)*

ASSISTANT PROFESSOR: *Lucinda Hart-González (Linguistics, and Sociology and Anthropology)*

ASSOCIATED FACULTY: *Professor, Donald C. Hildum (Communication Arts and Linguistics); Associate Professors, John W. Barthel (German and Linguistics), Carlo Coppola (Hindi-Urdu and Linguistics), Don Iodice (French and Linguistics)*

Linguistics is concerned with the objective study of language, language history, comparison of languages, and with theories about human languages and their implications in language acquisition and learning theory. As recent research has indicated, linguistics plays a pivotal role in studies dealing with the nature of the mind. Rapid expansion of knowledge in linguistics has involved such fields as anthropology, computer and information science, language teaching, speech pathology, sociology, and dialectology, and has produced the new disciplines of bio-

linguistics, mathematical linguistics, psycholinguistics, and sociolinguistics as exciting and viable fields.

The Department of Linguistics offers a cross-disciplinary liberal arts major in linguistics leading to the Bachelor of Arts degree, a modified liberal arts major in linguistics with a concentration in computer and information science, concentrations in linguistics with a modified major in departments in the College of Arts and Sciences, and a minor in linguistics.

The department offers a graduate program with several specializations in linguistics. For further information, see the *Oakland University Graduate Study Catalog.*

Requirements for the Liberal Arts Major in Linguistics

1. 28 credits in linguistics courses to include LIN 301, 403, and 404. Only 12 of these credits may be in ALS courses.
2. 12 credits in a cognate area — anthropology, computer and information science, English, modern languages, philosophy, psychology, sociology, or communication arts.
3. Fourth-semester proficiency in a modern or classical foreign language. If the cognate area is in a foreign language, the language proficiency requirement must be met in a different language.

Requirements for Modified Major in Linguistics with a Minor in Computer and Information Science

1. 24 credits in linguistics courses to include LIN 301, 403, and 404. Only 8 of these credits may be in ALS courses.
2. 16 credits in CIS, including CIS 122 or 123, 220, and 385, and one elective.
3. PHL 370.

Requirements for the Liberal Arts Minor in Linguistics

Twenty credits in linguistics courses to include:

1. ALS 176 or one 200-level LIN course.
2. LIN 301.
3. At least 12 credits at the 300 or 400 levels.
4. At least 4 credits at the 400 level.

Requirements for Concentrations in Linguistics with Modified Majors in Other Departments

Students may elect a modified major in anthropology, communication arts, English, philosophy, psychology, or sociology, and may concentrate in linguistics at the same time.

Requirements:

1. 20 credits in LIN or ALS courses to include:
   a. LIN 301
   b. For a major in:

Anthropology	ALS 375
Communications	LIN 401
English	LIN 303
Philosophy	LIN 407
Psychology	ALS 335
Sociology	ALS 376

2. For requirements in the modified majors, consult the appropriate department.

COURSE OFFERINGS IN APPLIED LANGUAGE STUDIES

ALS 102 Studies in Vocabulary and Etymology (4)

A basic course in vocabulary building. The origin of scientific and literary terms; foreign

phrases in current use; borrowing of words into English from other languages, the relationship between meaning and culture; and meaning and context. Course not applicable to LIN programs.

ALS 176 The Humanity of Language (4)
An introduction to the interrelationships of language and other cultural subsystems. Linguistic knowledge, the child's acquisition of language, sound and writing systems, meaning and communication, language and social groups are among the topics discussed.

ALS 200 Techniques of Effective Reading (2)
A practical approach to techniques of critical reading for better comprehension through study of linguistic and other patterns, as well as meaning, in college-level assignments. Frequent exercises supplement the examination of reading techniques. Course not applicable to LIN programs.

ALS 328 Bilingualism (4)
A survey of cultural and psycholinguistic aspects of bilingualism. Topics include bilingualism and intelligence, bilingual-bicultural education, maintenance of individual and communal bilingualism. The course will examine world-wide examples and minority language groups in the U.S.

ALS 334 Language Development in Children (4)
Language acquisition in normal and abnormal children: stages of the acquisition process; the role of the environment; the relationship between language and the development of other skills; language acquisition in children with sensory or psychological disorders.
Prerequisite: ALS 176 or one course in LIN.

ALS 335 Psycholinguistics (4)
The psychology of language, the accommodation between the cognitive and physical structure of humans and the structure of language, the nature of the language learning process, and the consequences of language use. Identical with PSY 335.
Prerequisite: One course in ALS or LIN and one course in PSY.

ALS 340 The Biology of Language (4)
Animal communication and the evolution of man's capacity for language; development of language in normal and abnormal children, disorders of speech, hearing and language, language and the brain, and genetic aspects of language.
Prerequisite: ALS 176 or one course in LIN.

ALS 360 Neurolinguistics (4)
The neurology of language: essentials of neuroanatomy; neurological mechanisms underlying language; aphasia and kindred disorders of speech; the relationship of language to memory, intelligence, and cognition; language and mental retardation and psychological disorders.
Prerequisite: ALS 176 or one course in LIN.

ALS 373 Ethnography of Communication (4)
The systematic description of the interaction of linguistic form, participants, setting, and modes of interaction. Comparison of similar communicative events in simple and complex societies. Readings and guided student research. Identical with AN 373.
Prerequisite: One course in ALS or LIN or AN 102 or SOC 100.

ALS 374 Cross-Cultural Communication (4)
A theoretical and practical examination of the role of language and nonverbal modes in intercultural communication. Problems and strategies for developing awareness of and operational skills in intercultural processes. Identical with AN 374.
Prerequisite: One course in ALS or LIN.

ALS 375 Language and Culture (4)
Language viewed as cultural behavior, its system, acquisition, and use; its relation to history, attitudes, and behavior; standard languages; social dialects; pidgins; and creoles. Identical with AN 375.
Prerequisite: One course in ALS, LIN, or AN 102.

ALS 376 Sociolinguistics (4)
Language in its social context: intrasocietal variation; social evaluation of language varieties (style, dialect) as an influence in language change; and the choice of a language variety as an index of group solidarity, social ideology, and individual attitudes. Identical with SOC 376.
Prerequisite: One course in ALS or LIN or SOC.

ALS 420 Linguistics and Reading (4)
A study of the English writing system: a close examination of spelling and morphology, ambiguity, dialect interference, and derivational vocabulary.
Prerequisite: LIN 301.

ALS 428 The Teaching of English as a Second Language (4)
Approaches, methods, and techniques of teaching pronunciation, grammar, and vocabulary. The use of language tests and laboratory techniques.
Prerequisite: LIN 301.

ALS 429 Practicum (2 or 4)
Supervised experience in some area of applied linguistics, such as working with nonnative speakers of English, tutoring, or other appropriate field work or internship, to be approved by the Department of Linguistics.
Prerequisite: By permission only.

COURSE OFFERINGS IN ENGLISH AS A SECOND LANGUAGE

ESL 100 Semi-Intensive English—Listening, Speaking, and Writing (4)
Concentrates on aural comprehension of adapted and unadapted materials and practice in pronunciation and grammar for communicative competence. Daily practice in writing of acceptable English sentences and short discourse, up to the paragraph. Emphasis on basic grammar.

ESL 101 Semi-Intensive English—Reading (4)
Practice in reading comprehension, including short selections from college texts. Reading materials focus on cultural orientation, particularly to the American university and prevailing teaching, learning, and testing styles.

COURSE OFFERINGS IN LINGUISTICS

LIN 204 Syntax (4)
An introduction to the basic principles of morphological and syntactic structure with emphasis on modern American English.

LIN 207 Semantics (4)
The study of meaning, which involves the relation between speaker, the language, and the real, or imagined, world. Attention is given to modern theories about the organization of thought. Identical with SCN 207.

LIN 300 Topics in Linguistics (4)
Topics and problems selected by the instructor.

LIN 301 Linguistic Structures (4)
An introduction to synchronic linguistic analysis, with structural problems in natural languages.
Prerequisite: ALS 176 or one 200-level LIN course.

LIN 302 Historical Linguistics (4)
Diachronic linguistic analysis: language change, dialect geography, establishment of genealogical relationships, the reconstruction of earlier stages of languages and the relationship of language change to synchronic analysis.
Prerequisite: LIN 301.

LIN 303 Sound Patterns of American English (4)
The fundamentals of articulatory phonetics with studies in American social and geographic dialects.
Prerequisite: ALS 176.

LIN 401 Phonetic Theory (4)
An introduction to articulatory and acoustic descriptions of spoken language, and training in the recognition and production of sounds found in languages other than English. Identical with SCN 401.
Prerequisite: LIN 301.

LIN 403 Phonological Theory (4)
A presentation of theory and application of phonological analysis with emphasis on original work.
Prerequisite: LIN 301.

LIN 404 Syntactic Theory (4)
A presentation of theory and application of morphological and syntactic analysis, with emphasis on original work.
Prerequisite: LIN 301.

LIN 407 Semantic Theory (4)
An inquiry into contemporary efforts to formulate and articulate a theory of meaning adequate for the analysis of natural language, with emphasis on the relation between syntactic and semantic analysis.
Prerequisite: LIN 301.

LIN 410 Studies in the Structure of a Language (4)
A study of the structural aspects of an individual language to be determined by the instructor. Among the languages for study are French, German, Hindi-Urdu, and Sanskrit.
Prerequisite: LIN 301.

LIN 480 Seminar in Linguistics (4)
Topics and problems selected by the instructor.
Prerequisite: LIN 301.

LIN 490 Independent Study (2 or 4)
Special research projects in linguistics.
Prerequisite: Permission of Department of Linguistics.

DEPARTMENT OF MATHEMATICAL SCIENCES

CHAIRPERSON: *Donald G. Malm*

PROFESSORS: *Harvey J. Arnold, Louis R. Bragg, John W. Dettman, George F. Feeman, William C. Hoffman, G. Philip Johnson, Donald G. Malm, James H. McKay, Irwin E. Schochetman, Yel-Chiang Wu*

ASSOCIATE PROFESSORS: *Baruch Cahlon, Charles C. Cheng, J. Curtis Chipman, Jon Froemke, Jerrold W. Grossman, Louis J. Nachman, Subbaiah Perla, Darrell Schmidt, Sze-Kai Tsui, J. Barry Turett, Stuart S. Wang*

ASSISTANT PROFESSORS: *Beth Barron, David J. Downing, Marcia Feingold, Kon Fung, Stephen J. Wright*

ADJUNCT PROFESSORS: *Joseph Assenzo, Seth Bonder, Gary C. McDonald, Edward F. Moylan*

ADJUNCT ASSISTANT PROFESSOR: *Wanda J. Mourant*

The Department of Mathematical Sciences offers programs of study leading to the degrees of Bachelor of Arts with a major in mathematics, Bachelor of Science with a major in mathematical sciences, Master of Science in applied mathematics, Master of Science in applied statistics, and Master of Arts in Teaching in mathematics. In addition, the department offers courses which are required or are recommended as electives in other programs of the university. For further information on graduate programs of the department, see the *Oakland University Graduate Study Catalog.*

Whether in the B.A. or B.S. program, students are encouraged to elect a variety of applied courses both inside and outside the department. The greater the familiarity with applications of mathematics, the greater will be the possibilities of employment in a world which is becoming more mathematics-oriented each year. Concentrations or minors, or possibly even second majors, are available in computer science, the life sciences, the physical sciences, engineering, economics and manage-

ment, the social sciences, and linguistics. Mathematics majors are advised to consult departmental faculty before planning their programs.

The department recommends that all mathematics majors and minors, in either the B.A. or B.S. programs, acquire in their first or second years a programming ability at the level of CIS 130. Note the additional programming requirement for the B.S. program.

Placement Examinations

The department offers a placement exam during orientation, registration, and the first week of classes to place students in the appropriate MTH courses. MTH 101 through 105 are sequentially arranged so that each is a prerequisite for the next in the sequence. These courses also form prerequisites for regular courses as follows:

COURSE	PREREQUISITE
MTH 185	MTH 102
MTH 121	MTH 103
MTH 122	MTH 104 or 121
MTH 154	MTH 104 with 105 as a corequisite

Successful completion of the prerequisite courses or placement out of the prerequisite courses is required for enrollment in all mathematical sciences courses.

Requirements for the Liberal Arts Major in Mathematics, B.A. Program

1. A minimum of 41 credits in mathematical sciences is required. These must consist of MTH 154, 155, 254, 256, 351, 475; one of STA 226, APM 257, or APM 263; and additional courses labeled APM, MOR, MTH, or STA and numbered above 300, including at least one course numbered above 400 other than MTH 414 or MTH 497. MTH 414, however, can count toward the major.
2. Five courses outside the Department of Mathematical Sciences in areas related to mathematics are required. It is recommended that at least two of these be in science.
3. A minimum grade of 2.0 is required in each mathematical science course used to satisfy the major requirements in mathematical sciences.

Requirements for the Major in Mathematical Sciences, B.S. Program

1. A core of 26 credits in mathematical sciences is required: MTH 154, 155, 254, 256, APM 257, 331, and STA 226.
2. An approved program of 20 additional credits in mathematical sciences courses, chosen from the areas below, must be completed, including at least two courses from a single area, with at least two areas represented:
   a. Applicable analysis and mathematical modeling: APM 332, 357, 435, 455
   b. Discrete mathematics: APM 263, 463
   c. Numerical analysis: APM 335, 336
   d. Operations research: MOR 342, 346
   e. Pure mathematics: MTH 351, 352, 361, 372, 415, 453, 461, 465, 475, 476
   f. Statistics: STA 322, 323, 324, 425, 427, 428
3. 16 credits in an area related to the student's option outside the Department of Mathematical Sciences are required.
4. A minimum grade of 2.0 is required in each mathematical sciences course used to satisfy the major requirements in mathematical sciences.
5. Students must complete CIS 130-131 with an average grade of at least 2.00 (or equivalent).

Requirements for the Liberal Arts Minor in Mathematics

To qualify for the liberal arts minor in mathematics, a student must take 20 credits of course work beyond MTH 154 in the department. These credits must include MTH 155, MTH 254, and MTH 256. Two additional courses must be chosen from among STA 226, MTH 351, APM 257, APM 331, APM 263, or any 400-level course from the STA, APM, MOR, or MTH listings except MTH 414 and MTH 497.

Students majoring in engineering or computer and information science should consult "Concentrations and Minors" in the School of Engineering and Computer Science section of this catalog for information on minors in applied mathematics and in applied statistics.

Requirements for the Secondary Teaching Minor in Mathematics

To qualify for the secondary teaching minor in mathematics, a student must take 20 credits of course work in the department. Only MTH 154 and courses with at least MTH 154 as a prerequisite may be used to satisfy this requirement. It is recommended that the student select his/her courses from among MTH 154, 155, 254, 256, 361; APM 257, 331, 332, 263; STA 226 and 322; and MOR 342 and 346.

In addition to the field experiences required for secondary education certification (tutoring in ED 428 and student teaching in ED 455), other field experiences are available in several areas of community service. Interested students should consult the department chairperson for detailed information.

Minor in Computer and Information Science for Mathematics Majors

The requirements for a minor in computer and information science are determined by the School of Engineering and Computer Science. They are:

1. CIS 130
2. Two courses from CIS 131, 220, 221, 280
3. Eight credits from CIS courses labeled 300 or higher (only four credits of CIS 490 may be counted)

COURSE OFFERINGS

Beginning with the winter semester of 1984, students will be admitted to mathematics courses above the level of MTH 101 only with a grade of 2.0 or better in the prerequisite course(s) or with the permission of the department.

MATHEMATICS

MTH 100 Topics in Elementary Mathematics (2 or 4)
A selection of topics designed to develop the students' awareness and appreciation of mathematics with an emphasis on problem solving. Includes individualized reinforcement of basic arithmetic skills, as well as a laboratory and reading component.
Prerequisite: Placement in Summer Support Program.

MTH 101 College Arithmetic (2)
A half-semester study of whole numbers, fractions and decimals, signed numbers, powers and exponents, roots and radicals, simple equations, and problem solving.

MTH 102 College Algebra I (2)
A half-semester study of sets, real numbers, absolute value, order relations, inequalities, R^2 and the plane, graphs, and linear and quadratic functions.
Prerequisite: MTH 101.

MTH 103 College Algebra II (2)
A half-semester study of monomials, binomials, polynomials, factoring, roots of polynomial equations, quadratic equations, and complex numbers.
Prerequisite: MTH 102.

MTH 104 Elementary Functions (2)
A half-semester study of functions, graphs of functions, polynomial functions, rational functions, inverse functions, and exponential and log functions.
Prerequisite: MTH 103.

MTH 105 Trigonometry (2)
A half-semester study of angles and angular measures, trig functions, graphs, trig identities, inverse trig functions, and trigonometric equations.
Prerequisite: MTH 104.

MTH 121 Linear Programming, Elementary Functions (4)
Systems of equations, matrices, linear programming (simplex method); rational, exponential and logarithmic functions.
Prerequisite: MTH 103.

MTH 122 Calculus for the Social Sciences (4)
The basic concepts, theorems, and applications to the social sciences of the differential and integral calculus of one and several variables. Prerequisite: MTH 121 or MTH 104.

MTH 154-155 Calculus (4 each)
A comprehensive study of analytic geometry, limits, differentiation, and integration of functions of one real variable. Each is offered fall and winter semester.
Prerequisite: MTH 104, with MTH 105 as corequisite.

MTH 185 Mathematics—An Exploration into Undergraduate Topics (4)
Topics selected from probability, calculus, linear algebra, group theory, number theory, abstract algebra, topology, projective geometry, logic, and foundations.
Prerequisite: MTH 102.

MTH 190-191 Topics in Mathematics (1 or 2)
A study of some topic in mathematics intended to be appropriate for students enrolled in MTH 154-155 respectively. MTH 190 is offered fall semester, MTH 191 offered winter semester.
Prerequisite: Permission of department.

MTH 254 Multivariable Calculus (4)
A study of vectors, polar coordinates, three-dimensional geometry, differential calculus of functions of several variables, exact differential equations, multiple integrals, line and surface integrals, and vector fields.
Prerequisite: MTH 155.

MTH 256 Introduction to Linear Algebra (3)
An introduction to systems of linear equations, vectors, and matrices with emphasis on applications and computational techniques. Gaussian elimination, matrix algebra, determinants, eigenvalues and eigenvectors, Jordan form, linear transformations, vector spaces.
Prerequisite: MTH 155.

MTH 290 Independent Study (2 or 4)
Reading or research on some mathematical topic. Open only to sophomores.
Prerequisite: Written permission of department.

MTH 351 Introduction to Analysis (4)
A rigorous introduction to sets, sequences, series, topology of the real line, functions, continuity, uniform convergence, differentiation, Riemann integration, and Fundamental Theorem of Calculus.
Prerequisite: MTH 254 and MTH 256.

MTH 352 Complex Variables (4)
A study of analytic functions of a complex variable including differentiation and integration, series representations, the theory of residues, and applications.
Prerequisite: MTH 254.

MTH 361 Geometric Structures (4)
A study of topics from Euclidean geometry, projective geometry, non-Euclidean geometry, and transformation geometry.
Prerequisite: MTH 256.

MTH 372 Number Theory (4)
Number-theoretic functions, diophantine equations, congruences, and quadratic residues.
Prerequisite: MTH 155.

MTH 405 Special Topics (2 or 4)
Advanced study of some topic in mathematics. May be taken more than once.
Prerequisite: Permission of department.

MTH 414 History of Mathematics (4)
Mathematics from ancient to modern times, its growth, development, and place in human culture.
Prerequisite: MTH 351.

MTH 415 Foundations of Mathematics (4)
An examination of the logical foundations of mathematics including analysis of the axiomatic method, basic set theory, cardinal and ordinal numbers, and the axiom of choice.
Prerequisite: MTH 351.

MTH 453 Multivariable Analysis (4)
The topology of R_n, curves in R_n, derivatives and differentials, Lagrange multipliers, Taylor's formula, inverse and implicit function theorems, manifolds, multiple integrals, multilinear forms, differential forms, and closed and exact forms.
Prerequisite: MTH 351.

MTH 461 General Topology (4)
A study of topological spaces and continuous functions. Separation and countability properties, connectedness, compactness, and local properties.
Prerequisite: MTH 351.

MTH 465 Differential Geometry (4)
Theory of curves and surfaces in Euclidean space with an introduction to the theory of matrix Lie groups.
Prerequisite: MTH 351.

MTH 475-476 Abstract Algebra (4 each)
Algebra of sets and mappings, groups and homomorphisms, rings and ideals, factorization and divisibility, vector spaces, linear tranformations, fields, and field extensions.
Prerequisite: MTH 256.

MTH 490 Independent Study (2 or 4)
Research on some mathematical topic.
Prerequisite: Permission of department.

MTH 497 Apprentice College Teaching (2 or 4)
Open to any well-qualified upperclassperson who obtains consent of a faculty member to assist in presenting a regular college course. The apprentice should be capable of assuming limited classroom teaching duties.
Prerequisite: Permission of department.

APPLICABLE ANALYSIS AND MATHEMATICAL MODELING

APM 257 Introduction to Differential Equations (3)
An introduction to the basic methods of solving ordinary differential equations, including the methods of undetermined coefficients, variation of parameters, series, Laplace transforms, and numerical methods. Separable, exact, and linear equations. Applications.
Prerequisite: MTH 155.

APM 263 Discrete Mathematics (4)
An introduction to discrete mathematical structures with emphasis on their application to computer and information science. Topics drawn from the areas of set theory and relations, Boolean algebras, strings, and graphs. Some programming experience is recommended.
Prerequisite: MTH 155.

APM 331 Applied Analysis (4)
Infinite series. Uniform and absolute convergence, differentiation and integration of series. Taylor's formula and series. Advanced calculus—the derivative as a linear transformation, multiple integration.
Prerequisite: MTH 254 and MTH 256.

APM 332 Applied Matrix Theory (4)
Eigenvalues, eigenvectors, and their applications, matrix calculus, linear differential equations, Jordan canonical forms, quadratic forms. Time will also be spent on various computational

techniques.
Prerequisite: MTH 256 and APM 257.

APM 335-336 Introduction to Numerical Analysis (4 each)
An introduction to mathematical methods appropriate to computer work. Topics include interpolation, approximation, quadrature, solution of differential equations, and matrix computation.
Prerequisite: MTH 254 and MTH 256.

APM 357 Elements of Partial Differential Equations (4)
Partial differential equations of physics, Fourier methods, Laplace transforms, orthogonal functions, initial and boundary value problems, and numerical methods.
Prerequisite: APM 257.

APM 405 Special Topics (2 or 4)
Advanced study of a selected topic in applied mathematics. May be taken more than once.
Prerequisite: Permission of department.

APM 435 Introduction to Mathematical Science (4)
The algebraic structures of scientific phenomena. Differential equations and dynamical systems. Partial differential equations of the physical and life sciences. Introduction to mathematical modeling.
Prerequisite: APM 257 and MTH 256.

APM 455 Intermediate Ordinary Differential Equations (4)
Review of elementary techniques, existence and uniqueness theory, series methods, systems of equations, oscillation and comparison theorems, Sturm-Liouville Theory, stability theory, and applications.
Prerequisite: APM 257, and APM 331 or MTH 351.

APM 463 Graph Theory and Combinatorial Mathematics (4)
Introduction to combinatorics. Topics include techniques of enumeration, fundamental concepts of graph theory, applications to transport networks, matching theory, and block design.
Prerequisite: MTH 256 and APM 263.

APM 490 Independent Study (2 or 4)
Reading or research on some topic in applied mathematics.
Prerequisite: Permission of department.

STATISTICS

STA 221 Survey of Statistics for Health Sciences (2)
Descriptive statistics, random sampling, normal distributions, confidence intervals, hypothesis testing, correlation and regression, analysis of variance, chi-square tests, nonparametric tests.
Prerequisite: MTH 104 or permission of instructor.

STA 225 Probability and Statistics (4)
Descriptive statistics, probability, binomial and normal distributions, sampling methods, confidence intervals, hypothesis testing, regression and correlation, chi-square tests.
Prerequisite: MTH 103.

STA 226 Applied Statistics (4)
Introduction to statistics as applied to the physical, biological, and social sciences and to engineering. Applications of special distributions and nonparametric techniques. Regression analysis and analysis of variance.
Prerequisite: MTH 122 or 154.

STA 322 Regression Analysis (4)
Basic results from probability and statistics, linear regression, model testing and transformations, matrix methods in multiple regression, polynomial regression, indicator variables, stepwise and other search procedures.
Prerequisite: STA 226 or permission of instructor.

STA 323 Design of Experiments (4)
Planning of experiments, completely randomized, randomized block and Latin square designs, incomplete blocks, factorial and fractional factorial designs, confounding, response surface methodology.
Prerequisite: STA 226 or permission of instructor.

STA 324 Data Analysis (4)
Selected topics in statistical methodology with major emphasis on analysis of categorical data and nonparametric methods for location and scale.
Prerequisite: STA 226 or permission of instructor.

STA 405 Special Topics (2 or 4)
Advanced study of a selected topic in statistics. May be taken more than once.
Prerequisite: Permission of department.

STA 425 Elements of Stochastic Processes (4)
Random walk models, Markov chains and processes, birth and death processes, queuing processes, diffusion processes, and non-Markov processes.
Prerequisite: STA 226 and APM 331.

STA 427-428 Introduction to Mathematical Statistics (4 each)
The distribution of random variables, conditional probability and stochastic independence, special distributions, functions of random variables, interval estimation, sufficient statistics and completeness, point estimation, tests of hypothesis, and analysis of variance.
Prerequisite: APM 331 or MTH 351, and STA 226 or permission of instructor.

STA 490 Independent Study (2 or 4)
Reading or research on some statistical topic.
Prerequisite: Permission of department.

OPERATIONS RESEARCH

MOR 342 Introduction to Operations Research (4)
Topics will be drawn from deterministic models of operations research, such as linear programming, network analysis, dynamic programming, inventory control, and integer programming.
Prerequisite: MTH 254 and 256, or MTH 121 and 122 with 3.0 or better.

MOR 346 Stochastic Models in Operations Research (4)
Stochastic processes including Markov chains with applications to the development and analysis of queuing models. Further topics drawn from such areas as reliability, decision analysis, stochastic inventory control, and simulation.
Prerequisite: MTH 254 and STA 226, or MTH 122 and QMM 250 with 3.0 or better.

MATHEMATICS FOR ELEMENTARY EDUCATION MAJORS

MTE 109 Algebra for Elementary Education (2)
A study of numbers, absolute value, order relations, inequalities, graphs, and linear and quadratic functions. Open only to elementary education majors except with departmental permission.
Prerequisite: Elementary mathematics placement examination.

MTE 310 The Integers (2)
Ordinary and exotic algorithms for addition, subtraction, multiplication, and division. Radix theory, historical numeration systems. Mathematics laboratory project. Enrollment is limited to elementary education majors.
Prerequisite: MTH 102 or MTE 109 or equivalent.

MTE 311 The Rationals (2)
Divisibility properties of integers, the division algorithm. Various representations, including decimals, for rational numbers and algorithms for operating with these representations. Mathematics laboratory project. Enrollment is limited to elementary education majors.
Prerequisite: MTE 310.

MTE 312 Intuitive Euclidean Geometry (2)
Points, lines, planes, angles, parallelism and perpendicularity, elementary geometry of the triangle, similarity, circles and regular polygons, and figures in three-space. Mathematics laboratory project. Enrollment is limited to elementary education majors.
Prerequisite: MTE 311.

MTE 313 Geometry, Statistics, Probability (2)
Length, area, and volume. Measures of central tendency and dispersion, graphical representation, addition and multiplication principles of counting, and probabilities of simple events. Mathematics laboratory project. Enrollment is limited to elementary education majors.
Prerequisite: MTE 311.

MTE 317 Vector Geometry (4)
Geometry of the plane and space studied by means of vectorial ideas, independence of a set of vectors, and linear transformations. Mathematics laboratory project. Enrollment is limited to elementary education majors.
Prerequisite: MTE 312.

MTE 410 Elementary School Mathematics and the Computer (4)
Selected topics in mathematics useful to elementary school teachers in line with current curriculum developments. Computer-assisted programs will be emphasized. Enrollment is limited to elementary education majors.
Prerequisite: MTE 311.

MTE 418 Theory of Equations (4)
Solution of equations in one unknown. Descartes' rule of signs, intermediate value theorem, Euclidean algorithm for polynomials, basic numerical methods for finding roots, and systems of equations. Enrollment is limited to elementary education majors.
Prerequisite: MTE 313.

DEPARTMENT OF MODERN LANGUAGES AND LITERATURES

CHAIRPERSON: *David Jaymes*

PROFESSORS: *Carlo Coppola (Hindi-Urdu), Alfred J. DuBruck (French), Helen Kovach-Tarakanov (Russian), Richard A. Mazzara (French), Jack R. Moeller (German), Robert E. Simmons (German), Norman Susskind (French), Amitendranath Tagore (Chinese)*

ASSOCIATE PROFESSORS: *John W. Barthel (German), William C. Bryant (Spanish), Dolores M. Burdick (French), Renate Gerulaitis (German), Don R. Iodice (French), David Jaymes (French), John Marney (Chinese), Kathryn McArdle-Pigott (Spanish), Munibur Rahman (Hindi-Urdu), Carmen Urla (Spanish)*

The Department of Modern Languages and Literatures offers programs leading to the Bachelor of Arts degree.

The aim of the modern language curriculum is to help students acquire competence in the language of a given country or countries and, through the study of literature and civilization, to acquaint them with the cultural background of the country or countries. It prepares students also for graduate work, teaching at the elementary level, and careers in business or government service.

Students may wish to investigate the advantages of combining a knowledge of foreign languages and cultures with competence in other fields.There are standard concentrations, for example, in linguistics. Other majors such as political science, English, art, and music are enriched by the knowledge of a foreign language and culture. Students interested in study or work abroad, graduate study, or non-academic careers should obtain assistance from special advisers in the department familiar with the possibilities in these areas.

The selection of a foreign language to study should be a reasoned one. It is usually best to continue with a language begun in high school. However, if students wish to learn one not widely taught at the secondary level, they should not hesitate to change. Those who need advice about these choices are asked to consult with a member of the department.

Placement Examinations

A placement test is administered by the Special Advising Office. Students who enter Oakland University with previous work in French, German, or Spanish and

who wish to continue the study of one of these languages should take the appropriate placement test during summer orientation. Students are urged to consult with the department's advising office about the results of the examination and placement in the proper course at the proper level.

Admission to Major Standing

To be eligible for a major in one or more foreign languages the student must be admitted to major standing by the department. Normally a student should apply for major standing after having attained 56 credits and no later than three semesters before graduation. Students are to apply at the department office. A student planning to graduate with a Bachelor of Arts degree is admitted to major standing after successful completion of 314 and 370.

Requirements for the Liberal Arts Major in a Modern Language and Literature

The requirement is 32 credits at the 300 and 400 level in the chosen language, culture, and literature, including the courses numbered 314, 316, 318, 370, 408, and three in literature at the 400 level. Courses in the translation program, except 491, may apply toward the major. Two collateral courses are required: one in history or civilization and one numbered LIT 281 or 282. Students planning graduate work are strongly urged to study a second foreign language recommended by the department.

Requirements for the Liberal Arts Major in Two Modern Languages

The requirement is 18 credits at the 300 and 400 level in each of two languages, specifically courses numbered 314, 316, 318, 355, 455 and 408 in both languages. Three collateral courses are required: LIN 301 and two courses in history or civilization, one in each language area, to be approved by the student's departmental adviser. LIT 281 and LIT 282 are recommended. Students are strongly advised to complete a minor in a complementary field, such as economics and management. Most traditional graduate programs in language and literature will require students in this major to make up courses in literature.

Requirements for the Liberal Arts Major in a Modern Language with Minors in Economics, Management, or International Economics

Modified majors are available in French, German, Russian, Spanish, and Chinese with the above minors. The requirement in French, German, Russian, and Spanish is 24 credits at the 300 and 400 level. In Chinese the requirement is 16 credits at the 300 and 400 level, plus 12 credits in Chinese area studies including AS 210 and 490. Students should note the credit hour restrictions for the minors in economics or management. For those interested in a complete program in management see Masters in Business Administration. Consult the School of Economics and Management section of this catalog.

Departmental Honors

Departmental honors in a foreign language may be awarded to graduating seniors who maintain a minimum grade point average set by the department and complete projects of high quality.

Requirements for the Liberal Arts Major in Chinese Language and Civilization

The requirement in Chinese for this major is 16 credits at the 300 and 400 level,

selected from departmental offerings in consultation with an adviser. Twenty credits in East Asian area studies, including AS 490, are required also. See East Asian area studies program.

Requirements for the Liberal Arts Major in Latin American Language and Civilization

Requirements in Spanish are 24 credits at the 300 and 400 level. An alternative language requirement for this major is 16 credits in Spanish at the 300 and 400 level plus course work in French through FRH 214. Twenty credits are required in Latin American area studies courses including AS 490. See Latin American area studies program.

Requirements for the Liberal Arts Major in Russian Language and Civilization

Requirements are 16 credits in Russian language and civilization at the 300 and 400 level and 20 credits in Slavic area studies courses, including AS 490. See Slavic area studies.

Translation Program

Students may qualify for a translation certificate by completing language courses numbered 355, 455, and 491, and may then become candidates for the American Translators Association Accreditation Test. The 491 course does not apply toward the major.

Requirements for the Liberal Arts Minor in a Modern Language and Literature

Liberal arts minors are available in French, German, Russian, or Spanish language and literature. The requirement is 20 credits in one language beyond the 115 level, including 370 and one course in literature at the 400 level.

Requirements for the Liberal Arts Minor in a Modern Language

Liberal arts minors are available in French, German, Russian, or Spanish language. The requirement is 20 credits beyond 114-115, specifically courses numbered 214-215, 314, 316, 381, and 4 credits from courses numbered 355, 408, 455, and 457.

Requirements for the Secondary Teaching Minor in a Modern Language

The requirement is 20 credits in one language. Of these, 16 must be at the 300 and 400 level including 314, 316, and 370.

Requirements for an Elementary Teaching Concentration in a Modern Language

For students who wish to teach a foreign language at the elementary or junior high school level, the requirement is 36 credits in one language, including elementary and intermediate courses. For complete details on other requirements, including courses in education consult the education section of this catalog.

COURSE OFFERINGS

CHINESE LANGUAGE AND LITERATURE

CHE 114-115 Introduction to Chinese (4 each)
A two-semester sequence in the fundamentals of modern Mandarin Chinese (kuo-yu). A beginning course for students who have had no more than one year of secondary-school-level preparation. CHE 114 must be taken first.

CHE 211, 212 Second Year Oral Chinese (1 each)
A two-semester sequence of practice in listening to and speaking Chinese, including supervised laboratory work and drill sessions. To be taken in conjunction with 214-215 only.

CHE 214-215 Second Year Chinese (4 each)
A two-semester sequence continuing the work of CHE 114-115, with the addition of cultural and literary readings. CHE 214 must be taken first.
Prerequisite: One year of college Chinese or equivalent.

CHE 310 Literary Chinese (4)
Studies based upon literary texts of Confucius, Mo Tzu, etc.
Prerequisite: CHE 215.

CHE 330 Readings in Chinese Political Essays (4)
Studies in the documentary style of Chinese, selected mainly from writings of twentieth century political leaders of China.
Prerequisite: CHE 215.

CHE 340 Twentieth Century Chinese Literature (4)
Studies in modern pai-hua literature, including short stories, poems, essays, and pamphlets.
Prerequisite: CHE 215.

CHE 410 Chinese Fiction and Drama (4)
Studies in texts and criticism of fiction and drama, modern or classical.
Prerequisite: CHE 310 or 312.

CHE 421 Selected Classical Texts (4)
Studies of texts in advanced literary Chinese.
Prerequisite: CHE 310.

CHE 440 Chinese Poetry (4)
Selections from either classical T'ang and Sung Dynasty poems or from the post-May-fourth movement of poetry.
Prerequisite: CHE 310.

CHE 457 Business Chinese (4)
Introduction to the essential vocabulary and style specific to Chinese business as well as to the basic workings of the Chinese economy.
Prerequisite: CHE 215.

CHE 490 Directed Readings and Research in Chinese (2, 4, or 8)
For students with a high degree of competence in the language. May be conducted either in literary or modern Chinese. May be repeated for a total of 8 credits.
Prerequisite: Permission of instructor.

FRENCH LANGUAGE AND LITERATURE

FRH 114-115 Introduction to French (4 each)
A two-semester sequence in the fundamentals of French. A beginning course for students who have had no more than one year of secondary-school-level preparation. FRH 114 must be taken first.

FRH 214-215 Second Year French (4 each)
A two-semester sequence continuing the work of FRH 114-115, with the addition of cultural and literary readings. FRH 214 must be taken first.
Prerequisite: FRH 114-115.

FRH 216 Basic French Conversation (2)
Designed to develop the student's ability to organize and express ideas in French with a minimum of inhibition.
Prerequisite: FRH 115.

FRH 290 Directed Readings in French (2 or 4)
A reading course for nonmajors interested in research in a particular area. Approximately 50 hours of reading per credit; one conference weekly with the instructor.
Prerequisite: FRH 215.

FRH 313 French Phonetics (2)
Group and individual practice in the sound system of French, with specific reference to interference from English. Both written and laboratory work required.
Prerequisite: FRH 215.

FRH 314 Grammar Review Through Translation (4)
Review of French grammar through translation of a variety of materials from English to French and French to English. Offered fall semester.
Prerequisite: FRH 215.

FRH 316 Intermediate French Conversation (2)
Provides a transition between the carefully structured drills of other intermediate courses and free manipulation of the spoken language. Offered winter semester.
Prerequisite: FRH 215.

FRH 318 French Composition (2)
Practice in written composition. Techniques of textual analysis and exposition are introduced. Offered winter semester.
Prerequisite: FRH 314.

FRH 351 French Civilization (4)
An overview of contemporary life, education, and socio-economic conditions in France and other French-speaking countries. Conducted in French. Offered in alternate years.
Prerequisite: FRH 215.

FRH 355 Translation: French (2)
Translation from French to English of a range of materials from commercial and technical to literary, with an emphasis on idiomatic English. Offered winter semester.
Prerequisite: French 314.

FRH 370 Introduction to French Literature (4)
A sampling of critical approaches to the study of selected masterpieces of French literature. Conducted in French. Offered fall semester.
Prerequisite: FRH 215.

FRH 380 Survey of French Literature (4)
A survey of the highlights of French literature. Intended to supplement the work of FRH 370. Conducted in French. Offered winter semester.
Prerequisite: FRH 370.

FRH 408 Advanced Oral Practice in French (2)
Practice in speaking at an advanced level, which may include style and delivery appropriate to formal and informal speaking situations. May include oral presentations, self-recording, and critique.
Prerequisite: FRH 316.

FRH 413 From the Middle Ages through the Sixteenth Century (4)
A study of works in various genres of several periods. Works and authors may include epics, bawdy tales, courtly romances, Villon, Rabelais, and Montaigne. Conducted in French.
Prerequisite: FRH 370.

FRH 415 The Seventeenth and Eighteenth Centuries (4)
A study of works in various genres by leading French authors such as Pascal, Corneille, Racine, Moliere, La Fontaine, Montesquieu, Diderot, Rousseau, and Voltaire. Conducted in French.
Prerequisite: FRH 370.

FRH 417 The Nineteenth Century (4)
A study of works in various genres by leading French authors such as Stendahl, Balzac, Hugo, Nerval, Flaubert, Zola, Baudelaire, and Mallarmé Conducted in French.
Prerequisite: FHR 370.

FRH 418 The Twentieth Century (4)
A study of works in various genres by leading French authors such as Camus, Sartre, Anouilh, Malraux, and Gide. Conducted in French.
Prerequisite: FRH 370.

FRH 455 Translation into French (4)
Translation from English into French of a wide variety of materials ranging from commercial and technical to literary. Individual students may emphasize areas of interest. Offered fall semester in alternate years.
Prerequisite: FRH 314, 318, and 355.

FRH 457 Business French (4)
Introduction to the essential vocabulary and style specific to French business as well as to the basic workings of the French economy. All language skills receive equal stress.
Prerequisite: FRH 314, 316, and 318.

FRH 490 Independent Reading and Research (2, 4, or 8)
Directed individual research and reading for advanced French majors. May be repeated for a total of 8 credits.
Prerequisite: Two 400-level French literature courses and permission of department.

FRH 491 Independent Translation Project (4 or 8)
Directed annotated translation from French into English of a major work in the student's field. May not be counted toward the major.
Prerequisite: FRH 355 and 455 and permission of department.

GERMAN LANGUAGE AND LITERATURE

GRM 111, 112 Supplementary Oral Practice in German (1 each)
A two-semester sequence of practice in listening to and speaking German, including supervised laboratory work and drill sessions. To be taken only in conjunction with GRM 114-115.

GRM 114-115 Introduction to German (4 each)
A two-semester sequence in the fundamentals of German. A beginning course for students who have had no more than one year of secondary-school-level preparation. GRM 114 must be taken first.

GRM 214-215 Second Year German (4 each)
A two-semester sequence continuing the work of GRM 114-115, with the addition of cultural and literary readings. GRM 214 must be taken first.
Prerequisite: GRM 114-115.

GRM 290 Directed Readings in German (2 or 4)
A reading course for nonmajors interested in research in a particular area. Approximately 50 hours of reading per credit; one conference weekly with the instructor.
Prerequisite: GRM 215.

GRM 314 Grammar Review Through Translation (4)
Review of German grammar through translation of a variety of materials from English to German and German to English. Offered fall semester.
Prerequisite: GRM 215.

GRM 316 Intermediate German Conversation (2)
Provides a transition between the carefully structured drills of other intermediate courses and free manipulation of the spoken language. Offered winter semester.
Prerequisite: GRM 215.

GRM 318 German Composition (2)
Practice in written composition. Techniques of textual analysis and exposition are introduced. Offered winter semester.
Prerequisite: GRM 314.

GRM 355 Translation: German (2)
Translation from German to English of a range of materials from commercial and technical to literary, with an emphasis on idiomatic English. Offered winter semester.
Prerequisite: GRM 314.

GRM 370 Introduction to German Literature (4)
A sampling of critical approaches to the study of some masterpieces of German literature. Conducted in German. Offered fall semester.
Prerequisite: GRM 215.

GRM 380 Survey of German Literature (4)
A survey of the highlights of German literature. Intended to supplement the work of GRM

370. Conducted in German. Offered winter semester.
Prerequisite: GRM 370.

GRM 408 Advanced Oral Practice in German (2)
Practice in speaking at an advanced level, which may include style and delivery appropriate to formal and informal speaking situations. May include oral presentations, self-recording, and critique.
Prerequisite: GRM 316.

GRM 413 From the Middle Ages through the Seventeenth Century (4)
A study of works in all genres by leading authors of the period including Walther von der Vogelweide, Wolfram von Eschenbach, Gottfried von Strassburg, and Grimmelshausen. Conducted in German.
Prerequisite: GRM 370.

GRM 415 The Eighteenth Century (4)
A study of representative works of Lessing, Goethe, and Schiller which exemplify the intellectual and artistic currents of this period. Conducted in German.
Prerequisite: GRM 370.

GRM 417 The Nineteenth Century (4)
A study of works in all genres by leading authors of the period with emphasis on the lyric poetry of Romanticism, the dramas of Kleist, Grillparzer, and Hebbel, and the Novelle of Poetic Realism. Conducted in German.
Prerequisite: GRM 370.

GRM 418 The Twentieth Century (4)
A survey of modern German drama, poetry, and prose. Conducted in German.
Prerequisite: GRM 370.

GRM 455 Translation into German (4)
Translation from English into German of a wide variety of materials ranging from commercial and technical to literary. Individual students may emphasize areas of interest. Offered fall semester in alternate years.
Prerequisite: GRM 314, 318, and 355.

GRM 457 Business German (4)
Introduction to the essential vocabulary and style specific to German business as well as to the basic workings of the German economy. All language skills receive equal stress.
Prerequisite: GRM 314, 316, and 318.

GRM 480 Undergraduate Seminar (2 or 4)
Study of individual authors, selected themes, or critical problems.
Prerequisite: Permission of department.

GRM 490 Independent Reading and Research (2, 4, or 8)
Directed individual research and reading for advanced German majors. May be repeated for a total of 8 credits.
Prerequisite: Two 400-level German literature courses and permission of department.

GRM 491 Independent Translation Project (4 or 8)
Directed annotated translation from German into English of a major work in the student's field. May not be counted toward the major.
Prerequisite: GRM 355 and 455 and permission of department.

HINDI-URDU LANGUAGE

HIUR 114-115 Introduction to Hindi and Urdu (4 each)
A two-semester sequence of the fundamentals of both Hindi and Urdu. HIUR 114 must be taken first.

HIN 214-215 Second Year Hindi (4 each)
A two-semester sequence continuing the work of HIUR 114-115, with the addition of cultural and literary readings in Hindi. HIN 214 must be taken first.
Prerequisite: HIUR 114-115.

URD 214-215 Second Year Urdu (4 each)
A two-semester sequence continuing the work of HIUR 114-115, with the addition of cultural and literary readings in Urdu. URD 214 must be taken first.
Prerequisite: HIUR 114-115.

HIUR 390 Directed Readings in Hindi-Urdu (2 or 4)
Directed readings for individual Hindi-Urdu students. May be repeated for a total of 8 credits.
Prerequisite: Permission of department.

ITALIAN LANGUAGE AND LITERATURE

IT 114-115 Introduction to Italian (4 each)
A two-semester sequence of the fundamentals of Italian. A beginning course for students who have had no more than one year of secondary-school-level preparation. IT 114 must be taken first.

IT 214-215 Second Year Italian (4 each)
A two-semester sequence continuing the work of IT 114-115 with the addition of cultural and literary readings. IT 214 must be taken first.
Prerequisite: IT 114-115.

IT 390 Directed Readings in Italian (2 or 4)
Directed individual readings in Italian. May be repeated for a total of 8 credits.
Prerequisite: Permission of instructor.

JAPANESE LANGUAGE

JPN 114-115 Introduction to Japanese (4 each)
A two-semester sequence in the fundamentals of Japanese. A beginning course, intended for students who have had no more than one year of secondary-school preparation. JPN 114 must be taken first.

JPN 214-215 Second Year Japanese (4 each)
A two-semester sequence continuing the work of JPN 114-115, with the addition of cultural and literary readings. JPN 214 must be taken first.
Prerequisite: JPN 114-115.

JPN 390 Directed Readings in Japanese (2 or 4)
Directed individual readings in Japanese. May be repeated for a total of 8 credits.
Prerequisite: Permission of instructor.

RUSSIAN LANGUAGE AND LITERATURE

RUS 111, 112 Supplemental Oral Practice in Russian (1 each)
A two-semester sequence of practice in listening to and speaking Russian, including supervised laboratory work and drill sessions. To be taken only in conjunction with RUS 114-115.

RUS 114-115 Introduction to Russian (4 each)
A two-semester sequence in the fundamentals of Russian. A beginning course for students who have had no more than one year of secondary-school preparation. RUS 114 must be taken first.

RUS 211, 212 Second Year Oral Russian (1 each)
A two-semester sequence of practice in listening to and speaking Russian, including supervised laboratory work and drill sessions. To be taken in conjunction with 214-215 only.

RUS 214-215 Second Year Russian (4 each)
A two-semester sequence continuing the work of RUS 114-115, with the addition of cultural and literary readings. RUS 214 must be taken first.
Prerequisite: RUS 114-115.

RUS 290 Directed Readings in Russian (2 or 4)
A reading course for nonmajors interested in research in a particular area. Approximately 50 hours of reading per credit; one conference weekly with the instructor.
Prerequisite: RUS 215.

RUS 314 Grammar Review Through Translation (4)
Review of Russian grammar through translation of a variety of materials from English to Russian and Russian to English. Offered fall semester.
Prerequisite: RUS 215.

RUS 316 Intermediate Russian Conversation (2)
Provides a transition between the carefully structured drills of other intermediate courses and free manipulation of the spoken language. Offered winter semester.
Prerequisite: RUS 215.

RUS 318 Russian Composition (2)
Practice in written composition. Techniques of textual analysis and exposition are introduced. Offered winter semester.
Prerequisite: RUS 314.

RUS 355 Translation: Russian (2)
Translation from Russian to English of a range of materials from commercial and technical to literary, with an emphasis on idiomatic English. Offered winter semester.
Prerequisite: RUS 314.

RUS 370 Introduction to Russian Literature (4)
A sampling of critical approaches to the study of some masterpieces of Russian literature. Conducted in Russian. Offered fall semester.
Prerequisite: RUS 215.

RUS 380 Survey of Russian Literature (4)
A survey of the highlights of Russian literature. Intended to supplement the work of RUS 370. Conducted in Russian. Offered winter semester.
Prerequisite: RUS 370.

RUS 400 Special Topics in Language (4)
Special problems or topics selected by the instructor. May be repeated for credit.
Prerequisite: RUS 318, or 370 and 380.

RUS 408 Advanced Oral Practice in Russian (2)
Practice in speaking at an advanced level, which may include style and delivery appropriate to formal and informal speaking situations. May include oral presentations, self-recording, and critique.
Prerequisite: RUS 316.

RUS 418 The Twentieth Century (4)
A study of works in all genres by Russian authors of the period, including Bunin, Lamiatin, and Solzhenitsin. Conducted in Russian.
Prerequisite: RUS 370.

RUS 455 Translation into Russian (4)
Translation from English into Russian of a wide variety of materials ranging from commercial and technical to literary. Individual students may emphasize area of interest. Offered fall semester in alternate years.
Prerequisite: RUS 314, 318, and 355.

RUS 490 Independent Reading and Research (2, 4, or 8)
Directed individual research and reading for advanced Russian majors. May be repeated for a total of 8 credits.
Prerequisite: Two 400-level Russian literature courses and permission of department.

RUS 491 Independent Translation Project (4 or 8)
Directed annotated translation from Russian into English of a major work in the student's field. May not be counted toward the major.
Prerequisite: RUS 355 and 455 and permission of department.

SPANISH LANGUAGE AND LITERATURE

SPN 111, 112 Supplementary Oral Practice in Spanish (1 each)
A two-semester sequence of practice in listening to and speaking Spanish, including supervised laboratory work and drill sessions. To be taken only in conjunction with SPN 114-115.

SPN 114-115 Introduction to Spanish (4 each)
A two-semester sequence in the fundamentals of Spanish. A beginning course for students who have had no more than one year of secondary-school preparation. SPN 114 must be taken first.

SPN 211, 212 Second Year Oral Spanish (1 each)
A two-semester sequence of practice in listening to and speaking Spanish, including supervised laboratory work and drill sessions. To be taken in conjunction with 214-215 only.

SPN 214-215 Second Year Spanish (4 each)
A two-semester sequence continuing the work of SPN 114-115, with the addition of cultural and literary readings. SPN 214 must be taken first.
Prerequisite: SPN 114-115.

SPN 290 Directed Readings in Spanish (2 or 4)
A reading course for nonmajors interested in research in a particular area. Approximately 50 hours of reading per credit; one conference weekly with the instructor.
Prerequisite: SPN 215.

SPN 300 Composition and Conversation (3)
Part of overseas study program only. Third- or fourth-year level, depending on student preparation.
Prerequisite: SPN 215.

SPN 313 Spanish Phonetics (2)
Group and individual practice in the sound system of Spanish, with specific reference to interference from English. Both written and laboratory work required.
Prerequisite: SPN 215.

SPN 314 Grammar Review Through Translation (4)
Review of Spanish grammar through translation of a variety of materials from English to Spanish and Spanish to English. Offered fall semester.

SPN 316 Intermediate Spanish Conversation (2)
Provides a transition between the carefully structured drills of other intermediate courses and free manipulation of the spoken language. Offered winter semester.
Prerequisite: SPN 215.

SPN 318 Spanish Composition (2)
Practice in written composition. Techniques of textual analysis and exposition are introduced. Offered winter semester.
Prerequisite: SPN 314.

SPN 351 Spanish Civilization (3)
Historical approach to Spanish culture and civilization, with emphasis on geography, social structure, philosophical thought, music, art, and architecture. Part of overseas study program only.
Prerequisite: Sophomore standing.

SPN 355 Translation: Spanish (2)
Translation from Spanish to English of a range of materials from commercial and technical to literary, with an emphasis on idiomatic English. Offered winter semester.
Prerequisite: SPN 314.

SPN 370 Introduction to Spanish Literature (4)
A sampling of critical approaches to the study of some masterpieces of Spanish literature. Conducted in Spanish. Offered fall semester.
Prerequisite: SPN 215.

SPN 380 Survey of Spanish Literature (4)
A survey of the highlights of Spanish literature. Intended to supplement the work of SPN 370. Conducted in Spanish. Offered winter semester.
Prerequisite: SPN 370.

SPN 408 Avanced Oral Practice in Spanish (2)
Practice in speaking at an advanced level, which may include style and delivery appropriate to formal and informal speaking situations. May include oral presentations, self-recording, and critique.
Prerequisite: SPN 316.

SPN 411 Golden Age Drama (4)
Reading and critical consideration of selected dramatic works of Lope, Tirso, Calderón, and Alarcón. Conducted in Spanish.
Prerequisite: SPN 370.

SPN 412 The Quixote (4)
Detailed study of Cervantes' masterpiece. Conducted in Spanish.
Prerequisite: SPN 370.

SPN 417 The Nineteenth Century (4)
A study of works in all genres by leading Spanish authors, including Galdós, Zorrilla, Bécquer. Conducted in Spanish.
Prerequisite: SPN 370.

SPN 418 The Twentieth Century (4)
A study of works in all genres by leading Spanish authors, including Unamuno, Machado, Lorca, Cela. Conducted in Spanish.
Prerequisite: SPN 370.

SPN 420 Spanish-American Literature before 1888 (4)
A study of principal literary figures from the Colonial Period to Modernism. Conducted in Spanish.
Prerequisite: SPN 370.

SPN 421 Spanish-American Literature since 1888 (4)
Masterworks of twentieth-century Spanish-American literature, including Fuentes, Asturias, Neruda, Borges. Conducted in Spanish.
Prerequisite: SPN 370.

SPN 455 Translation into Spanish (4)
Translation from English into Spanish of a wide variety of materials ranging from commercial and technical to literary. Individual students may emphasize areas of interest. Offered fall semester in alternate years.
Prerequisite: SPN 314, 318, and 355.

SPN 457 Business Spanish (4)
Introduction to the essential vocabulary and style specific to Spanish business as well as to the basic workings of the Hispanic economy. All language skills receive equal stress.
Prerequisite: SPN 314, 316, and 318.

SPN 480 Undergraduate Seminar (2 or 4)
Study of individual authors, selected themes, or critical problems.
Prerequisite: Permission of department.

SPN 490 Independent Reading and Research (2 or 4)
Directed individual research and reading for advanced Spanish majors. May be repeated for a total of 8 credits.
Prerequisite: Two 400-level Spanish literature courses and permission of department.

SPN 491 Independent Translation Project (4 or 8)
Directed annotated translation from Spanish into English of a major work in the student's field. May not be counted toward the major.
Prerequisite: SPN 355 and 455 and permission of department.

MODERN LITERATURES IN TRANSLATION

LIT 251 Studies in the Foreign Film (4)
A study of film as a mirror of the cultures and aesthetics of various societies. Topics to be selected by the instructor.

LIT 281 Continental European Literature in Translation I (4)
A study of the main literary currents as reflected in European masterpieces up to 1850. All works read in English translations.

LIT 282 Continental European Literature in Translation II (4)
A study of the main literary currents as reflected in European masterpieces from 1850 to the present. All works read in English translations.

LIT 346 Non-Western Theatre and Dramatic Literature (4)
A study of classical and modern theatre and dramatic literature from one or more areas: China, India, Japan. Identical with THA 346.

MODERN LANGUAGE

ML 191-192 Tutorial in Foreign Language (4 each)
Instruction in the elements of a spoken or written foreign language such as Arabic, Bengali, Czech, Sanskrit, Catalan, etc. for which no regular course sequence exists here. May be repeated for credit in a different language each time.
Prerequisite: Permission of instructor.

ML 211 Diction for Singers, First Semester (4)
A basic course to instruct voice students in the techniques of pronouncing foreign languages. Extensive work with the International Phonetic Alphabet, tapes, and native speakers. Italian and Latin will be stressed. Offered fall semester in alternate years.

ML 212 Diction for Singers, Second Semester (4)
A continuation of ML 211 with emphasis on German and French. Extensive work with transcription techniques, tapes, and native speakers. Offered winter semester in alternate years.
Prerequisite: ML 211.

ML 290 Topics Related to Foreign Language Study (2 or 4)
Topics explored in areas not normally a part of regular offerings in language or literature. May be repeated for a total of 8 credits.
Prerequisite: Permission of instructor.

ML 291-292 Intermediate Tutorial in Foreign Language (4 each)
Intermediate work in a language and literature not normally taught at Oakland University. May be repeated for credit.
Prerequisite: Permission of instructor.

ML 391-392 Advanced Tutorial in Foreign Language (4 each)
Advanced work in a language not normally taught at Oakland University. May be repeated for credit.

ML 399 Field Experience in a Modern Language (4)
Field experience in an appropriate employment setting correlated with directed study assignments relating the experience to the knowledge and skills developed by the foreign language student. May not be repeated for credit.
Prerequisites: FRH, GRM, or SPN 314, 316, and 318.

DEPARTMENT OF PHILOSOPHY

CHAIRPERSON: *Richard J. Burke*

PROFESSOR: *Richard J. Burke*

ASSOCIATE PROFESSORS: *Richard W. Brooks, Robert J.J. Wargo*

ASSISTANT PROFESSOR: *J. Christopher Maloney*

ADJUNCT PROFESSOR AND LECTURER: *Charles E. Morton*

Philosophy is one of the oldest, often one of the least understood of the liberal arts. The philosopher is interested in all aspects of human life, searching for the greatest possible clarity concerning the most fundamental questions. There is no one kind of philosophy; there are many kinds, each with its own value. Philosophy has always served two functions: the first is speculative, the attempt to formulate illuminating generalizations about science, art, religion, nature, society, and any other important topic; the second is critical, the unsparing examination of its own generalizations and those of others to uncover unfounded assumptions, faulty thinking, hidden implications, and inconsistencies. The study of philosophy is designed to encourage a spirit of curiosity, a sensitivity toward the uses of words, a sense of objective assessment toward oneself as well as others. Competence in philosophy is solid training for advanced study in such fields as law, government, and public administration, as well as the ministry and teaching.

The Department of Philosophy offers programs of study leading to the degree

of Bachelor of Arts with a major in philosophy, modified major in philosophy with concentration in linguistics, area studies, or religious studies, and minor in philosophy.

Requirements for the Liberal Arts Major in Philosophy

The major requires 40 credits in philosophy, including:

1. One semester of logic (PHL 102, 170, or 370).
2. One semester of ethics (PHL 103, 316, or 318).
3. Two semesters in history of Western philosophy (PHL 204-6; PHL 307-8; PHL 204 and 206 are recommended).
4. One semester of Eastern philosophy (PHL 250, 351, 352, or 353).
5. At least 20 credits in PHL courses numbered 300 or above.

A student may substitute other courses for any of the above with permission of the department chairperson. Students planning to apply for graduate work in philosophy should discuss with faculty which courses to take in addition to the above.

Departmental Honors

Students who think they might qualify for departmental honors should submit an example of their philosophical writing to the chairperson early in the semester before they expect to graduate. This should normally be a substantial paper written in PHL 395, but two or three papers written in other courses will be acceptable. If this work is judged to be of sufficiently high quality, it will be read by the rest of the department, and a conference to discuss it with the student will be arranged. Departmental honors are thus based upon written and oral achievement in philosophy, as well as general performance in courses.

Requirements for a Modified Major in Philosophy with an Area Studies, Linguistics or Religious Studies Concentration

Modified majors in philosophy must meet the same requirements as a liberal arts minor in philosophy (see below), except 24 credits in philosophy (instead of 20) and 12 credits (instead of 8) in courses numbered 300 or above. In addition, they must meet one of the following sets of requirements:

1. **Requirements for the major in philosophy with a concentration in East Asian studies or South Asian studies:** 24 credits in philosophy, including PHL 351 or 353 (for East Asian studies) or 352 (for South Asian studies). For requirements in area studies, see pages 45 and 46.
2. **Requirements for the major in philosophy with a concentration in linguistics:** 24 credits in philosophy, including PHL 370 and 475. For requirements in linguistics, see page 84.
3. **Requirements for the major in philosophy with a concentration in religious studies:** 24 credits in philosophy, including PHL 225. For requirements in religious studies, see page 153.

Requirements for the Liberal Arts Minor in Philosophy

Twenty credits in philosophy, including:

1. One semester of logic (PHL 102, 170, or 370).
2. One semester of ethics (PHL 103, 316, or 318).

3. One semester of metaphysics/epistemology (PHL 204, 205, 206, 308, 329, 333, or 340).
4. At least 8 credits in courses numbered 300 or above.

Departmental Course Prerequisites

In general, 100-level courses presuppose no prior college experience, 200-level courses presuppose some, 300-level courses require some prior philosophy courses or related courses in other fields, and 400-level courses are primarily for philosophy majors. However, strict prerequisites have been kept to a minimum to encourage nonmajors to take philosophy courses as electives.

COURSE OFFERINGS

PHL 100 Topics in Philosophy (4)
A study of one philosophic topic or problem, to be announced in the schedule of classes each semester.

PHL 101 Introduction to Philosophical Thinking (4)
Fundamental skills and questions in philosophy, including: what an argument is, and how to assess one; practice in clarifying concepts, similarities or differences between philosophy and other activities, such as science, religion, and psychology. Offered every semester.

PHL 102 Introduction to Logic (4)
The relationship between conclusions and statements given in support of them. Topics may include analysis of ordinary arguments (such as might occur in a newspaper), hypothesis formulation and testing, argument by analogy, and informal fallacies. Offered every semester.

PHL 103 Introduction to Ethics (4)
Major ethical analyses of right and wrong, good and evil. Appeals to custom, theology, happiness, reason, and human nature will be examined as offering viable criteria for judgments on contemporary issues of moral concern. Offered every semester.

PHL 170 Introduction to Formal Logic (4)
Formal or symbolic logic is a study of what makes deductive arguments valid, employing symbols to represent sentences, words, phrases, etc. in order to reveal the formal structure of the arguments. Offered every year.

PHL 204, 205, 206 History of Western Philosophy (4 each)
The development of systematic philosophical thought in the Western world from its beginning in the Mediterranean region to 1800 A.D. The three courses are: PHL 204, Classical Greek Philosophy, PHL 205, Hellenistic and Medieval Philosophy, and PHL 206, Early Modern Philosophy. Each course may be taken separately, although together they present a continuous development.

PHL 221 Political Philosophy (4)
The meanings of central concepts in political philosophy, such as justice, freedom, and authority are examined through readings in classic political philosophers and crucial problems. Offered every other year.

PHL 225 Philosophy of Religion (4)
Examination of arguments for and against the existence of God, the nature of religious language, and the relations between religion and philosophy. Offered every other year. Identical with REL 225.

PHL 250 Philosophies and Religions of Asia (4)
The major religions of India, China, and Japan with emphasis on their philosophical significance. The course will cover Hinduism, Jainism, Confucianism, Taoism, and Buddhism, both the ancient traditions and some modern developments. Offered every year. Identical with REL 250.

PHL 260 American Philosophy (4)
An historical survey of American philosophy, from its beginnings in New England puritanism to the present day. Emphasis on Peirce, James, and Dewey. Offered every other year.

PHL 300 Topics in Philosophy (4)
One philosophical topic or problem at an intermediate level of difficulty. Topic to be announced in the schedule of classes for each semester.
Prerequisite: One philosophy course.

PHL 307 European Philosophy since Kant (4)
Among the major philosophers included are Hegel, Marx, Kierkegaard, Nietzsche, and Sartre. Several types of Marxism and existentialism will be distinguished, and their influence in this country will be discussed. Offered every two years.
Prerequisite: One philosophy course.

PHL 308 Twentieth Century British and American Philosophy (4)
The issues that have dominated Anglo-American philosophy in the twentieth century. The course will trace the history that has led Americans and Britons to look at philosophy in a new way, appropriate to our scientific world-view.
Prerequisite: One philosophy course; PHL 206 recommended.

PHL 310 Philosophy of Rhetoric (4)
The problem of "objectivity," the distinction between persuasion and proof, and the consequences of denying such a distinction. Readings include Plato's *Gorgias,* Aristotle's *Rhetoric,* and modern discussions of rhetoric and society. Offered every other year. Identical with SCN 310.
Prerequisite: One philosophy course, or SCN 201 or 301.

PHL 312 Aesthetics (4)
The nature of aesthetic experience and aesthetic judgment in the appreciation of nature and art. Major theories of the creation and structure of works of art, and the logic and semantics of aesthetic judgment. Offered every other year.
Prerequisite: One philosophy course, or a course in art, music, or literature.

PHL 316 Ethics, Economics, and Business (4)
Ethical problems in business practices and institutions, and critical analysis of the concepts, presuppositions, and theories used in the description and explanation of economic phenomena. Identical with MGT 316. Offered every year.
Prerequisite: One course in philosophy or economics.

PHL 318 Ethics and the Health Sciences (4)
Central ethical issues in modern health care and research. Included are the distribution and allocation of health resources, the right to life and death, "informed consent," and eugenics. Offered every semester. Recommended preparation: PHL 103.

PHL 319 Philosophy of Law (4)
The nature of law and legal obligation, with emphasis on the relation of law, coercion, and morality. Attention is also given to such issues as the nature of legal reasoning, the justifiability of civil disobedience, and the justification of punishment. Offered every other year. PHL 103 or PS 241 recommended as preparation.

PHL 329 Philosophy of Science (4)
Philosophical problems arising from critical reflection on the sciences. Typical topics: the structure of scientific explanation, the nature of scientific laws and theories, causality, and confirmation. Offered every other year.
Prerequisite: At least one course in philosophy and one in physical science, either in high school or college. PHL 170 is strongly recommended.

PHL 333 Theories of Knowledge (4)
Critical examination of knowledge claims and of the types of justification given in their support. Typical topics: skepticism; empiricism; rationalism; believing and knowing; intuition; and limits of knowledge. Offered every other year.
Prerequisite: One philosophy course; PHL 206 or 308 recommended.

PHL 340 Metaphysics (4)
Study of selected influential attempts to characterize the basic features of the world. Emphasis on reformulations of metaphysical problems, in the light of modern advances in scientific knowledge. Offered every other year.
Prerequisite: One philosophy course.

PHL 351 Chinese Philosophy (4)
The rise and development of Chinese philosophy with emphasis on the classical (Chou) period,

especially Confucianism and Taoism. Reference to modern developments as time permits. Offered every other year.
Prerequisite: PHL 250 or AS 210.

PHL 352 Indian Philosophy (4)
The presuppositions and doctrines of India's major philosophic systems. Realistic, idealistic, pluralistic, dualistic, and monistic systems will be considered, with some reference to contemporary developments. Offered every other year.
Prerequisite: PHL 250 or AS 240.

PHL 353 Japanese Philosophy (4)
Japan's major philosophical and religious systems including Shinto, Pure Land and Zen Buddhism, and Confucianism in the premodern era, the impact of European philosophical thought on the tradition, and the emergence of a creative synthesis. Offered every other year.
Prerequisite: PHL 250 or AS 220.

PHL 370 Symbolic Logic (4)
Standard first-order symbolic logic, emphasizing quantification theory and including identity theory and logical semantics. The logical system is approached both as a formal system and as a theoretical analysis of human reasoning. Offered every year.
Prerequisite: PHL 170, CIS 130, or MTH 103 or equivalent.

PHL 390 Directed Readings in Philosophy (2)
Tutorial on a topic not included in regular courses, primarily (but not exclusively) for majors. Students should consult with the department chairperson before approaching a faculty member with a topic. Graded S/N.
Prerequisite: One philosophy course at Oakland and permission of instructor.

PHL 395 Independent Study in Philosophy (4)
Tutorial on a topic not included in regular courses, primarily (but not exclusively) for majors. Students should consult with the department chairperson before approaching a faculty member with a topic. In addition to reading and consultation, the student will write a substantial term paper.
Prerequisite: One philosophy course at Oakland and permission of instructor.

PHL 399 Field Experience in Philosophy (4)
Students will serve in a variety of work settings, arranged by themselves or by the cooperative education office. The work experience will be integrated with readings in the philosophy of work, and the course grade will be based on a substantial term paper.
Prerequisite: 16 credits in philosophy, of which at least 8 must be at the 300-400 level.

PHL 401 Study of a Major Philosopher (4)
A study of the works of one major philosopher. The specific philosopher will vary, but courses on Plato, Aristotle, and Kant will be offered every few years. May be repeated for credit.
Prerequisite: One philosophy course; PHL 204, 205, 206, 307, or 308 recommended, whichever is relevant.

PHL 437 Philosophy of Mind (4)
Selected topics or works in the philosophical literature about mind. Some topics are: the nature of psychological explanation, the relation of mind and body, thinking, emotions, concepts, consciousness, and remembering. Offered every other year.
Prerequisite: PSY 100 and one philosophy course.

PHL 465 Seminar on a Philosophical Topic (4)
One philosophical topic or problem at an advanced level of difficulty, normally requiring considerable background in one field of philosophy. Topic and prerequisites to be announced in the schedule of classes for each semester.

PHL 475 Philosophy of Language (4)
Philosophical theories of natural language structure. Emphasis on views about what meaning is and how we are to explain our ability to communicate with one another. Offered every other year.
Prerequisite: PHL 102 or 170, or LIN 207. PHL 308 is recommended.

PHL 497 Apprentice College Teaching (4)
Open to a well-qualified philosophy student who is invited by a faculty member to assist in a regular college course, usually as preparation for a career as a professor of philosophy.

DEPARTMENT OF PHYSICS

CHAIRPERSON: *Abraham R. Liboff*

PROFESSORS: *Abraham R. Liboff, John M. McKinley, Ralph C. Mobley, Norman Tepley, Paul A. Tipler, Robert M. Williamson*

ASSOCIATE PROFESSORS: *Michael Chopp, Paul Doherty, W. D. Wallace*

ASSISTANT PROFESSORS: *Beverly Berger*

ADJUNCT PROFESSORS: *Adrian Kantrowitz, M.D. (Sinai Hospital)*

ADJUNCT ASSOCIATE PROFESSOR: *Norman H. Horwitz (William Beaumont Hospital)*

Courses are grouped into two categories—preprofessional career programs and experiences in science for students with broad interests in contemporary human culture. The latter are strongly recommended for students planning any of a wide range of careers, including law, business, criminology, art history, music, government, education, and journalism.

Programs of study lead to the degrees of Bachelor of Science, Bachelor of Arts, and Master of Science.

The Bachelor of Science degree in physics is for students who plan to become professional scientists. It qualifies them for graduate studies in physical sciences or research positions in government and industry. Students pursuing this degree may discuss with faculty different specialties. Advisers in these fields are professors Berger (astronomy), Doherty (geophysics), Chopp (medical physics), Liboff (physics and public policy), and Mobley (industrial physics-electronics). Independent research projects are available in each area.

A limited number of upper-level internships are available both in medical physics and in physics and public policy. Majors wishing to take a hospital internship (medical physics) or an internship in Washington or Lansing (physics and public policy) are urged to declare their intentions as early as possible.

The Bachelor of Arts degree in physics is primarily for students who desire a broader, less professionally specialized background in physics. The minor in physics is available for students who want to supplement their work in other fields with an introduction to physics.

Requirements for the Liberal Arts Major in Physics, B.A. Program

1. 32 credits in physics, with at least 22 in courses numbered above 200.
2. 20 additional credits in chemistry, mathematics, and physics.

Requirements for the Major in Physics, B.S. Program

1. 20 required credits in physics: PHY 151, 152, 158 or 159, 317, 351, 371.
2. 22 elective credits in physics, at or above the 200 level, including at least 2 credits of laboratory course work. PHY 361 and 381 are strongly recommended for students planning graduate work in physics.
3. MTH 154, 155, 254 and either MTH 256 or APM 257.
4. 10 credits of chemistry at a level not below CHM 144.

Placement in Physics 151

Students planning to take PHY 151 must take a placement test *before* registering for this course. Students who do not pass this test must complete PHY 101 with a passing grade of 2.0 before registering for PHY 151.

Engineering Physics Program

In cooperation with the School of Engineering and Computer Science the department offers a program leading to the B.S. degree with a major in engineering physics. For details see the listing under the School of Engineering and Computer Science.

Medical Physics Programs

Students interested in medical physics may earn either the B.S. in medical physics or the B.S. major in physics with a specialty in medical physics. Requirements are described in the health sciences section of this catalog.

Requirements for the Liberal Arts Minor in Physics

Twenty credits in physics are required including PHY 101-102 or PHY 151-152, PHY 158 or 159, and at least 8 credits in physics numbered 300/400.

Requirements for the Secondary Teaching Minor in Physics

PHY 101 and 102, or PHY 151 and 152, and PHY 158 or PHY 159, and 10 credits in physics approved by Professor Williamson by the end of the sophomore year.

COURSE OFFERINGS

PHY 101 General Physics I (4)
Mechanics, fluids, thermodynamics. Calculus is not required. Offered fall and winter.
Prerequisite: High school algebra and trigonometry or equivalent.

PHY 102 General Physics II (4)
Sound, light, electricity and magnetism, atomic and nuclear physics. Offered fall and winter.
Prerequisite: PHY 101.

Each of the following courses is designed for nonscience majors.

PHY 104 Astronomy: The Solar System (4)
The sun, planets, space travel, the search for extraterrestrial life.

PHY 105 Astronomy: Stars and Galaxies (4)
Nature and evolution of stars, the Milky Way and other galaxies, cosmology.

PHY 106 Earth Sciences I (4)
The earth as a planet. Topics include: origin, history, orbit, gravity, rocks and minerals, earthquakes, the interior, and the theory of continental drift. Offered fall only.

PHY 107 Earth Sciences II (4)
The surface of the earth, including the atmosphere and oceans. Topics include: climate, meteorology, continental evolution, weathering, glaciers, wind, and the energy resources of the earth. Offered winter only.

PHY 115 Energy (4)
Basic physical principles of energy, sources, transmission, and distribution. Political, economic, and ecological considerations.

PHY 125 The Physics of Music (4)
Lectures and experiments on the nature of vibrations, waves, and sound as applied to musical instruments and scales, voice, hearing, room acoustics, and electronic music. Offered fall only.

PHY 127 Human Aspects of Physical Science (4)
Primarily for the student wishing to explore the interaction of the physical and social sciences. Format varies to reflect the impact of physics on contemporary life, particularly on politics, economics, and behavior, as well as environment and well-being. Offered winter only.

PHY 141 The Physics of Health Care (4)
Introduction to the physical principles of health-care delivery. Scientific systems and method. Data-collecting measurements, problem-solving, applications, physical hazards, radiation dosi-

metry, and electrical safety. Offered winter.
Prerequisite: High school algebra.

The following courses are designed primarily for the physics major and for majors in the other sciences and engineering.

PHY 150 Perspective and Method in Contemporary Physics (4)
A survey of contemporary physics; e.g., black holes, quarks, nuclear energy, and fusion. Methods in physics and techniques of problem solving. Offered fall only.
Prerequisite: High school algebra.

PHY 151 Introductory Physics I (4)
Classical mechanics and thermodynamics. For science, mathematics, and engineering students. Offered fall and winter.
Prerequisite: Physics placement test and MTH 154 or PHY 150.

PHY 152 Introductory Physics II (4)
Sound, light, electricity, and magnetism. Offered fall and winter.
Prerequisite: PHY 151. Corequisite: MTH 155.

PHY 158 General Physics Laboratory (2)
Elementary experiments in mechanics, heat, sound, electricity, and optics for students with little high school physics laboratory experience. Offered fall and winter.
Prerequisite: PHY 101 or 151. Corequisite: PHY 102 or 152.

PHY 159 Introductory Physics Laboratory (2)
Extended experiments and projects in introductory physics. Students with high school physics laboratory experience (or PHY 158) are encouraged to do open-ended experiments chosen in consultation with the instructor. Offered fall and winter.
Prerequisite: PHY 101 or 151 and one year high school physics laboratory. Corequisite: PHY 102 or 152.

PHY 241 Introductory Electronics for Scientists I (2)
D.C. circuits, voltage and current generation and measurement.

PHY 242 Introductory Electronics for Scientists II (2)
Digital circuits. (PHY 241 is not a prerequisite.)

PHY 243 Introductory Electronics for Scientists III (2)
A.C. circuits.
Prerequisite: PHY 241 or equivalent.

PHY 290 Introduction to Research (2 or 4)
Independent study and/or research in physics for students with no research experience.
Prerequisite: Written agreement of a physics faculty supervisor.

PHY 304 Astrophysics I (4)
Application of elementary physics to the study of planets, stars, galaxies, and cosmology.
Prerequisite: PHY 152 or PHY 102 and MTH 155.

PHY 305 Astrophysics II (4)
Continuation of PHY 304.
Prerequisite: PHY 304.

PHY 306 Observational Astronomy (2)
A lecture/laboratory course using the Oakland University Observatory and providing basic training in astronomical techniques.
Prerequisite: PHY 158 or 159.

PHY 307 Geophysics (4)
The application of physics concepts to the study of the earth, gravity and its anomalies, geomagnetism, earth-sun energy, geochronology, and seismic wave propagation. Offered every other year in fall only.
Prerequisite: PHY 151-152. PHY 106 highly recommended.

PHY 308 Physical Oceanography (4)
Physical oceanography and meteorology; composition and structure of the atmosphere and oceans. Interactions of sea water with the atmosphere, the continents, and man. Offered every

other year in winter only.
Prerequisite: PHY 151-152. PHY 107 highly recommended.

PHY 317 Modern Physics Laboratory (2)
Optics and atomic physics experiments. Offered fall only.
Prerequisite: PHY 158 or 159. Corequisite: PHY 371.

PHY 318 Nuclear Physics Laboratory (2)
Nuclear physics experiments. Offered winter only.
Prerequisite: PHY 158 or 159. Corequisite: PHY 372.

PHY 325 Biophysical Science I (4)
Lecture course emphasizing the physics of living systems: thermodynamics in biology, information theory, theories of aging, biomolecular structure, nerve conduction, radiation biology. Offered fall only.
Prerequisite: PHY 102 or 152, and MTH 155.

PHY 326 Biophysical Science II (4)
Lecture course presenting application of the physical laws to operation of modern biophysical instruments; the electron microprobe, ultracentrifuge, spectrometer, laser light scattering, optical and x-ray diffraction, and acoustic probe. Offered winter only.
Prerequisite: PHY 102 or 152, and MTH 155.

PHY 331 Optics (4)
Geometrical optics, optical instruments, wave theory of reflection, refraction, interference, diffraction, and polarization of light. Offered winter only.
Prerequisite: PHY 152 and MTH 155.

PHY 341 Electronics (4)
Electronics for scientists, circuit theory, transistors, power supplies, linear amplifiers, oscillators. Offered winter only.
Prerequisite: PHY 152 and PHY 158 or 159; concurrent enrollment in PHY 347 is recommended.

PHY 347 Electronics Laboratory (2)
Circuits and electronics experiments. Offered winter only.
Corequisite: PHY 341.

PHY 351 Intermediate Theoretical Physics (4)
Topics and techniques common to intermediate physics courses. Includes analytical and numerical (computer) solution techniques, DIV, GRAD, CURL, and Fourier analysis. Offered fall only.
Prerequisite: PHY 152.

PHY 361 Mechanics I (4)
Applications of Newton's laws to particles, systems of particles, harmonic oscillators, central forces, accelerated reference frames, and rigid bodies. Offered winter only.
Prerequisite: PHY 152. Corequisite: MTH 254.

PHY 371 Modern Physics (4)
Introduction to relativity, kinetic theory, quantization, and atomic physics. Additional topics chosen from physics of molecules, solids, nuclei, and elementary particles. Offered fall only.
Prerequisite: PHY 152 and MTH 155; concurrent enrollment in PHY 317 is recommended.

PHY 372 Nuclear Physics (4)
Radioactivity, interaction of radiations with matter, accelerators, nuclear reactions, fission, and fusion. Offered winter only.
Prerequisite: PHY 102 or 152, and MTH 155; concurrent enrollment in PHY 318 is recommended.

PHY 373 Physics in Medicine (4)
Especially for premedical students, wishing to explore the physical basis of medicine, including signal analysis, feedback and control, biomechanics, body fluid dynamics, bioelectricity, nuclear physics and nuclear medicine, x-rays, electrical properties of nerves, and membrane transport.
Prerequisite: MTH 155 and PHY 152.

PHY 381 Electricity and Magnetism I (4)
Maxwell's equations and the experimental laws of electricity and magnetism. Potential theory,

boundary conditions on the electromagnetic field vectors, field energy. Dielectrics, conductors, and magnetic materials. Offered fall only.
Prerequisite: PHY 351 and MTH 254. APM 257 desirable.

PHY 400 Undergraduate Seminar (1)

PHY 405 Special Topics (2, 4, or 6)
Prerequisite: Permission of department.

PHY 418 Modern Optics Laboratory (2)
Laboratory studies employing sophisticated laser, spectrometer, and photon counting techniques and equipment including atomic absorption spectroscopy, intensity fluctuation spectroscopy, atomic and molecular fluorescence, and Brillouin scattering. Offered winter only.
Prerequisite: PHY 371, PHY 158 or 159.

PHY 421 Thermodynamics (4)
The zeroth, first, and second laws of thermodynamics with applications to pure substances. Introduction to the kinetic theory of gases and to statistical mechanics. Offered fall only.
Prerequisite: PHY 361 and APM 257.

PHY 441 Physics of Radiology I (2)
Physical principles underlying the practice of radiology. Offered fall only.
Prerequisite: Departmental approval and PHY 371, 381, and either PHY 247 or 347.

PHY 442 Physics of Radiology II (2)
A continuation of PHY 441. Offered winter only.
Prerequisite: PHY 441.

PHY 443 Physics of Nuclear Medicine I (2)
Physical principles of diagnostic and therapeutic applications of radio-nuclides. Offered fall only.
Prerequisite: Approval of department, PHY 371, 381, and either PHY 247 or 347.

PHY 444 Physics of Nuclear Medicine II (2)
A continuation of PHY 443. Offered winter only.
Prerequisite: PHY 443.

PHY 445 Medical Instrumentation (2)
Detailed examination of the scientific instrumentation used in modern medical diagnostic and therapeutic practice. Offered winter only.
Prerequisite: Approval of department, PHY 371, 381, and 347.

PHY 470 Relativity (4)
Special relativity in mechanics and electromagnetism. Introduction to general relativity and gravitation. Offered winter only.
Prerequisite: PHY 361 or 371 or 381.

PHY 472 Quantum Mechanics I (4)
Principles of nonrelativistic quantum mechanics, Schrodinger wave equation, expectation values of energy, position, momentum and angular-momentum operators, spin, perturbation theory, identical particles. With applications to atomic systems. Offered fall only.
Prerequisite: PHY 351, 361, 371, and APM 257.

PHY 482 Electricity and Magnetism II (4)
Multipole fields, solutions of Laplace and Poisson equations, electromagnetic waves in insulators and conductors, radiation, and the derivation of the laws of optics from Maxwell's equations. Offered winter only.
Prerequisite: PHY 381, APM 257, and MTH 256.

PHY 490 Independent Study and Research (2, 4, or 6)
Prerequisite: Written agreement of a physics faculty supervisor.

PHY 497 Apprentice College Teaching (2)
Directed participation in teaching selected undergraduate physics courses. May be repeated for a maximum of 4 credits. Graded S/N.
Prerequisite: Permission of instructor.

DEPARTMENT OF POLITICAL SCIENCE

CHAIRPERSON: *Edward J. Heubel*

PROFESSORS: *Sheldon Appleton, Thomas W. Casstevens, Edward J. Heubel, Roger H. Marz, Carl R. Vann (Political Science and Behavioral Sciences)*

ASSOCIATE PROFESSORS: *Robert J. Goldstein, Vincent B. Khapoya, William A. Macauley, James R. Ozinga*

ASSISTANT PROFESSORS: *Karen L. Beckwith, Nathan H. Schwartz, Don Schwerin, Sharon T. Tunstall*

ADJUNCT PROFESSOR: *Paul Wileden*

VISITING ASSISTANT PROFESSOR: *Richard F. Kanost*

Political science offers a concentrated and systematic study of politics at all levels of government and in many different cultural and national settings. Policy-making, law, political behavior, administration, international politics, foreign governments, and theories and philosophies of government are among the many topics explicated by these courses. The general educational aim is to increase the student's awareness and understanding of the broad realm of politics and government. Many students electing this major wish to prepare for careers in public service, law, practical politics, or the teaching of government and social studies.

The Bachelor of Arts degree with a major in political science is the department's broadest degree program and is appropriate for the student with interest in public affairs or who intends to enter law school or graduate school. The department also offers a major in public administration leading to the Bachelor of Science degree. The program provides appropriate analytical skills for professionals and attempts to prepare students either for direct entry into public service or for specialized graduate programs in public administration and public policy. A Master of Public Administration is also available. For details, see the *Oakland University Graduate Study Catalog.*

Requirements for the Liberal Arts Major in Political Science

The major requires 40 credits in political science including PS 100, 131, and 222. No more than 4 credits of PS 110 and no more than 12 credits of independent study and internships (PS 390, 458, and 490) may be offered toward satisfaction of the major requirements.

Requirements for the Major in Public Administration and Public Policy, B.S. Program

In addition to the general requirements for a Bachelor of Science degree of the College of Arts and Sciences, students must maintain a 2.50 average in required major courses (40 credits) and cognate courses (22 credits).The following major courses are required: PS 100, 131, 222, 350, 353, 453, and 454. Students are advised to enroll in PS 458—Public Affairs Internship (8 credits) in the spring session of the senior year. For students who complete the internship, 4 additional credits in political science courses numbered 300 or above should be taken. For students who do not take the internship an additional 12 credits in 300/400 level political science courses are required. Consultation with the director of public administration is recommended before choosing those 12 credits.

The following corequisite courses are required:

1. MTH 121 and STA 225
2. ECN 200 and 201 (8 credits) or ECN 210 (6 credits)
3. ACC 200 (4 credits)
4. CIS 122 (4 credits)

Political science majors may be advised by anyone in the department. For entry into the public administration program, consult any of the following: Edward J. Heubel, director; Roger H. Marz; or James R. Ozinga.

Departmental Honors

Departmental honors are conferred upon graduates who successfully complete a PS 490 project and paper at the honors level during the senior year. The student seeking honors should obtain departmental permission before registering for a 490 project. There are opportunities for advanced students to undertake independent readings and research under the PS 390 and PS 490 numbers; these also require preenrollment in the departmental office.

Requirements for a Major in Political Science with Other Concentrations

Students in political science may pursue a regular major in political science with a number of interdepartmental concentrations.

These include, among others, American studies, applied statistics, Michigan studies, social justice and corrections, and women's studies.

For students who wish to emphasize political science and pursue a secondary education in social studies, see program information.

Legal Assistant Program—Political Science Credit

In cooperation with the Division of Continuing Education, the department sponsors courses preparing students for the legal-assistant field. In addition to the foundation courses, certain courses focus on areas such as general practice, litigation, probate, and estate planning. Completion of the program as specified by the Division of Continuing Education leads to a diploma awarded by that division.

A student in the college may offer up to 8 credits of such course work toward the total number of credits required for graduation. Courses approved to date by the committee on instruction are listed below. For specific details, consult the department.

PS 344 (CE 2506)	**Substantive Law (1)**
PS 345a (CE 2510)	**Legal Research and Writing I (1)**
PS 345b (CE 2511)	**Legal Research and Writing II (1)**
PS 346 (CE 2520)	**Real Property Transactions (1)**
PS 347 (CE 2525)	**Estates and Taxes (1)**
PS 348 (CE 2530)	**Corporations (1)**
PS 349 (CE 2535)	**Introduction to Litigation (1)**
PS 447a (CE 2550)	**Administration of Decedents' Estates (1)**
PS 447b (CE 2555)	**Federal Estate and Gift Taxes (1)**
PS 447c (CE 2560)	**Income Taxation of Estates and Trusts (1)**
PS 447d (CE 2565)	**Drafting of Wills and Trusts (1)**
PS 447e (CE 2568)	**Estate Planning and Documents (1)**
PS 449a (CE 2540)	**Litigation I: Case Preparation before Trial (1)**
PS 449b (CE 2541)	**Litigation II: Case Preparation before Trial (1)**
PS 449c (CE 2545)	**Litigation III: Trial Practice and Procedure (1)**
PS 449d (CE 2547)	**Litigation IV: Anatomy of a Lawsuit (1)**
PS 491	**Special Topics for Legal Assistant (1)**
PS 492 (CE 2599)	**Legal Assistant Internship (2)**

Requirements for the Liberal Arts Minor in Political Science

Twenty credits in political science including either PS 100 or PS 131 and at least 8 credits at the 300/400 level.

COURSE OFFERINGS

PS 100 Introduction to American Politics (4)
The decision-making process in the American national government and the ways in which parties, groups, and individuals work to produce public policy in Congress, the Presidency, and the courts.

PS 103 Black Politics (4)
Analysis of Afro-Americans and their relationship to the American political system. Emphasis is on black political ideologies and thought, political organizations and strategies, and forms of political participation, both electoral and nonelectoral.

PS 110 Contemporary Political Issues (4)
Selected topics dealing with current political issues or public policy problems. The particular topic will be announced at the time of offering. Designed for the general student. May be repeated for credit with different topics.

PS 115 U.S. Foreign Policy (4)
Foreign policy issues and challenges confronting the U.S. in the nuclear age in light of the historical evolution of American diplomacy and in light of the limitations imposed upon foreign policy makers by public opinion and the exigencies of domestic politics.

PS 131 Foreign Political Systems (4)
Analysis of contemporary politics and governmental systems of selected countries; types chosen range from established constitutional democracies and totalitarian systems to movements and regimes of new developing nations. Offered fall and winter.

PS 213 International Politics (4)
Interdisciplinary study of concepts and hypotheses basic to the understanding and analysis of political and economic relations and conflict among nations, states, and other institutions in the international system.

PS 222 Measurement and Methodology (4)
A study of research design, measurement of political variables, and data analysis.
Prerequisite: One course in political science.

PS 241 Law and Politics (4)
A broad survey of the function of law and legal systems in the political order. The student will be exposed to the classic jurisprudential, historical, anthropological, and comparative treatments of the subject.

PS 250 Politics of Survival (4)
An examination of environmental, regulatory, and energy related political issues that challenge human survival both nationally and globally.

PS 301 American Presidency and the Executive Process (4)
A study of presidential politics, decision-making, and leadership in the American political system.
Prerequisite: PS 100.

PS 302 Legislative Process and Public Policy (4)
A study of legislative behavior and decision-making, emphasizing the problems of public policy development in the American political system.
Prerequisite: PS 100.

PS 305 Politics of the Local Community (4)
Study of local governments, political forces, trends in metropolitan and suburban politics, and problems of planning in an age of urbanization.
Prerequisite: PS 100.

PS 307 State Politics (4)
Comparative analysis of the variations and similarities of the political systems of the 50 states;

the policy-making structures; political participation; and contemporary public policy issues.
Prerequisite: PS 100.

PS 313 International Law (4)
An examination of the principles and organization of modern international law. Attention is given to the growing field of ocean resource, outer space, environmental protection, and information law.
Prerequisite: PS 213.

PS 318 Foreign Policies of Communist Systems (4)
Relations since 1917 between communist states and the Western world as well as relations among communist states.
Prerequisite: PS 131.

PS 320 Laboratory in Empirical Methods (4)
Topics include social science data management, two or three batch and conversational statistical packages, some computer programming, some statistics not covered in PS 222, and different modes of empirical political science research.
Prerequisite: PS 222.

PH 321 Systematic Political Analysis (4)
A study of formal models in political science.

PS 323 The American People and Their Presidents (4)
Study of the relationships among public attitudes toward the Presidency and the political system, voting behavior in Presidential elections, and Presidential policies and leadership.
Prerequisite: PS 100.

PS 324 Electoral Processes (4)
The study of electoral systems, political parties, and the voting behavior of individuals and groups, with special attention to U.S. political experience.
Prerequisite: PS 100.

PS 329 European Political Systems (4)
An analysis of politics within and between nations in Europe. Selected institutions and processes are examined in detail. A comparative point of view is emphasized.
Prerequisite: PS 131.

PS 330 Political Development (4)
An examination of the various approaches and theories used in comparative political research, including theories of development and modernization.
Prerequisite: PS 131 and 222.

PS 331 Politics in Canada and the Commonwealth (4)
An analysis and comparison of politics, parties, parliament, politicking, and public policy in Canada and selected countries of the Commonwealth.

PS 332 Politics of the Middle East and North Africa (4)
The cultural and historical factors that influence contemporary politics of the area will be emphasized. Topics include religion, social structures, economic problems, the impact of the West, and the Arab-Israeli conflict.
Prerequisite: PS 131.

PS 333 African Politics (4)
Examination of politics of selected African states. Primary focus is on political development. Attention is given to traditional and colonial politics as well as to individuals, groups, and institutions that make up the present political process.
Prerequisite: PS 131.

PS 334 Political Systems of Southern Asia (4)
Examination of the elements of political life in India, Bangladesh, and Pakistan. The cultural, historical, social, and economic factors that influence contemporary political institutions; and the issues and processes by which political conflicts are resolved will be studied.
Prerequisite: PS 131.

PS 335 Politics of Latin America (4)
Analysis of Latin American political systems and the historical, social, and economic factors underlying them. The major countries are studied intensively, and a comparative approach is

used to examine the variations from democracy to dictatorship and the political instability that characterizes the area.
Prerequisite: PS 131.

PS 337 The Soviet Political System (4)
A descriptive analysis of the Soviet society as a political system: its origins, institutions, and political behavior. Trends and developments in the system will be assessed, and comparisons with other political systems will be undertaken.
Prerequisite: PS 131.

PS 338 Modern Chinese Politics (4)
An analysis of the rise of social movements in China after the breakdown of the traditional order; the emergence of the Nationalist and Communist regimes and the triumph of the Communists; and the political processes of the People's Republic of China, emphasizing the role of elites in policy formation, ideology, mass support, and the exercise of central power.
Prerequisite: PS 131.

PS 342 American Legal System I: Principles and Processes (4)
A study of the various institutions of the American legal system with emphasis on the specific policy-making tools of the judicial process.
Prerequisite: PS 100.

PS 343 American Legal System II: Constitutional Law and Civil Liberties (4)
Survey of American constitutional law with emphasis on civil rights as defined and protected by the judiciary. Primary emphasis on U. S. Supreme Court decisions dealing with freedoms of speech, religion, and privacy; rights of the accused; racial, ethnic, and sex discrimination.
Prerequisite: PS 241 or 342.

PS 350 Public Administration (4)
Study of government in action, with special attention to policy formulation, organization, personnel administration, supervision, coordination, administrative control, and accountability.
Prerequisite: PS 100.

PS 353 Public Policy Analysis (4)
Examines the political, economic, and social factors in development, implementation, and impact of public policies; the roles of interest groups, political parties, bureaucratic institutions, and legislative bodies in the policy process at federal, state, and local governmental levels.
Prerequisite: PS 100.

PS 359 Public Policy and Health Care (4)
An examination of the status and evolution of public policies relating to health and health care, the policy-making processes in health care and the various implications of trends in health care policy.
Prerequisite: PS 100

PS 371 American Political Thought (4)
The writings of prominent American thinkers and statesmen whose ideas have influenced the development of the American polity will be considered. Selected texts by European thinkers may also be examined with a view to their influence on America.
Prerequisite: PS 100.

PS 372, 373 Western Political Thought (4 each)
A two-semester survey of Western political philosophy. Each major philosopher, from Plato to Marx, is placed in his/her political setting to show the interrelationships between a philosopher's environment and his/her ideas.

PS 377 Communism (4)
The development of revolutionary socialism from early Marxism to the present. The course analyzes the relevance of Marxism to a variety of contemporary revolutionary situations.

PS 390* Independent Study (2 or 4)
Readings not normally covered in existing course offerings. Directed on an individual basis.
Prerequisite: Permission of department and instructor.

PS 452 Comparative Politics and Administration (4)
The role of public administrative systems in the context of diverse national environments,

various levels of political development, and different stages of modernization.
Prerequisite: PS 131 and 350.

PS 453 Public Budgeting (4)
The budgeting process in complex institutions, with special reference to various modern budgetary systems. Stresses use of control over flow of funds as an instrument in policy control.
Prerequisite: PS 350.

PS 454 Public Personnel Administration (4)
Study of the procedures, techniques, and problems of personnel administration in public agencies; evolution of the modern civil service system, merit principle, and responses to collective bargaining and equal opportunity programs.
Prerequisite: PS 350.

PS 455 Public Policy Evaluation (4)
Analysis of public policy-making, evaluation techniques, uses of relevant information, and ethical implications of such studies.
Prerequisite: PS 222 or a statistics course and PS 353.

PS 456 Public Administration Strategies and Policies (4)
The application of the management tools of economics, political science, statistics, accounting, and organizational behavior to the systematic analysis of case studies drawn from experience in the governmental sector or other not-for-profit enterprises.
Prerequisite: Senior standing and permission of department.

PS 457 Public Administration Career Orientation (2)
Prospects, problems, and ethics of public administration as a profession. Examples and practical problems from agency work, jointly presented by professional administrators and department faculty.
Prerequisite: PS 350 and permission of department.

PS 458* Public Affairs Internship (4 or 8)
Supervised student internships with governmental, political, and other public agencies; reports and analyses relating to agency required. Applicants must seek departmental approval at the beginning of the semester prior to that of the internship. Graded S/N.
Prerequisite: Permission of department.

From time to time, the department offers advanced seminars in which a topic or problem is studied in depth, and in which significant individual student research is presented for analysis and criticism. The seminar titles refer to the broad fields of political science within which the problem falls; the precise problems to be studied will be announced by the department when the seminars are offered. All seminars require permission of the department before registration. Offered every semester.

PS 402, 403 Seminar in American Politics (4 each)
PS 410 Seminar in International Relations (4)
PS 420 Seminar in Political Behavior (4)
PS 430 Seminar in the Comparative Study of Political Systems (4)
PS 440, 441 Seminar in Public Law (4 each)
PS 450 Seminar in Public Policy (4)
PS 480 Seminar in Political Theory (4)
PS 490* Special Topics or Directed Research (2, 4, or 8)

*Students are limited to 8 credits of independent study (PS 390, 458, or 490) in any one semester, and may offer no more than 12 credits toward fulfillment of major requirements.

DEPARTMENT OF PSYCHOLOGY

CHAIRPERSON: *David W. Shantz*

PROFESSORS: *Edward A. Bantel, David C. Beardslee, Jean S. Braun, Daniel N. Braunstein, Harvey Burdick, Boaz Kahana*

ASSOCIATE PROFESSORS: *Max Brill, Ranald D. Hansen, Algea O. Harrison, Lawrence G. Lilliston, David G. Lowy, Dean G. Purcell, Ralph Schillace, David W. Shantz, Irving Torgoff, Keith E. Stanovich, Harold Zepelin*

ASSISTANT PROFESSORS: *Virginia Blankenship, I. Theodore Landau, Robert Stewart*

ADJUNCT ASSOCIATE PROFESSOR: *F. Edward Rice*

The Department of Psychology offers undergraduate programs leading to the Bachelor of Arts degree. The Department of Psychology curriculum is structured to meet the needs of four types of students interested in majoring in psychology: the student who plans to find employment after obtaining his/her bachelor's degree, rather than continuing formal education; the student who plans to go to graduate school in psychology; the student who plans to enter a field other than psychology that requires further formal training; and the student who has a general interest in psychology. A pamphlet, *Majoring in Psychology at Oakland University,* is available in the department office. The student planning to major in psychology should obtain a copy of this pamphlet, which offers suggested programs of study.

Requirements for the Liberal Arts Major in Psychology

The requirement is 36 credits in psychology, including PSY 100, 250, and four courses at the 350 level or above. Students who plan to attend graduate school should take statistics (PSY 357) and one of the experimental courses (PSY 400, 410, 411, or 412).

The department currently offers practicum courses in areas of specialization such as gerontology and community psychology.

Departmental Honors

Departmental honors are conferred upon graduates who have taken at least six psychology courses at Oakland University, including PSY 357 and a 400-level experimental course, and achieved a grade point average of 3.50 or higher in psychology courses. The student must also do honors-level work in PSY 494.

Requirements for a Modified Major in Psychology with a Linguistics Concentration

A modified major in psychology with a concentration in linguistics is available. The linguistics concentration requires 24 credits in psychology, including PSY 100, 250, and at least two 300-level courses.

The department also offers a Master of Arts degree in clinical psychology. For details, see the *Oakland University Graduate Study Catalog.*

Requirements for the Liberal Arts Minor in Psychology

The requirement for a minor in psychology is 20 credits in psychology, including one introductory course (PSY 100 or 130), a methods course (PSY 250), and three other psychology courses, two of which must be at the 300 level or above.

COURSE OFFERINGS

Courses at the 500 level are generally available to qualified upper-level undergraduates. Consult the *Graduate Study Catalog* for further information.

PSY 100 Foundations of Contemporary Psychology (4)
An introduction both to basic principles and recent formulations in psychology. Topics include the central psychological processes of attending, perceiving, learning, thinking, remembering, and study of social behavior and the development and organization of personality. Required of psychology majors.

PSY 130 Psychology and Society (4)
Examination of relationships among people and the effects of these relationships upon them. Analysis of social functions and roles; development and change of attitudes, beliefs, and values; and development of personality in relation to the social milieu.

PSY 200 through 209 Topics in Psychology (4 each)
Offered occasionally on special topics of current interest that are not listed among regular offerings.
Prerequisite: See individual listings in schedule of classes.

PSY 220 Abnormal Psychology (4)
The psychodynamics of abnormal behavior, clinical types, methods of investigation, and principles of psychotherapy.
Prerequisite: PSY 100 or 130.

PSY 235 Social Psychology (4)
Overview of traditional and current trends in social psychology. Attention is given to developing theoretical approaches to attitudes, interpersonal processes, and social perception.
Prerequisite: PSY 100 or 130.

PSY 250 Introduction to Research Design (4)
General introduction to design, function, and interpretation of research in the social sciences. Aimed at providing necessary preparation to evaluate the empirically based content of psychology. Required of psychology majors.
Prerequisite: PSY 100 or 130.

PSY 271 Child Development (4)
Theory and principles of child development from birth to puberty. Selected topics include: maturational processes, learning and motivation, intelligence, self concept, and child-rearing practices.
Prerequisite: PSY 100 or 130.

PSY 300 through 309 Topics in Psychology (2 or 4 each)
Offered occasionally by faculty wishing to explore topics of current interest not listed among regular offerings, either on their own initiative or at the request of a group of students.
Prerequisite: See individual listings in schedule of classes.

PSY 310 Coping Strategies in the Normal Personality (4)
Characteristics of healthy personality in the following dimensions: need gratification, reality contact, interpersonal relationships, and growth.
Prerequisite: PSY 100 or 130.

PSY 311 Tests and Measurement (4)
Theories of measurement and evaluation. Examination of construction and interpretation of tests of ability, achievement, interests, and special attitudes. Objective tests of personality.
Prerequisite: PSY 100 or 130.

PSY 312 Psychopathology of Childhood (4)
The psychopathology of children and adolescents, emphasizing dynamic and cognitive-perceptual-motor variables.
Prerequisite: PSY 100 or 130.

PSY 315 Individual Differences (4)
Intellectual, motivational, and personality differences associated with age, social roles, sex, ethnic and racial groups, and social class.
Prerequisite: PSY 100 or 130.

PSY 316 Applied Psychology (4)
The areas in which psychology has been used, such as child-rearing, teaching and training methods, personality and aptitude testing, sensitivity training, human engineering, environmental design, and animal behavior.
Prerequisite: PSY 100 or 130.

PSY 322 The Psychology of Crime and Delinquency (4)
The nature of criminal behavior. Various psychological theories about the origins of delinquency and alternative approaches to dealing constructively with criminal behavior.
Prerequisite: PSY 100 or 130, and 220.

PSY 323 Community Psychology (4)
Historical antecedents, contemporary roots, and basic concepts of the community psychology movement. Community approach to problems of emotional disorder, suicide, poverty, community organization, and community education will be examined.
Prerequisite: PSY 100 or 130, and 220.

PSY 324 Dehumanization (4)
Survey of research and literature on the effects of removing an individual's responsibility for the outcome of personal behavior. Topics include bystander apathy, over-obedience, conformity, etc.
Prerequisite: PSY 100 or 130.

PSY 325 Psychology of Women (4)
Psychological variables that repeatedly differentiate women from men; topics include sex differences in personality and learning ability, dependence, passivity, identification, role conflict, and achievement motivation.
Prerequisite: PSY 100 or 130.

PSY 326 The Psychology of Social Issues (4)
Psychology's contribution to understanding selected issues of current social concern such as urban areas, jury selection, effects of television on violence, etc.
Prerequisite: PSY 100 or 130.

PSY 331 Psychology of Adulthood and Aging (4)
Psychological change, from young adulthood to death; topics include potentials for psychological growth and sources of crisis, changes in intellectual processes, attitudes toward aging, retirement, and the needs of the aged.
Prerequisite: PSY 100 or 130.

PSY 335 Psycholinguistics (4)
Identical with ALS 335.

PSY 336 Psychology of Adolescence and Youth (4)
The transition to adulthood, as influenced by physiological change, intellectual growth, and social attitudes. Topics include the quest for identity, juvenile delinquency, drug use, the youth culture, relationships between generations, and vocational choice.
Prerequisite: PSY 100 or 130.

PSY 337 Group Behavior (4)
Group structure, function, and process. Focus on how individuals affect the behavior of people in groups; how the group, in turn, affects the behavior of the individual. Topics include leadership, cohesion, group therapy, crowds, and mobs.
Prerequisite: PSY 100 or 130, and 235.

PSY 350 Motivation (4)
The nature of physiological and behavioral mechanisms that control an organism's reaction to the demands of its environment.
Prerequisite: PSY 100.

PSY 351 Learning, Memory, and Thinking (4)
Approaches to learning, memory, and thinking processes. Includes conditioning, problem solving, verbal behavior, storage systems, and organization.
Prerequisite: PSY 100.

PSY 352 Sensation and Perception (4)
Approaches to the basic sensory systems and perceptual processes.
Prerequisite: PSY 100 and PSY 250 or equivalent or permission of instructor.

PSY 353 Cognitive Psychology (4)
The information processing approach to problems in pattern recognition, selective attention, mental operations, short- and long-term memory, the psychology of reading, problem-solving, and probabilistic reasoning.
Prerequisite: PSY 100.

PSY 354 Animal Behavior (4)
Comparative psychological, ethological, and sociobiological viewpoints on behavior of animals. Emphasis will be on vertebrate species including humans. Discussion of reproductive, aggressive and social behaviors, learning, communication, etc. Stresses an evolutionary perspective.
Prerequisite: PSY 100 or an introductory biology course.

PSY 355 Physiological Psychology (4)
Biological bases of behavior of humans and related mammalian species: basic neuroanatomy and neurophysiology, motivation, emotion, learning and memory, sleep and dreams, sensory-motor mechanisms, brain stimulation, psychopharmacology, hormones, and behavior.
Prerequisite: PSY 100 or an introductory biology course.

PSY 356 Sleep and Dreams (4)
A review of facts and theories regarding sleep and dreams with demonstrations of research techniques. Topics include psychological and biological viewpoints on sleep, dreams, dream interpretation, and sleep disorders.
Prerequisite: PSY 100.

PSY 357 Statistics and Research Design (4)
The principal statistical procedures employed in social science research. Emphasis is on design of experimental studies, problems of sampling and control of variables, and psychological measurement. Two years of high school mathematics are recommended.
Prerequisite: PSY 100 and 250.

PSY 358 History and Systems of Psychology (4)
How psychology came to be as it is. The beginning to the great experiments and the schools of psychology; the schools to World War II; World War II to the present. Men, experiments, theories.
Prerequisite: PSY 100 and two psychology courses other than PSY 357.

PSY 360 Attitudes and Opinions (4)
Nature and function of attitudes, relations between attitudes and personality, and attitudes and behavior. Attitude measurement, formation, and change processes.
Prerequisite: PSY 357.

PSY 371 Work with the Elderly I (4)
Introduction to community and institutional work with the elderly. Field placement is combined with readings and lectures on psychosocial services for the elderly.
Prerequisite: PSY 331 (may be taken concurrently with instructor's consent).

PSY 372 Work with the Elderly II (4)
Field work is combined with independent readings in gerontology.
Prerequisite: PSY 371 and 250 or its equivalent, and instructor's consent.

PSY 376 Socialization in the Family (4)
Some areas of research and theory on socialization processes. Areas of focus: attachment and separation, conscience development, sex-role identity, ego-identity, etc. Role of principal agents, e.g., family, peers, school.
Prerequisite: PSY 271, 331, or 336.

PSY 380 Theories of Personality (4)
Major theories of human personality development and principles of personality theory building.
Prerequisite: PSY 100 and two other psychology courses.

PSY 391 through 398 Advanced Topics in Psychology (2 or 4)
Offered occasionally by faculty wishing to explore special topics of current interest not listed

among regular offerings, either on their own initiative or at the request of a group of students. Especially for majors, but qualified nonmajors will be admitted.
Prerequisite: See individual listings in schedule of classes.

PSY 399 Field Experience in Psychology (4)
The application of psychological concepts and methods in a work setting. Includes job placement with a classroom component, readings, and discussion of relevant literature. Does not count towards the major. May not be repeated for credit.
Prerequisite: PSY 250 and 16 additional credits in psychology, of which at least 8 must be at the 300-400 level.

PSY 400 Experimental Psychopathology (4)
Basic philosophy of science; issues in design and methodology of psychological research with application to abnormal behavior. Experience in data collection.
Prerequisite: PSY 220 and 357.

PSY 410 Experimental Social Psychology (4)
Theory and techniques of survey research, field experiments, laboratory experiments, and field studies. Experience in data collection; independent project required.
Prerequisite: PSY 235 and 357.

PSY 411 Experiments in the Basic Processes (4)
Issues in learning, perception, thinking, physiological psychology, and animal behavior with independent research project.
Prerequisite: PSY 357, and 351, 352, or 353.

PSY 412 Experimental Developmental Psychology (4)
Issues in design and methodology of psychological research with application to the developmental area. Independent project required.
Prerequisite: PSY 357 and PSY 271 or PSY 331 or PSY 336.

PSY 430 Advanced Social Psychology (4)
Critical study of selected areas in social psychology such as attribution theory.
Prerequisite: Permission of instructor.

PSY 441 Advanced General Psychology (4)
Current frontiers of knowledge and new methodology in the range of psychology. For senior majors who plan to attend graduate school.
Prerequisite: Permission of instructor.

PSY 470 Apprentice College Teaching (4)
Supervised participation in teaching undergraduate psychology courses. Discussion of teaching objectives and methods. May be repeated for a total of 8 credits. Only 4 credits may be offered to fulfill major requirements.
Prerequisite: Permission of instructor.

PSY 480 through 485 Readings and Research Projects (2 or 4 each)
Individual readings or laboratory research on a topic agreed upon by a student and a member of the psychology faculty. Not more than 8 credits of readings and research project may be counted towards fulfillment of the major in psychology.
Prerequisite: Permission of instructor.

PSY 494 Honors Independent Studies (4)
Independent honors research projects in clinical, developmental, experimental, and social psychology, respectively.
Prerequisite: Permission of instructor.

PSY 496 Senior Honors Seminar (4)
Basic concepts and issues in the field of psychology, with representative topics such as mind-body, heredity-environment, learning-instinct, theories, models and paradigms, the nature of verification and measurement, and the politics of psychology.
Prerequisite: PSY 357 and two 300-level psychology courses and a grade point average of 3.50 in psychology.

DEPARTMENT OF RHETORIC, COMMUNICATIONS, AND JOURNALISM

CHAIRPERSON: *Donald E. Morse*

PROFESSORS: *Peter G. Evarts, Donald C. Hildum, Donald E. Morse*

ASSOCIATE PROFESSORS: *Margaret B. Pigott, Ronald A. Sudol*

ASSISTANT PROFESSORS: *Paul Bator, Jane Briggs-Bunting (Director of Journalism Program), Alice Horning, Roberta Schwartz*

SPECIAL INSTRUCTORS: *Rose Cooper-Clark (Director, Reading Programs), Bernadette Dickerson, Wilma Garcia (Director, Rhetoric Writing/Reading Center), Barbara Hamilton, Margaret Kurzman*

INSTRUCTOR: *Sharon Howell*

ADJUNCT ASSISTANT PROFESSOR: *William W. Connellan*

LECTURERS IN RHETORIC: *Anne Becker, Richard Burt, Colin Cass, Ella Davis, Carl Dull, Margot Gardner, Lewis Hayner, Jessie Herreshoff, Carlson Jackson, Donald Lytle, Mary Kay Monteith, Sally Pierce, Karen Robinson, Carole Royer, Louise Sanderson, Marilyn Shapiro, Aaron Stander, Carole Terry, Edward Wolff, Jack Zucker*

LECTURERS IN COMMUNICATIONS: *Karen Seelhoff, Mary Wells*

LECTURERS IN JOURNALISM: *Harry Atkins, James Berline, Lawrence Devine, Jane Eckels, Berl Falbaum, Kenneth Fireman, David Frank, John Guinn, Barbara Holliday, Thomas Houston, Iris Jones, Geraldine King, Jeff Laderman, James Llewellyn, Kitty McKinsey, Joseph Paonessa, James Ritz, Neal Shine, Susan Stark, Allan Steinmetz*

The Department of Rhetoric, Communications, and Journalism offers programs of study leading to the degree of Bachelor of Arts with the opportunity to concentrate in several areas. Courses are available in communication theory, public and interpersonal communication, journalism, advertising, oral interpretation, mass media, and speech education. The Department of Rhetoric, Communications, and Journalism serves the nonspeech major and the general Oakland University student. Communication training can enhance almost any career or life. There are many specialized careers which welcome students with communication knowledge, e.g., journalism, media, law, public relations, advertising, and teaching.

The rhetoric program is designed to help students acquire basic skills necessary to perform college-level academic work. While the emphasis in composition courses is on coherent and effective writing, other modes of written communication, including library search techniques, research, and annotation, are included in the writing curricula. In addition, the program offers courses in reading, study skills, and tutorial instruction.

Students are placed in rhetoric writing courses according to the results of pre-enrollment diagnostic testing. Unless exempted, students should enroll in the course sequence assigned, which in most cases will include a two-course sequence in the form and content of composition (RHT 100 and RHT 101). The courses are designed so that a student who completes the assigned sequence should also be granted the university's certification of proficiency in writing required for graduation.

Assistance is available for students who need extra help in writing and reading. A noncredit writing center in Wilson Hall is staffed by qualified student tutors during the hours posted. Credit-bearing developmental courses (those below the 100 level) are also offered. Students enrolled in these courses should be in close contact with their advisers to insure that they do not exceed the specific limitation of 16 credits earned below the 100 level counting toward completion of the baccalaureate.

Requirements for the Liberal Arts Major in Communications

The major consists of a minimum of 36 credits in courses labeled SCN, JRN or in the THA courses listed below. SCN 201 and 303 are required. Students should choose, in consultation with an adviser, either a media specialization (SCN 491 required) or a theoretical specialization (SCN 202 required). At least 20 credits of the total must be at the 300 or 400 level, including at least 4 credits at the 400 level. No more than a total of 12 credits from SCN 281, 490,491, and 497, JRN 240, 404 and 490, and THA 363 may be counted toward the major.

The following theatre arts courses may be counted toward the liberal arts major in communications, the modified major with linguistics concentration, the liberal arts minor, and the secondary teaching minor in speech: THA 213, 230, 267, 350, 363, 368, 420, 430, 450, 460, 462, 467. Course descriptions can be found in the Center for the Fine and Performing Arts section of this catalog.

Requirements for the Modified Major in Communications with a Linguistics Concentration

Twenty-four credits in SCN or JRN, or THA (chosen from those listed above), and 20 credits in linguistics. SCN 303, and SCN 201 or 202, are required. For linguistics requirements refer to the linguistics section of this catalog.

Requirements for the Liberal Arts Minor in Communications

Twenty credits in SCN, JRN, or THA (chosen from those listed above), including SCN 201 or 202, and at least 12 credits at the 300 or 400 level. No more than 4 credits in independent study, internship, or apprentice college teaching may be counted toward the minor.

Requirements for the Secondary Teaching Minor in Speech

Twenty credits in SCN, JRN, or THA (chosen from those listed above), including SCN 201 and 321. Any student with voice or articulation problems which would handicap his/her performance as a speech teacher must include THA 230 in his/her program.

Requirements for Admission to the Journalism Major

1. Completion of RHT 100 and 101 or satisfaction of the writing proficiency requirement, and completion of JRN 200, with an average grade for all these courses of 3.0 or higher.
2. Completion of at least 20 credits of corequisite courses with an average grade of 3.0 or higher.
3. Completion of an introductory two-semester sequence in a modern language at the university level; or completion of one semester of a modern language at the second-year level or above; or completion of two courses numbered above 120 in mathematical or computer science.

Requirements for the Liberal Arts Major in Journalism

1. Twenty credits in journalism, including JRN 200, 300, 403, and 404; and any two of the following: JRN 310, 311, 312, 320, 321, 332, 333, 340.

2. A major in journalism with an emphasis in speech; 8 credits from the following: SCN 201, 207, 285, 301, 303, 311, 371, 403, 473. A major in journalism with an emphasis in advertising: JRN 340, 341, and 342 plus an advertising internship.
3. Corequisites (36 credits) as follows (these courses, where appropriate, may also satisfy general education requirements):
   a. 8 credits from HST 201, 202, 214, 215
   b. 12 credits from ENG 100, 105, 111, 211, 224, 241
   c. 8 credits: PS 100 and any one of PS 110, 241, 305
   d. 4 credits in ECN 150 or 200
   e. 4 credits from SOC 100, AN 101, 102

Requirements for the Liberal Arts Minor in Journalism and Advertising

An emphasis in journalism requires 24 credits in JRN courses including JRN 200, 300, and 404. An emphasis in advertising requires 24 credits in JRN courses including JRN 200, 340, 341, 342, and 404. The internship must be taken in advertising. Communications majors may not count credits towards the major and this minor simultaneously.

COURSE OFFERINGS IN RHETORIC

RHT 060-061 Supervised Study (1)
Two seven-week courses of tutorial instruction focusing on academic skills. A regular and concentrated series of lessons in any of a variety of subjects including mathematics, the sciences, the social sciences, theatre, art history, and composition. Graded S/N.

RHT 063 Tutorial in English for Foreign Students (1)
A course for non-native speakers of English designed to provide tutorial assistance in grammar and composition. May be repeated for credit. Graded S/N.

RHT 075 Developmental Writing I (4)
A small-group course in basic composition skills, including techniques for idea generation, organization of written work, and mastery of writing mechanics, as well as developing fluency and a positive self-image for the writer. Placement by diagnostic testing, referral, or student's decision. Graded S/N.

RHT 076 Reading Skills (4)
For students who have problems in reading comprehension. Small group instruction. Initial diagnosis of reading difficulty and an individual program of study. Graded S/N.

RHT 080 Developmental Writing II (4)
A continuation of RHT 075 to serve students who need more small-group instruction before proceeding to RHT 100 and/or RHT 101. Graded S/N.

RHT 090 Grammar and Composition for Foreign Students (4)
A course for foreign students covering the basic syntax of English and the composition of short expository papers. Graded S/N.

RHT 091 Reading English for Foreign Students (4)
A course designed to aid foreign students in the effective reading of the English language. Short composition exercises are included. Graded S/N.

RHT 100 Composition I (4)
Explores the formal and functional elements of expository prose, with emphasis on the process of writing. Students investigate effective syntactic and rhetorical pattern, incorporating these patterns into the composition of several short essays. Placement by diagnostic testing.

RHT 101 Composition II (4)
A course emphasizing the process of writing to develop extended rhetorical structures, with focus on organizational patterns and the development of logic, coherence, and unity in several student compositions. Also includes fundamentals of investigation, research, and annotation. Placement by diagnostic testing.
Prerequisite: RHT 100 or permission of the department.

RHT 103 Effective Study Skills (4)
Designed to improve skills in the following areas: notetaking, memory and concentration, vocabulary building, preparing for and taking exams, and analytical reading.

RHT 105 Efficient Reading (2 or 4)
A seven- or fourteen-week course for students who understand basic material, and have a primary need for more efficient reading habits. Topics include skimming/scanning techniques, adjustment of rate, patterns of organization, drawing inferences and conclusions before and during reading, and proper use of textbooks. Graded S/N.

RHT 110 Introduction to Critical Reading (4)
For students who understand literal reading content, but who have difficulty with critical comprehension. Develops sophisticated reading skills for practical prose. Recommended for upper-level students contemplating graduate school.
Prerequisite: Completion of the Oakland University writing proficiency requirement.

RHT 200 Peer Tutoring in Composition (4)
Peer tutoring theories and pedagogies, and practical experience in teaching. Work divided between classroom and tutoring assignments. Particularly valuable for majors in the humanities, education, psychology, human services, and related fields.
Prerequisite: Completion of the writing proficiency requirement.
Recommended: A grade of 3.5 or better in RHT 101 or its equivalent.

RHT 335 Communication Skills for Human Services Professionals (4)
Oral and written communication skills for human services and training development professionals. Emphasis on oral presentation, development of promotion and training techniques and experience in workshops, and group discussions.
Prerequisite: RHT 101 or satisfaction of university writing proficiency requirement; completion of 60 credit hours.

COURSE OFFERINGS IN SPEECH COMMUNICATION

SCN 114 Introduction to American Sign Language (4 each)
Conversational AMESLAN; nonverbal communication; body and facial expression integrated with a basic sign vocabulary; a survey of the various sign systems; an examination of the psychological, cultural, and linguistic aspects of the deaf community.

SCN 115 American Sign Language (4)
A continuation of SCN 114.
Prerequisite: SCN 114.

SCN 172 Media Hardware (4)
A working knowledge of the instruments used in mass media: operation, maintenance, and malfunctions. Recommended for education majors.

SCN 201 Public Speaking (4)
Theory and practice in public address: adaptations required by particular goals, audiences, and occasions; and classroom interactions.

SCN 202 Group Dynamics and Communication (4)
Group dynamics, discussion, and problem solving; influences of group structure, norms, roles, leadership, and climate on the processes of group communication and collaborative decision-making.

SCN 207 Semantics (4)
Identical with LIN 207.

SCN 220 Public Speaking on Public Issues (4)
The development, presentation, and defense of speeches addressing public issues, including advanced concepts of audience analysis and persuasion, and the use of rhetorical strategies and aids.
Prerequisite: SCN 201.

SCN 280 Broadcast Announcing (4)
Techniques of speaking before a microphone, editing, reading copy, and news broadcasting. Experience includes recording and critique of various styles of delivery.
Prerequisite: THA 230.

SCN 281 Broadcast Laboratory (2)
Announcing or other broadcast performance on campus radio station. May be repeated for a total of 4 credits. Graded S/N.
Prerequisite: SCN 280 (may be taken concurrently).

SCN 285 Introduction to Broadcasting (4)
A survey of public and commercial radio and television, including their public service, educational, and religious functions; and the history, economics, influence, and social control of broadcasting.

SCN 301 Persuasion (4)
Analysis of persuasion in current society, psychological bases of persuasion, ethical considerations, and distinctions between debate and persuasive argument.
Prerequisite: SCN 201.

SCN 303 Communication Theory (4)
Communication theory in its broadest sense, related to individual learning, knowledge, and group interaction.
Prerequisite: Completion of 32 hours.

SCN 304 Communication in Organizations (4)
Communication theory and practice within organizational systems.

SCN 305 Interpersonal Communication (4)
Elements, purposes, and patterns of communication and their effects; experience in interviewing, decision-making, and tutoring.
Prerequisite: SCN 202.

SCN 308 Forensics Laboratory (2)
Practice for forensic festival or competitive events such as public address and oral interpretation. May be repeated for up to 6 credits.
Prerequisite: SCN 201.

SCN 310 Philosophy of Rhetoric (4)
Identical with PHL 310.

SCN 311 Rhetoric and Public Address (4)
Introduction to the history and theory of rhetorical criticism and public address, contrasting Aristotle's rhetoric with contemporary theorists.
Prerequisite: SCN 201.

SCN 318 Argumentation and Debate (4)
Theories of argumentation from the classical to the contemporary period combined with debating experience. Propositions of fact, value, and policy are distinguished and related to the construction and selection of argument. Debate experience will focus on the national intercollegiate proposition.
Prerequisite: SCN 201.

SCN 321 Speech Communication for the Secondary Teacher (4)
Principles and practices to improve the speech habits of the teacher, to supply special skills for classroom and professional use, and to help prospective teachers to acquire techniques for speech improvement in the classroom.
Prerequisite: SCN 201.

SCN 371 Forms and Effects of Mass Communication (4)
Identical with SOC 371.

SCN 375 Introduction to Cinematography (4)
The essential elements of film as a medium, its capabilities and limitations. Application in studio and/or field work.
Prerequisite: SCN 172.

SCN 376 Introduction to Television Production (4)
The essential elements of television as a medium, its capabilities and limitations. Practical experience in studio and/or field work.
Prerequisite: SCN 172.

SCN 401 Phonetic Theory (4)
Identical with LIN 401.

SCN 402 Small Groups (4)
Identical with SOC 402.

SCN 403 Communicative Networks (4)
The patterns of contact and information transfer in human groups, ranging from the sociometric patterns of small groups, to the formal and informal networks of organization and the large-scale exchanges of mass societies.
Prerequisite: SCN 303.

SCN 471 Workshop in Contemporary Communication (4)
A bridge between academic learning and professional applications in speech communication forms and media. Included in the practicum-seminar format of the workshop are field work, observation, and lecture-demonstrations with professionals in various job settings.
Prerequisite: Permission of instructor.

SCN 473 Social Control of Mass Media (4)
Identical with SOC 473.

SCN 480 Special Topics Seminar (4)
Group study of topics of special interest chosen by department faculty and students. May be repeated for credit with the instructor's permission.
Prerequisite: Three SCN courses.

SCN 490 Independent Study (2 or 4)
Special research projects in speech communication. May be repeated for a maximum of 8 credits.
Prerequisite: Permission of instructor.

SCN 491 Internship (4)
Experience working with professionals in various performing arts and mass communication settings. May be repeated once in a different setting for up to 8 credits.
Prerequisite: Permission of supervising faculty.

SCN 497 Apprentice College Teaching (2 or 4)
Assisting in teaching an undergraduate course in speech communication, and discussions with the supervising faculty member on the principles, methods, and problems of such teaching.
Prerequisite: Junior standing and permission of instructor.

COURSE OFFERINGS IN JOURNALISM

JRN 200 Newswriting (4)
Training in the practical aspects of news gathering, interviewing, and basic newswriting techniques; a discussion of the various journalism media.
Prerequisite: Completion of RHT 101 or writing proficiency requirement.

JRN 240 Journalism Laboratory (2)
Work in on-campus publications under the direction of an instructor; may be repeated once.
Prerequisite: JRN 200.

JRN 300 Newspaper Editing (4)
Principles and practices of the newspaper copydesk: copy reading, headline writing, makeup, and typography; preparing copy for the printer; some attention to new and developing devices in the print shop, such as those involving the computer.
Prerequisite: JRN 200.

JRN 310 Advanced Newswriting (2)
Gathering information through wide reading and interviewing, writing objective in-depth news reports; and background on current social, political, and economic issues.
Prerequisite: JRN 200.

JRN 311 Public Affairs Reporting (4)
Practical training in the news coverage of local governments including police protection, fire

control, and the courts. Discussion of federal and state coverage of stories of public interest.
Prerequisite: JRN 200 and PS 100.

JRN 312 Feature Writing (2)
Practice in writing newspaper and magazine nonfiction features, such as human interest stories, and profiles. The course will enable students to develop further their reportorial skills for careers in print journalism. A study of the purposes, styles, types, and techniques of the feature story.
Prerequisite: JRN 200.

JRN 313 Magazine Writing and Freelancing (2 or 4)
Writing magazine-length nonfiction articles, with some discussion of the differences between newspaper feature stories and magazine pieces, how to write and sell freelance pieces, legal liabilities and rights of the freelance writer including a discussion of the U.S. copyright laws.
Prerequisite: JRN 312.

JRN 320 Editorial Writing (2)
Preparing and writing newspaper opinion and commentary usually found on the editorial page; forms and techniques of editorials and the editorial page.
Prerequisite: JRN 200.

JRN 321 Reviewing: Books, Theatre, Movies (2)
Writing newspaper reviews of the literary, visual, and performing arts from recent publications, live productions, films, and television. Students will be required to purchase tickets and attend various performances.
Prerequisite: JRN 200, JRN 312, and one of the following: ENG 100, 111, 224.

JRN 330 News Photography (2)
Fundamentals of black-and-white photographic production; practice in taking still pictures of people and events for use in newspapers and news magazines; darkroom laboratory work in developing photos.
Prerequisite: JRN 200.

JRN 331 Media Management (2)
Business, corporation, and legal problems in the front-office operation of weekly and daily newspapers; industrial and employee magazines; radio and television stations.
Prerequisite: JRN 200.

JRN 332 Radio-Television News (2 or 4)
Fundamentals and techniques of preparing news for broadcasting, especially the different demands of electronic journalism from those of the print media.
Prerequisite: JRN 200.

JRN 333 Public Relations and the Media (2)
A study of the function of agency, industrial, business, and institutional relations with the public through newspaper, radio, television, and other media, especially concerning press information; preparation of copy; some attention to employee publications.
Prerequisite: JRN 200.

JRN 340 Introduction to Advertising (4)
Advertising in print and electronics media from the standpoint of marketing, its social and legal environment, and strategy decisions in the profession.
Prerequisite: JRN 200.

JRN 341 The Advertising Medium (4)
Further study of the advertising industry including trends, design, marketing strategy, and the technical problems of planning a product campaign.
Prerequisite: JRN 340.

JRN 342 Case Studies in Advertising (4)
The study of actual case histories of various companies and projects as well as the analysis of problems within a market. An assigned case study is required.
Prerequisites: JRN 340 and JRN 341.

JRN 401 Advanced Photojournalism (4)
Photography in the news media including work in use of 35mm SLR cameras, darkroom

techniques, and a brief discussion of marketing for publication.
Prerequisite: JRN 330.

JRN 402 Ethical Issues in the Media (4)
A study of professional ethics with an emphasis on print journalism though helpful and applicable to electronic journalism as well. Discussion format where students analyze a series of factual problems that arise in daily media operations.
Prerequisite: JRN 200 or junior standing.

JRN 403 Law of the Press (4)
State and federal laws dealing with libel, contempt of court, right of privacy, copyright, and other legal matters affecting newspapers, radio and television, and other media.
Prerequisite: JRN 300, or pre-law student.

JRN 404 Journalism Internship (4)
A full- or part-time internship on a weekly or daily newspaper, radio, or television station, or with a public relations or advertising office for one semester. Open only to students in the journalism program, usually in the senior year. May be repeated once in a different medium.
Prerequisite: JRN 200, 300, and two other JRN courses.

JRN 480 Special Topics in Journalism (2 or 4)
Various specialties offered to students. Subjects change from semester to semester, with some opportunity for independent study. May be repeated under different subtitles.
Prerequisite: JRN 200.

JRN 490 Independent Study (2 or 4)
Individual research projects in journalism.
Prerequisite: Permission of instructor.

DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

CHAIRPERSON: *Peter J. Bertocci*

PROFESSORS: *Judith K. Brown, Nahum Z. Medalia, Jesse R. Pitts, Jacqueline R. Scherer, Philip Singer*

ASSOCIATE PROFESSORS: *Peter J. Bertocci, William Bezdek, James W. Dow, Harry Gold, A. Gary Shepherd, Richard B. Stamps, Donald I. Warren*

ASSISTANT PROFESSORS: *Edward J. McCabe*

ASSOCIATED FACULTY: *Assistant Professor Lucinda Hart-González (Linguistics)*

The Department of Sociology and Anthropology participates in several major programs, each designed to provide a maximum of flexibility to serve the student's interest while also providing the substantive background required to prepare the student for a career in his/her chosen field. These programs lead to the Bachelor of Arts degree.

The department participates actively in the following concentrations: archaeology, social justice and corrections, social service, and urban studies. In addition, the department participates in the Institute for Social Analysis and Marketing. For information concerning this institute, contact Professor William Bezdek, acting director of the institute.

Requirements for Liberal Arts Majors in Sociology and Anthropology

1. **Major in sociology:** SOC 100 and 36 other credits in sociology. Of these, 8 may be taken in anthropology.
2. **Major in anthropology:** AN 101, 102, and 32 other credits in anthropology. Of these, 8 may be taken in sociology. LIN 301 may be substituted for one departmental course.
3. **Major in sociology and anthropology:** SOC 100, AN 101, AN 102, 16 additional credits in sociology, and 12 additional credits in anthropology.

Note: Not more than 8 credits may be taken in SOC or AN 190, 392, or 480.

Requirements for Modified Majors in Sociology and/or Anthropology with a Linguistics Concentration

1. **Modified major in sociology with concentration in linguistics:** 24 credits in sociology, including SOC 100 and 300, and 20 credits in linguistics. LIN 204 may be substituted for one course in sociology.
2. **Modified major in anthropology with concentration in linguistics:** AN 101 and 102, 12 additional credits in anthropology, and 20 credits in linguistics.

Requirements for a Liberal Arts Minor in Sociology or in Anthropology

1. Minor in sociology: SOC 100 plus 16 other credits in sociology courses at the 300 or 400 level.
2. Minor in anthropology: AN 101 and AN 102 plus 12 other credits in anthropology courses at the 300 or 400 level.

Departmental Honors in Sociology or in Anthropology

Sociology: SOC 202 or SOC 203, SOC 300; a minimum grade point average of 3.50 in sociology courses taken at Oakland University; recommendation by two faculty members teaching in the sociology/anthropology department.

Anthropology: A minimum grade point average of 3.50 in anthropology courses taken at Oakland University; recommendation by two faculty members teaching in the sociology/anthropology department.

COURSE OFFERINGS IN ANTHROPOLOGY

AN 101 Evolution of Man and Culture (4)
Introduction to physical anthropology and archaeology as applied to the evolution of man and culture. Stress placed on man's development in adaptation to the environment.

AN 102 Man in Culture and Society (4)
Introduction to cultural and social anthropology with emphasis on the continuing adaptation of man to the environment and especially the interactions among culture, society, and natural environment.

AN 190 Current Issues in Anthropology (4)
Designed for the general student, this course examines issues of current interest in anthropology. Topic will be announced at the time of offering.

AN 222 Introduction to Anthropological Archaeology (4)
Introduces the field of anthropological archaeology through examination of theory, data collection methods and techniques, and interpretive strategies used to understand human histories, life-ways, and cultural processes.

AN 251 Peasant Society and Culture (4)
The peasant as a social type; the peasant's role in the making of great civilizations; and forces for change in peasant societies, especially in the non-Western world.
Prerequisite: AN 102.

AN 271 Magic, Witchcraft, and Religion (4)
Anthropological theories of magic, witchcraft, and religion: human interaction with beings, creatures, and forces that manifest extraordinary powers; folk beliefs of nonliterate people; and transformation of social systems by religious movements. Identical with REL 271.
Prerequisite: AN 102 or sophomore standing.

AN 282 The Prehistoric Origins of Civilization (4)
The development and spread of culture in the period before written history, using archaeological evidence from Neolithic Old World and New World sites. Cultural evolution from early farming and settlement to the rise of complex civilization.
Prerequisite: AN 101.

AN 300 Theories of Society and Culture (4)
Acquaints students with the major theoretical foundations of modern anthropology. Identical with SOC 300.
Prerequisite: AN 102 or SOC 100.

AN 302 Specialized Field Techniques of Social Research (4)
Training in: research information storage and retrieval; field research instrumentation (photography, cinematography, video and audio recording, field computers); use of archives and data banks; plus participant observation; ethnomethodology and semantic analysis. Identical with SOC 302.
Prerequisite: AN 102 or SOC 100.

AN 305 Child Rearing and Human Development in Cross-Cultural Perspective (4)
Child-rearing practices and their educational role, the rearing of nonhuman primate young, and socialization practices of certain Western subcultures and non-Western societies.
Prerequisite: AN 102.

AN 306 The Life Course in Cross-Cultural Perspective (4)
Aspects of the life course from infancy to old age will be considered. Each phase will be examined by means of examples drawn from varied culture areas of the world, as well as from American subcultures. Recent theoretical contributions in cross-cultural human development also will be considered.
Prerequisite: AN 102 or SOC 100 or PSY 100 or PSY 130.

AN 307 Cultural Anthropology and the Ethnographic Film (4)
The systematic study of selected peoples from different cultures through the ethnographic film and appropriate readings, lectures, and discussions. Students learn to evaluate cultural data according to various anthropological concepts and methodologies.
Prerequisite: Junior standing or permission of instructor.

AN 310 Psychological Anthropology (4)
Theories of psychological anthropology on culture and personality and psychological phenomena viewed in relationship to culture and from a cross-cultural perspective.
Prerequisite: AN 102.

AN 315 Mind, Symbol, and Culture (4)
The different ways that people in different cultures and subcultures have of seeing their experiences. The anthropologist's methods of studying and analyzing these differences. Includes field work practice.
Prerequisites: AN 102, or SOC 100, or PSY 100.

AN 322 Subsistence and Technology in Nonindustrial Society (4)
Technologies of different cultures; implications for the individual, society, and cultural survival; ecology of tribal, peasant, and industrial cultures with emphasis on subsistence technology of non-Western cultures. Identical with ENV 322.
Prerequisite: AN 102.

AN 333 Medical Anthropology (4)
Interaction between biological, ethnopsychiatric, and sociocultural environments in health,

illness, and treatment. Includes historical, organizational, demographic, ecological and other problems in health care delivery.
Prerequisite: Three courses in anthropology, or two courses in anthropology and one in sociology.

AN 337 Women's Lives in Cross-Cultural Perspective (4)
Anthropological literature will be used to examine cultural variation in rituals and customs affecting women's lives. Female life-cycle events and the division of labor by sex will be studied in relation to the position of women in different societies.
Prerequisite: AN 102.

AN 352 Peoples and Cultures of Africa (4)
A general survey of the geography, history, economy, society, religions, and political systems of selected indigenous peoples of Africa. Part of the course will cover the events of the period of European contact.
Prerequisite: AN 102.

AN 361 Peoples and Cultures of India (4)
A survey of contemporary society and culture on the Indian subcontinent, with focus on India, Pakistan, and Bangladesh; emphasis on social structure, folk religion, and the problems of socio-cultural change.
Prerequisite: AN 102 or AS 240.

AN 362 Peoples and Cultures of China (4)
An anthropological study of China, stressing the variety of cultural and ecological adaptations characteristic of that complex society.
Prerequisite: AN 102 or AS 210.

AN 370 Archaeology of Mesoamerica (4)
The pre-Hispanic culture of Mexico and Guatemala, the Aztecs and Mayas, and their neighboring and derivative cultures. Detailed discussion of the major archaeological sites.
Prerequisite: AN 101 and 102.

AN 371 Peoples and Cultures of Mexico and Central America (4)
Anthropological studies of Indian and Mestizo societies in Mexico and Guatemala, including their separate socio-economic patterns and their integration into a dualistic social system.
Prerequisite: AN 102.

AN 372 Indians of South America (4)
A survey of the native South Americans. Includes warriors of the jungles, peasants and herders of the mountains, nomads of the plains and forests, and subsistence fishermen of the southern coasts.
Prerequisite: AN 102.

AN 373 Ethnography of Communication (4)
Identical with ALS 373.

AN 374 Cross-Cultural Communication (4)
Identical with ALS 374.

AN 375 Language and Culture (4)
Identical with ALS 375.

AN 380 Archaeology of North America (4)
The evolution of native North American cultures (including Mesoamerica) from 50,000 B.C. to 1500 A.D., with emphasis on the ecological factors in the development of culture areas.
Prerequisite: AN 101.

AN 381 Peoples of North America: Indians and Eskimos (4)
The culture of certain North American societies and their adaptation to Western contact.
Prerequisite: AN 102.

AN 382 Advanced Physical Anthropology (4)
The emergence and diversification of the human species in relation to the morphology and ecology of both modern and fossil man, including physical and physiological variation (sex, race, and age), climatic adaptation, and population genetics.
Prerequisite: AN 101.

AN 383 Methods in Anthropological Archaeology (4)
Instruction and field research, including site location, excavation and artifact analysis, and conservation. May be repeated once for credit.
Prerequisite: AN 101.

AN 391 Primate Behavior (4)
Various bio-social factors which aid the nonhuman primates in their adaptation to the environment, implications for human behavior, classroom discussions, and field studies.
Prerequisite: AN 101 or 102 or PSY 100 or SOC 100 or HRD 301.

AN 392 Current Problems in Anthropology (2 or 4)
Seminar in which a topic or problem is studied in depth. Each seminar requires independent readings and writing.
Prerequisite: Permission of instructor.

AN 399 Field Experience in Anthropology (4)
Field experience in anthropology with faculty supervision. An academic project related to the departmental discipline which incorporates student performance in an occupational setting. May not be repeated for credit.
Prerequisite: 16 credits in anthropology, of which at least 8 must be at the 300/400 level.

AN 401 Social Anthropology (4)
Examines social structure and social organization in anthropological perspective. Entails the study of economic, political, religious, and kinship systems in the social life of man.
Prerequisite: AN 102.

AN 410 Cultural Ecology (4)
Examines current theory and data on cultural responses to environment and the processes that lead to human survival or extinction as groups and societies interact with their natural environments. Identical with ENV 410.
Prerequisite: AN 322, ENV 322, ENV 333, or ENV 362.

AN 420 Ethnopsychiatry (4)
The socio-cultural context of mental illness and the forms of its institutional and medical care; relation between family relationships, child-rearing practices, and mental illness; and the physician-patient and indigenous healer-patient relationship.
Prerequisite: Three sociology or anthropology courses.

AN 430 Systems of Wealth and Power in Anthropological Perspective (4)
Concepts and methods of political and economic anthropology, emphasizing the interrelated state of political and economic phenomena, with particular reference to preindustrial, non-Western societies.
Prerequisite: AN 102.

AN 440 Anthropology of Law (4)
The mechanisms of social control and legal institutions in non-Western, preliterate societies. Topics include the varying types of moral order and the problem of legal enforcement in stateless societies.
Prerequisite: AN 102 or 200.

AN 460 Problems of Social and Economic Change in Developing Societies (4)
The role of anthropology in programs of socio-economic development on non-Western areas. Review of U.N. activities and national governments.
Prerequisite: AN 102.

AN 480 Independent Study and Research (2 or 4)
A tutorial in which the student will pursue a course of reading and research with the instructor. May be repeated only once for credit.
Prerequisite: Permission of instructor.

AN 497 Apprentice College Teaching (2 or 4)
Supervised participation in teaching an undergraduate course in anthropology, combined with readings and discussion of teaching objectives and methods appropriate for anthropological presentation. May be taken only once for credit toward a major.
Prerequisite: Senior anthropology and permission of instructor.

COURSE OFFERINGS IN SOCIOLOGY

SOC 100 Introduction to Sociology (4)
Introduction to the basic concepts of sociology relating to the study of man as a participant in group life. Particular attention is given to culture, socialization and personality development, and class.

SOC 190 Current Issues in Sociology (4)
Designed for the general student, this course will examine issues of current interest in sociology. The topic will be announced at the time of the offering.

SOC 202 Introduction to Methods of Social Research (4)
The collection, organization, analysis, and interpretation of social data; elementary techniques of understanding and using quantitative evidence in sociological research.
Prerequisite: SOC 100.

SOC 203 Social Statistics (4)
Interpretation of social data by quantification and statistical reasoning.
Prerequisite: Two years of high school mathematics.

SOC 205 Sociology of Social Problems (4)
An introductory survey of social problems in areas such as race relations, poverty, delinquency, and crime. Comparison of sociological with journalistic, theological, and political-legal approaches to social problems.
Prerequisite: SOC 100.

SOC 206 Self and Society (4)
Examines the reciprocal relationship between the individual and the group. Emphasizes the social roots of human nature, the self, social interaction, definitions of reality, socialization, and social character.

SOC 300 Theories of Society and Culture (4)
Acquaints students with the major theoretical foundations of modern sociology. Identical with AN 300.
Prerequisite: SOC 100 or AN 102.

SOC 301 Social Class and Mobility (4)
The concepts of class, caste, and race in relation to social conflict and social integration. Students will study these problems in a cross-cultural perspective, emphasizing comparative materials.
Prerequisite: SOC 100.

SOC 302 Specialized Field Techniques of Social Research (4)
Training in: research information storage and retrieval; field research instrumentation (photography, cinematography, video and audio recording, field computers); use of archives and data banks; plus participant observation; ethnomethodology and semantic analysis. Identical with AN 302.

SOC 305 Sociology of Religion (4)
An analysis of changing relationship between social structure and religion in preindustrial societies, Europe during the Protestant Reformation, and the contemporary U.S. Identical with REL 305.

SOC 306 Sociology of Science (4)
A sociological view of the natural and life sciences. Topics include: training and socializing young scientists; organizations in scientific fields, such as industrial laboratories, university departments, and "invisible colleges"; and inequalities in science.
Prerequisite: SOC 100 or major standing in a physical or life science.

SOC 314 The Social Context of Social Work (4)
A study of the social work profession and the social context of welfare policies, the relationships between social structure and the development of social work practice, and public and private welfare organizations.
Prerequisite: SOC 100 or two courses in psychology or human resources development.

SOC 315 Sociology of Poverty and Social Welfare (4)
Survey of the development of social welfare programs in the U.S. Procedures developed to deal with problems of poverty, such as case work, community organization, and agency

programming; analysis and evaluation of current policy debates on welfare programs.
Prerequisite: SOC 100 or 314.

SOC 320 Sociology of Crime and Punishment (4)
Study of the various forms of criminal deviance, the sociological theories developed to explain the phenomenon of crime, and modes of control from hospitals to penitentiaries.
Prerequisite: SOC 100.

SOC 322 Sociology of Law (4)
An investigation of law and legal institutions from a comparative perspective, including the uses of law, the development of legal institutions, the role and organization of legal professionals, social influences on law, and the capacity of law to affect social behavior.
Prerequisite: SOC 100.

SOC 323 Juvenile Delinquency and Its Social Control (4)
Nature and types of juvenile delinquency; the relation of juvenile delinquency to the stress of adolescence and the specific social situation; methods of preventing delinquency or its recurrence.
Prerequisite: SOC 320.

SOC 327 Police and Society (4)
A study of police techniques and problems, of deviant citizen-police relations, and of social control in a field where power is high and visibility is relatively low. Topics include the defenses against corruption and the containment concept of police.

SOC 328 Sociology of Health and Medicine (4)
The sociological study of medicine and the uses of sociology in medicine, definitions of health and illness, disease and death, health care occupations, medical malpractice, the organization of health services, and trends in health and medicine.
Prerequisite: SOC 100.

SOC 330 The Sociology of Youth (4)
A cross-cultural analysis of the emerging youth culture in industrial societies; the economic, social, and political consequences.
Prerequisite: SOC 100 and junior standing or above.

SOC 331 Racial and Ethnic Relations (4)
A study of racial, ethnic, and religious groups, particularly those of the U.S., emphasizing their historical development, problems of adjustment and assimilation, and contemporary problems and trends.
Prerequisite: SOC 100.

SOC 335 The Family (4)
A comparative and historical study of the family.
Prerequisite: SOC 100.

SOC 336 Sex Roles in Modern Society (4)
The impact of ideological and technological change on the statuses, occupations, and relationship of males and females.
Prerequisite: SOC 100.

SOC 338 Moral Socialization (4)
The cultural, social, and psychological dimensions of "morality"; how moral agreements are reached, and how they are communicated to group members; how individual members incorporate these agreements into their personal values and behaviors.

SOC 343 Communities (4)
Community is examined in both empirical and theoretical contexts, with emphasis on contemporary experiments, recent political and social interpretations of community development, and changing patterns of communal interaction.
Prerequisite: SOC 100.

SOC 350 The Transformation of the Workplace (4)
A study of how high technology, computers, and a shift in the economic base of employment are transforming work in contemporary society, why this is happening, and the social, psychological, political, and cultural impacts of change in the workplace.
Prerequisite: SOC 100.

SOC 353 Seminar in Socio-Technical Systems (4)
This seminar introduces students to the growing field of inquiry that integrates the social and technical dimensions of work. Issues within the immediate, primary workplace, and the organization and social system that are related to the workplace are examined.
Prerequisite: One social science methods course.

SOC 354 Quality of Work Life (4)
Can small groups in large organizations promote the personal growth of employees and achieve corporate goals of productivity? The use and abuse of quality circles; the tension between personal development, corporate culture, and the ideology of worker/management relations.
Prerequisite: SOC 100.

SOC 357 Industrial Sociology (4)
The relationship between industrial and business organizations and the community; the study of occupations, labor unions, informal work groups, and the character of American occupational life.
Prerequisite: SOC 100.

SOC 371 Forms and Effects of Mass Communication (4)
Techniques of disseminating ideas and information through the mass media; evaluation of the media on values of individuals, and policies of institutions. Identical with SCN 371.
Prerequisite: SOC 100 or sophomore standing.

SOC 373 Social Control of Mass Media (4)
The major sociological factors which control the informational content of the mass media; differences between the structures and processes of control in the print and electronic sectors of the media. Identical with SCN 373.
Prerequisite: SOC 371.

SOC 376 Sociolinguistics (4)
Identical with ALS 376.

SOC 381 Sociology of Modern Organizations (4)
A study of organizations, such as labor unions, ethnic associations, and social service agencies. Topics include: analysis of bureaucracies, features of organizations, and effects of organizations on American culture.
Prerequisite: SOC 100.

SOC 392 Current Problems in Sociology (2 or 4)
Seminar in which a topic is studied in depth. Each seminar requires independent readings and writing.
Prerequisite: Permission of instructor.

SOC 399 Field Experience in Sociology (4)
Field experience in sociology with faculty supervision. An academic project related to the departmental discipline which incorporates student performance in an occupational setting. May not be repeated for credit.
Prerequisite: 16 credits in sociology, of which at least 8 must be at the 300/400 level.

SOC 401 Survey and Interview Techniques (4)
Acquaints students with field interview techniques, questionnaire design, scaling and index construction, experimental and quasi-experimental designs, plus program evaluation research techniques.
Prerequisite: SOC 100.

SOC 402 Small Groups (4)
The study of small group relations and the informal understandings, codes, and conventions which they generate. Considers dynamics of individuality, leadership, conformity, and esprit de corps in a group setting. Identical with SCN 402.
Prerequisite: SOC 100.

SOC 403 Computer Packages in Social Science (4)
Principles of packaged programs, with practice in data editing and analysis with SPSS (Statistical Package for the Social Sciences) and BMDP. Comparative merits of different packages.
Prerequisite: SOC 203 or equivalent.

SOC 408 Population Theory and Problems (4)
Historical analysis of world population growth, focusing on relationships among population size, population policy, and social and economic development.
Prerequisite: SOC 100.

SOC 425 Corrective and Rehabilitative Institutions (4)
Problems of interaction within the institution are analyzed, e.g., between inmate, guard, supervisor, and rehabilitation specialist; development of inmate subcultures; dynamics of crisis (e.g., riots); and equilibrium.
Prerequisite: SOC 320.

SOC 430 Internship in Social Justice and Corrections (4 or 8)
Field placement and supervision of students in police, prison, and parole organizations and agencies.
Prerequisite: Enrollment in social justice and corrections concentration and written permission of instructor.

SOC 437 Sociology of the Courts (4)
The roles of judges, court officers, jury, and attorneys are described and analyzed in the context of their professional matrix.
Prerequisite: SOC 100 and 320.

SOC 441 Social Change (4)
The prediction and explanation of social change; change mechanisms such as crowds, publics, mass or social movements, and revolutions; and implications for social action.
Prerequisite: SOC 100 and junior standing or above.

SOC 444 The Neighborhood (4)
Social patterns of neighborhood life and the individual, the basis of ecological and cultural differentiation in central city, suburban and rural fringe areas. Investigation methods include observation, theoretical, and applied aspects of research.
Prerequisite: SOC 100 or AN 101, and SOC 343 or 445.

SOC 445 Urban Sociology (4)
The social structure, culture, and ecology of early and contemporary urban communities; institutional responses to the problems of modern urban life.
Prerequisite: SOC 100.

SOC 455 Sociology of Occupations and Professions (4)
The structure of major occupations and professions in terms of their publics, mandates, clients, and the career lines they offer, with comparisons between "incomplete professions," such as nursing and undertaking, and full-fledged professions.
Prerequisite: SOC 100.

SOC 460 Political Sociology (4)
Sociological factors which influence distribution of power within a society: political communication, maintenance of consensus, the revolution process, the structure of political parties, and the emergence of new states.
Prerequisite: SOC 100.

SOC 465 Sociological Perspectives on Aging (4)
Recent sociological perspectives on aging: Topics include status of persons approaching and past retirement age; family and community roles and relations; and occupational and political participation.
Prerequisite: SOC 100 and junior standing or above.

SOC 473 Social Control of Mass Media (4)
The major sociological factors which control the informational content of the mass media; differences between the structures and process or control in the print and electronic sectors of the media. Identical with SCN 473.
Prerequisite: SOC 371.

SOC 480 Independent Study and Research (2 or 4)
Directed individual reading and research.
Prerequisite: Permission of instructor.

SOC 497 Apprentice College Teaching (2 or 4)
Supervised participation in teaching an undergraduate course in sociology, combined with readings and discussion of teaching objectives and methods appropriate for sociological presentation. May be taken only once for credit toward a major.
Prerequisite: Senior sociology major and permission of instructor.

BIOCHEMISTRY PROGRAM

BIOCHEMISTRY COMMITTEE: *Denis M. Callewaert (Chemistry), John D. Cowlishaw (Biological Sciences), Arun K. Roy (Biological Sciences), Michael D. Sevilla (Chemistry)*

This interdepartmental program offers a B.S. degree with a major in biochemistry. The program is based on faculty resources and research facilities in the departments of biological sciences and chemistry. The curriculum is designed to prepare students for professional schools in health sciences, graduate school in biochemistry and in biochemical research. The specialized research facilities for cellular and analytical biochemistry at Oakland University include tissue culture facilities, ultracentrifugation laboratory, isotope laboratories with beta and gamma counters, gas chromatographs, equipment for high pressure liquid chromatography, equipment for NMR, EPR, laser Raman and atomic absorption spectroscopy, and various other computerized biochemical equipment. The undergraduate students in the biochemistry program have access to faculty research laboratories and are encouraged to participate in various ongoing research programs such as studies on gene expression, hormone action, immunochemistry, biochemistry of viruses and nucleic acids, and radiation damage to macromolecules. The minimum requirement for a Bachelor of Science in biochemistry is 124 credits which include 30 credits in chemistry, 16 credits in biological sciences, and 14 credits in biochemistry.

Admission Requirements

Students may apply for admission to the biochemistry program after completing 16 credits of the core program with a grade point average of 2.50 or better in these courses. Courses which carry no numerical grade and letter grades are excluded from the calculation of the grade point average.

Requirements for the Bachelor of Science Degree

Students wishing to select this major should prepare a detailed plan of study in consultation with a member of the biochemistry committee.

1. A core program of 56 credits, including BIO 190; CHM 144, 145, 149, 225, 203, 204, 209, (or 234, 235, 237), 342, 343; BCM 453, 454; PHY 151, 152; MTH 154, 155 (STA 226 is a recommended elective).
2. An additional 12 credits in biology from the following courses: BIO 200, 319, 320, 321, 322, 323, 324, 341, 342, 345, 393, 394.
3. At least 8 credits of advanced study in biochemistry from the following courses: BIO 407, 408; CHM 457, 458, 553; BCM 490.
4. Admission to major standing and approval by the biochemistry committee of a detailed program of study at least three semesters before graduation.
5. Courses used to fulfill the requirements of a major in biology or chemistry may not be used to fulfill simultaneously the requirements of a major in biochemistry.

COURSE OFFERINGS

BCM 453-454 Biochemistry (3 each)
Identical with CHM 453-454.

BCM 490 Biochemistry Research (1, 2, 3, 4)
Laboratory experience in biochemical research requiring at least four hours of work per week per credit. May be repeated for credit. Graded S/N.
Prerequisite: Permission of instructor.

ENVIRONMENTAL HEALTH

DIRECTOR: *Paul Tomboulian (Chemistry)*

Designed to integrate applied scientific specialties within the broad field of environmental health, the curricula described below prepare students for a variety of professional opportunities in government and the private sector as well as for graduate study in such fields as toxicology, industrial hygiene, and environmental planning. Graduates of the program should be able to identify and evaluate a broad range of environmental problems. In addition they should be able to offer solutions, as well as to anticipate hazards and prevent future problems. Studies include such areas as health and safety in the work place, toxic substances, air resources, water resources, land resources, and planning.

Requirements for the Bachelor of Science Degree

1. An introductory prerequisite core of 38 credits, to be completed before major standing is awarded, including BIO 190, 200; CHM 144, 145, 149, 225; PHY 151, 152 (or, for students not considering graduate education, PHY 101 and 102); 8 credits in mathematics above MTH 105, usually including STA 225; MTH 154 strongly recommended (MTH 155 recommended for those considering graduate education).

Admission to major standing and filing an approved program of study must occur at least three semesters before graduating. Only approved courses may be included in the degree program.

2. A program of 50 credits in advanced courses, usually including ENV 308 plus courses required by one of the three options. At least 36 credits must be in courses at the 300 level or above, and 30 credits must be in approved courses numbered 350 and above.
3. Completion of one of the specializations described below.

Specialization in Occupational Health and Safety

Based upon an extensive curriculum planning study, this option combines environmental and occupational health perspectives in scientific and technical courses designed to provide preprofessional training for careers relating human health and safety factors to working conditions. Students learn to recognize, evaluate, and control actual and potential environmental hazards, especially undesirable occupational health and safety conditions and practices. The option emphasizes environmental and occupational toxicology.

Required course work includes BIO 207 or 321; CHM 203-204; ENV 355, 358, 386, 474, 481.

Recommended electives include ENV 350, 372, 373, 387, 388, 452, 461, 470, 484, 486; BIO 407 or CHM 453, BIO 301, 480; PS 353.

Specialization in Environmental and Resource Management

This option emphasizes the wise use of resources, especially as they affect human health and well-being. Opportunities for study include air pollution, water pollution, demography, land resource management, control applications, and planning functions. Program electives offer training for a variety of field and laboratory opportunities in industry and government, including planning, natural resource management, environmental protection, and public health.

Required course work includes the core, plus the following: BIO 301, 303, PHY 107, 158.

Recommended electives include CHM 203-204; BIO 207 or 321, 303, 311, 312, 307 or 319, 327, 333, 373, 375, 377, 407, 443, 480; ENV 312, 350, 355, 372, 373, 386, 461, 474, 481, 484; PS 302, 305, 350, 353; EGR 407; HST 228.

Specialization in Toxic Substance Control

This option is designed to provide training for professional opportunities in toxic substance management. The major focus is on toxicological principles and their applications to the production, distribution, and release of toxic substances, especially as they may cause environmental problems. Risk assessment, problem-solving, and legislative compliance are emphasized.

Required course work includes the core plus BIO 301; CHM 203-204; ENV 355, 461, 481, 484, 486.

Recommended electives include: CHM 453 or BIO 407; BIO 375, 377, 480; PHY 107; PS 353; ENV 372, 373, 386, 388, 474.

ENVIRONMENTAL STUDIES COURSE OFFERINGS

ENV 308 Introduction to Environmental Studies (4)
Survey of a broad range of environmental issues from a scientific viewpoint. Basic ecological and thermodynamic principles with applications to air, water, and land pollution; human demography and food supplies; alternative futures.
Prerequisite: Sophomore standing.

ENV 312 Energy and the Environment (4)
Basic facts of energy: sources, forms, the roles it plays, and its ultimate sinks. Includes study of laws limiting energy utilization, energy flow patterns, effects of energy use on the environment, and analyses of current energy-related problems.
Prerequisite: Sophomore standing; mathematics proficiency at the MTH 103 level.

ENV 322 Subsistence and Technology in Nonindustrial Society (4)
Identical with AN 322.

ENV 333 Food and Nutrition (4)
Introduction to the science of nutrition, with applications to the human diet. Includes compositional analysis of foods, nutritional requirements and fads, and the relationships of agriculture and politics to nutrition.
Prerequisite: Sophomore standing.

ENV 343 Tropical Habitats (2)
Biological analysis of the interactions with tropical environments. Includes history, geology, climatology, agriculture, public health and epidemiology involved with human living in tropical settings.
Prerequisite: Sophomore standing.

ENV 346 Life in the Oceans (4)
Physiographic history, habitats, community groups, interrelationships among organisms, the oceans as a food source, human impacts on oceans.
Prerequisite: Sophomore standing.

ENV 350 Selected Topics (1, 2, 3, or 4)
Technical studies in special areas; topics vary with semester. May be repeated for credit.
Prerequisite: Junior standing and permission of instructor.

ENV 355 Environmental Health Practice (3)
Survey of environmental health activities from public health perspective: vector control and prevention, sanitation practice, solid waste management, air pollution control, environmentally related diseases and their prevention.
Prerequisite: Junior standing in environmental health.

ENV 358 Occupational Safety (3)
Systematic study of occupational safety concerns, including accident prevention, loss control, safety management, behavioral factors, hazard reduction, risk management, safety engineering, safety education, and safety laws and regulations.
Prerequisite: Junior standing in environmental health.

ENV 372 Air Chemistry (3)
Technical evaluation of the nature and composition of the earth's atmosphere, both in its natural state and as it has been affected by man. Some discussion of air pollution control will be included. Identical with CHM 372.
Prerequisite: CHM 145.

ENV 373 Water Resources (3)
Analysis of natural water systems, introductory hydrology, the chemistry of eutrophication, and wastewater systems. Emphasis is on applications, including water pollution abatement and management strategies.
Prerequisite: CHM 145 and junior standing.

ENV 386 Principles of Occupational Health (3)
Recognition, evaluation, and control of environmental factors affecting human health, especially in the work place (industrial hygiene); anticipation and prevention of future hazards.
Prerequisite: Junior standing in environmental health; BIO 190, CHM 203; physics is desirable.

ENV 387 Principles of Occupational Health II (3)
An intensive treatment of selected subjects of current interest in occupational health.
Prerequisite: ENV 386.

ENV 388 General Control Methods (3)
Theory and practice of control of exposure to occupational hazards, government standards, philosophies, ventilation, protective equipment, and exposure control will be emphasized.
Prerequisite: ENV 386 or 387.

ENV 390 Directed Studies (1, 2, 3, 4 or 6)
Studies in special areas, often individually arranged. May be repeated for credit. Preparation of study plan and instructor's approval are required before registration. Graded S/N.

ENV 410 Cultural Ecology (4)
Identical with AN 410.

ENV 452 Industrial Environmental Control (3)
Problems of air and water pollution, solid waste management, hazardous material handling, and emergencies examined from an industrial viewpoint. Chemical engineering solutions to environmental problems, practical aspects, and compliance with regulations.
Prerequisite: Junior standing in environmental health, CHM 145, MTH 154.

ENV 461 Environmental Law and Policies (3)
Legislative and legal perspectives on environmental and occupational health issues. Special emphasis on current laws and regulations, as well as their impact on the groups regulated.
Prerequisite: Junior standing.

ENV 470 Occupational Health Internship (2)
Supervised practical experiences in a variety of occupational health settings.
Prerequisite: Senior standing in environmental health and permission of instructor.

ENV 474 Measurements and Sampling Methods (1, 2, or 3)
Analysis of environmental and occupational exposures and hazards using instrumental methods in the laboratory and field locations.
Prerequisite: CHM 148 and CHM 225; ENV 386 or 388.

ENV 481 Principles of Toxicology (3)
General principles of toxicology: exposure, toxokinetic, and toxodynamic phases; dose-effect relationships; toxicological testing methods; factors influencing toxicity. Emphasis is on systemic mammalian toxicology.
Prerequisite: BIO 190, 200; CHM 203 or 234; BIO 207 or 321 desirable; biochemistry desirable.

ENV 484 Environmental Toxicology (3)
Applications of toxicology to broad environmental issues of air, water, and land resource pollution; study of sources dispersion, and fate of toxic substances; effects on biological systems.
Prerequisite: BIO 190, BIO 200, CHM 203 or 234; ENV 308, and ENV 386 or 481; biochemistry desirable.

ENV 486 Toxic Substance Control (3)
Detailed discussion of toxic substance flows in society; identification, production, use, distribution, and disposal. Emphasis is on risk assessment, risk-benefit analyses, regulatory practices and programs. Current management philosophies and disposal methods are analyzed.
Prerequisite: Junior standing in environmental health; ENV 481 or 484 desirable.

SECONDARY TEACHING SOCIAL STUDIES PROGRAM

The secondary teaching social studies program offers either a baccalaureate program with a major in social studies or a separate social studies minor. Students seeking the Bachelor of Arts degree with a major in social studies will take a minor in sociology, psychology, history, or political science to achieve secondary teacher certification. The Michigan secondary provisional certificate is valid for teaching all subjects in grades 7 and 8, and in subject matter areas in grades 9 to 12 in which the student has completed a major or minor. In general education, a social science distribution field is satisfied by the major; students must fulfill the history, philosophy, and area studies field with one course (4 credits) in area studies selected from AS 210, 220, 230, 240, 250, 260, or 270.

Bachelor of Arts with Teaching Major in Social Studies

To complete the degree program the student must fulfill all requirements set by the College of Arts and Sciences for B.A. candidates.

The social studies program requires a core of social science courses with concentrated study in three social science content areas. The student must:

1. Complete a total of 40 credits in social studies and the social sciences, including:
   a. SS 100 and 200 (prerequisite for ED 455, Internship).
   b. 16 credits in political science, evenly distributed between American politics and non-American/comparative politics.
   c. 16 credits in history, evenly distributed between American history and world history.
2. Complete a minor of at least 20 credits in one of the following social sciences: sociology, psychology, history, or political science. If a student minors in either political science or history, 16 credits in another social science or from an interdisciplinary social science group must be substituted in the major.
3. Complete a professional component of 40 credits:
   a. ED 100 and 200 must be taken concurrently.
   b. ED 100 and 200, 370, 427, and 428 must be taken sequentially in three semesters and are each prerequisites to ED 454 and 455.

c. ED 454 must be taken concurrently with ED 455.
d. ED 338, 344, and 345 may be taken any time in the student's program before ED 455.

Students may enroll in ED 455 (Internship) only if their grade point average in professional courses (ED 100, 200, 370, 427, 428) is 2.50 or higher, with no grades below 2.0; and if their grade point average in the courses in their major is 2.50 or higher, with no grades below 2.00.

Failure to complete certification requirements in the secondary social studies teaching major may result in the need for additional course work in order to complete an alternative College of Arts and Sciences major.

Advising is available from the academic adviser in the School of Human and Educational Services.

Secondary Teaching Minor in Social Studies

A teaching minor in social studies requires completion of SS 100 and 20 additional credits in the social sciences. At least three courses must be taken at the 200 level or higher. Students should concentrate in two of the social sciences, earning at least 8 credits in each. Students intending to minor in social studies must see their secondary social studies academic adviser upon entry into a teacher certification program to agree upon the social sciences concentration and distribution. This minor may not be taken by students majoring in secondary social studies; it is open to any other student with a secondary teaching major.

COURSE OFFERINGS

SS 100 Introduction to Social Studies (4)
This introduction to an interdisciplinary social science program provides an overview of the philosophical and historical development of individual social science disciplines (psychology, sociology, anthropology, political science, history, economics, and geography). Required of all social studies majors and minors.

SS 200 Inquiry Skills for the Social Scientist (4)
Continues the interdisciplinary focus begun in SS 100. Current issues form its content. Students are expected to apply interdisciplinary investigative models to these issues to solve problems. Required of all social studies majors before student teaching.
Prerequisite: SS 100.

OTHER ACADEMIC OPTIONS

COORDINATOR: *Sheldon Appleton (Political Science)*

COMMITTEE: *Maurice Brown (English), Carlo Coppola (Modern Languages), James Dow (Sociology and Anthropology), Jane Eberwein (English), Thomas Fitzsimmons (English), Robert Goldstein (Political Science), Roy Kotynek (History), David Mascitelli (English), Janice Schimmelman (Art History), Richard Stamps (Sociology and Anthropology), W. Patrick Strauss (History), Ronald Sudol (Rhetoric, Communications and Journalism)*

CONCENTRATION IN AMERICAN STUDIES

The American studies concentration provides both a broad understanding of the American experience and an introduction to the practice of focused interdisciplinary study. The concentration is taken in addition to a departmental major. By electing departmental courses with an American focus in two or three areas outside the major and framing the concentration with two interdisciplinary Ameri-

can studies courses, the student may expect to gain a coherent sense of the national experience and to appreciate the various contributions of different academic disciplines to understanding this complex topic. Although not a vocationally directed program, the American studies concentration should be of particular interest to students preparing for careers in law, government, or journalism and to those planning graduate work in American studies or any of its contributing disciplines.

Concentration requirements include one course from the AMS 201, 202, 203, 204 grouping, AMS 400, and four electives representing at least two fields of study outside the student's major. Recommended electives appear on the list below; other courses emphasizing American materials may also be counted toward the concentration upon approval of a committee adviser.

AMERICAN STUDIES COURSE OFFERINGS

AMS 201-204 Approaches to American Culture (4)
Study of three central themes in American cultural experience (such as equality, success, individualism, the frontier) from an interdisciplinary perspective. 201—emphasis on the fine arts. 202—emphasis on history. 203—emphasis on literature. 204—emphasis on social sciences. A student may receive credit toward degree requirements for only one course in this sequence.

AMS 400 American Studies Colloquium (4)
Examination of one topic in American studies. Should be taken in the junior or senior year. Offered every fall.
Prerequisite: AMS 100.

Recommended Departmental Electives

Art and Art History: AH 350, 355.
English: ENG 224, 302, 317, 320, 322, 324, 332, 341, 342.
History: HST 214, 215, 218, 220, 221, 292, 302, 306, 307, 310, 312, 313, 314, 315, 316, 317, 318, 319, 321, 323.
Linguistics: LIN 303.
Music: MUS 347.
Philosophy: PHL 260.
Political Science: PS 100, 103, 115, 301, 302, 305, 307, 323, 324, 342, 343, 371, 402, 403.
Sociology-Anthropology: SOC 100, 205, 301, 315, 331, 357, 455; AN 380, 381.

CONCENTRATION IN APPLIED STATISTICS

COORDINATOR: *Harvey Arnold (Mathematical Sciences)*

COMMITTEE: *William Bezdek (Sociology and Anthropology), William Macauley (Political Science), David Doane (Economics and Management), Ronald Mourant (Engineering), Ann Sakai (Biological Sciences), Robert Schwartz (Education), Robert Stewart (Psychology)*

The University Committee on Applied Statistics sponsors this concentration, available to all undergraduates in the university. In order to be certified by the committee as having fulfilled the requirements of this concentration, the student must complete at least 16 credits in statistics including:

1. one course at the introductory level chosen from QMM 250, PSY 357, SOC 203, STA 226, SYS 317;
2. STA 322;
3. STA 323 or 324 and
4. one 400-level course in the student's major. This course must meet the approval of the university committee on applied statistics.

Students who wish to take this concentration must develop a program in consultation with a concentration committee member.

CONCENTRATION IN ARCHAEOLOGY

COORDINATOR: *Richard Stamps (Sociology and Anthropology)*

COMMITTEE: *Carl F. Barnes, Jr. (Art and Art History), Gottfried Brieger (Chemistry), James Dow (Sociology and Anthropology)*

This concentration prepares students for graduate study in archaeology. It is also useful for students interested in an interdisciplinary approach to human cultural development viewed from historical, aesthetic, and scientific perspectives.

There are 28 credits required for this program:

1. Core: AH 100, AN 101, AH 316, AN 222.
2. One of the following: AH 312, AH 314, AN 282, AN 370, AN 371, AN 380.
3. 8 credits in methods and field term: AN 383.

In addition to the required courses, a number of other courses are recommended for those who wish to expand their background. These include: AH 322, AH 326, HST 261, HST 306, HST 367, PHY 107. Students are reminded that professional conservation work requires a knowledge of botany and chemistry.

MINOR IN COMPUTER AND INFORMATION SCIENCE

COORDINATOR: *Glenn A. Jackson (Engineering)*

The minor in computer science is offered by the School of Engineering and Computer Science and is available to students within the College of Arts and Sciences. Many combinations are feasible.

With a major in mathematics, physics, chemistry, biology, or economics, a student may wish to emphasize numerical and scientific computing aspects of computer science. With a major in English, modern languages, history, philosophy, psychology, sociology, or anthropology, a student may wish to take courses in the computer science minor that emphasize nonnumerical and symbolic data processing, language translation, and list processing. With a major in economics, a student may wish to take courses oriented toward application of computers in management data processing. For specific requirements, see page 225.

CONCENTRATION IN ENERGY STUDIES

COORDINATOR: *Gottfried Brieger (Chemistry)*

This concentration provides students with an interdisciplinary approach to energy issues, examined from the perspective of anthropology, biology, chemistry, economics, engineering, physics, and political science. It serves as a foundation for additional specialized study in any of these fields.

This concentration requires 28 credits distributed as follows:

1. Core courses: four of the following: AN 322, ENV 312, PHY 115, PS 250;
2. Advanced option: one of the following: AN 410, ME 454, EGY 350;
3. Practicum: all of the following: EGR 108, EGR 106, and EGY 390 (4 or 8 credits).

COURSE OFFERINGS

EGY 350 Energy Efficient Food Production (4)
Man's opportunities for production of food nutrients through efficient field agriculture, horticulture, and aquaculture, and the energy relationships involved.
Prerequisite: one year of college-level science or permission of the instructor.

EGY 390 Energy Projects (4 or 8)
Laboratory or field work under the direction of a faculty supervisor approved by the concentration coordinator on a current energy-related issue resulting in a comprehensive project and report.
Prerequisite: Concentration core courses EGR 108 and EGR 106 are recommended prior to enrollment.

CONCENTRATION IN ENVIRONMENTAL STUDIES

COORDINATOR: *Paul Tomboulian (Chemistry)*

Environmental studies courses introduce students to modes of thought and action relative to environmental issues. Students learn to identify and evaluate alternative solutions to environmental problems. Short- and long-range implications of human activities are analyzed, especially as they affect resources and public policy.

Four broad areas of inquiry are included in these studies: systematic analyses of environmental quality issues; effects of human settlements on ecosystems; implications of human life support activities; and use, reuse, and depletion of physical and biological resources.

Concentrations are available in conjunction with cooperating departments. Requirements for the concentration are 28 credits in environmental studies and related courses, to be planned and selected in consultation with the program coordinator. Courses in environmental studies are listed under Environmental Health.

Related courses in many departments are often suitable for an environmental studies concentration. These include, but are not limited to: AN 102, BIO 301, BIO 303, BIO 311, BIO 327, BIO 373, BIO 375, BIO 377, ECN 309, ECN 310, EGR 407, HST 228, PHL 318, PHY 107, PHY 115, PS 250, PS 305, PS 350, and PS 353. Consult the program coordinator for details.

CONCENTRATION IN FILM AESTHETICS AND HISTORY

COORDINATOR: *Dolores Burdick (Modern Languages)*

COMMITTEE: *Herbert Appleman (English), Peter Bertocci (Sociology and Anthropology), Alfred J. DuBruck (Modern Languages), Robert T. Eberwein (English) Donald Hildum (Rhetoric, Communications, Journalism), Brian Murphy (English), Charlotte Stokes (Art and Art History)*

The interdisciplinary concentration in film aesthetics and history, sponsored by the departments of English, modern languages and literatures, art and art history, and rhetoric, communications and journalism, offers multiple perspectives for examining theoretical and critical issues of film as art and communication. The three introductory courses explore the operation, function, and construction of film. The history courses examine narrative and technical developments with emphasis on major directors, genres, and trends. The theoretical courses are concerned with the uniqueness of film, its relation to other forms of verbal and plastic arts, and special approaches needed for analysis and enjoyment. The range of viewing experiences and the variety of approaches to the medium provide an excellent preparation for students seeking employment in advertising, publishing, journalism, visual media, or teaching, as well as for those who wish to pursue film studies on the graduate level.

Twenty-eight credits are required, including CIN 150, ENG 250, ENG 392; two courses chosen from among CIN 300, 301, and 302; and any two of the following: AH 367, AN 307, CIN 450, ENG 309, LIT 251, SCN 303. In special circumstances, CIN 499 may be substituted for one of the above courses with the permission of the concentration coordinator.

COURSE OFFERINGS

CIN 150 Introduction to Film (4)
Introduction to the art of film by examination of the filmmaking process, study of narrative and non-narrative film, and exploration of film's relation to society.

CIN 300 History of Film: The Silent Era (4)
Survey of directors and films important in shaping film history: Griffith, Eisenstein, Chaplin, Murnau, Pabst, Lang, and others.

CIN 301 History of Film: The Sound Era to 1958 (4)
Examination of significant directors, genres and movements: Welles, Hitchcock, Renoir, DeSica and others; the western, gangster film, musical; neorealism, film noir.

CIN 302 History of Film: The New Wave and Beyond (4)
Study of film since 1959: New Wave directors such as Truffaut, Godard, Resnais; major artists such as Fellini, Bergman, Kubrick; experimental films and new developments.

CIN 450 Topics in Film (4)
Examination of specialized subjects in film such as: The War Film, Alfred Hitchcock's Films, The New Wave, The Japanese Cinema. Topic to be selected by instructor.
Prerequisite: A course in film or permission of instructor.

CIN 499 Independent Study (4)
Study on an independent basis for students with demonstrated interest in film. A proposed course of study must be submitted to the prospective instructor in the semester before the independent study is to be taken.
Prerequisite: One course in film.

CONCENTRATION IN FOLKLORE AND POPULAR CULTURE

COORDINATOR: *Mark E. Workman (English)*

COMMITTEE: *Jane Bingham (Education), Marc Briod (New Charter College), Judith Brown (Anthropology), Roy Kotynek (History), Lucinda Hart-González (Linguistics), David Stevens (Theatre Arts), Amitendranath Tagore (Modern Languages)*

Folklore is traditional, artistic behavior; it is engaged in by even the most intellectually and technologically sophisticated among us, and it encompasses all modes of expression. Popular culture borrows from folklore its formulas of production as well as much of its content. This concentration provides an introduction to the materials and methods of inquiry into these subjects, and encourages students to pursue further the extensive social and cultural ramifications of folklore and popular culture into related areas of study.

The program is of potential relevance to students in all areas of the humanities, social sciences, and education. It will be of benefit to them both in their studies at Oakland University and as preparation for careers in media, human services, teaching, or graduate work in any of the fields related to the concentration.

The program requires 28 credits, including ENG 214 and either ENG 302 or HST 220. A minimum of 8 credits must be taken at the 300 or 400 level, and no more than 8 credits from the student's major will count towards the concentration. The current list of approved electives follows. The selection of electives must be made in consultation with the coordinator of the concentration.

AN 251, 271, 310, 333. AS 386. AH 360. SCN 371, THA 346. ED 332. ENG 120, 211, 302, 304, 312, 313, 314. CIN 150. HST 220, 222, 292, 346. ALS 375. MUS 346, 347. REL 295.

CONCENTRATION IN GERONTOLOGY

COORDINATOR: *Harold Zepelin (Psychology)*

This multidisciplinary concentration, cosponsored by the School of Human and Educational Services, provides students an opportunity to gain an understanding of aging as a process in personal, cultural, and social contexts. It adds another dimension to career preparation for students who plan to obtain graduate degrees in the helping professions such as nursing, clinical psychology, and social work. And it

provides essential background and introductory experience for students holding bachelor's degrees and who wish to seek employment in agencies providing services for the elderly.

The concentration requires 28 credits, 12 in required core courses and 16 in elective courses. One of the required core courses, a multidisciplinary seminar on aging, will bring students into contact with diverse disciplines that have an interest in aging. Students in arts and sciences must choose one elective (4 credits) from HRD courses.

Core Courses

(a) Two of the following three: BIO 250, PSY 331, or SOC 465.
(b) Multidisciplinary Seminar on Aging (GRY 400), which has any two of the preceding core courses as prerequisites.

Elective courses

HRD 369, 431, 467, 490 (HRD 490 is open to HRD majors only), PSY 371, 372, and either SOC 314 or 315.

CONCENTRATION IN MICHIGAN STUDIES

COORDINATOR: *Richard B. Stamps (Sociology and Anthropology)*

COMMITTEE: *John B. Cameron (Art and Art History), Ann Sakai (Biological Sciences), Nathan Schwartz (Political Science), W. Patrick Strauss (History)*

The concentration in Michigan studies is an integrated program of courses which provide both a broad introduction to, as well as a focused interdisciplinary study of Michigan. Each student is required to take MC 100 Life In Michigan, which serves to integrate the various disciplinary offerings.

The concentration requires completion of 26 credits, including MC 100, to be selected from the following list of course offerings. No more than eight credits from the student's major may be counted towards the concentration.

COURSE OFFERINGS

MC 100 Life in Michigan (2)
An introduction to Michigan history and politics, fine art and archaeology, geology and environment, flora and fauna, climatology, and industry and economic development.

Students will select the remaining 24 credits from the following courses (4 credits each, except for ENV 373, 3 credits).

AH 355 Michigan Architecture
AH 360 History of Automobile Design
AH 399 Field Experience in Art History
AN 383 Methods in Anthropological Archaeology
AN 399 Field Experience in Anthropology
BIO 303 Field Biology
CHM/ENV 373 Water Resources
HST 218 History of Michigan
HST 302 American Labor History
HST 399 Field Experience in History
PS 305 Politics of the Local Community
PS 307 State Politics
PS 458 Public Affairs Internship
SOC 343 Communities

CONCENTRATION IN NEUROSCIENCES

COORDINATOR: *William C. Hoffman (Mathematical Sciences)*

The concentration in neurosciences provides focused study for students interested in the broad area of scientific aspects of the mind. The concentration

recognizes two major orientations, one theoretical (Formal Models in the Neurosciences), the other experimental (Experimental Neurosciences with laboratory work). The concentration is frankly scientific, built around neurochemistry, neuroanatomy, physiological psychology, and sensory recognition, and is intended to prepare students for careers or graduate study in the neurosciences.

The concentration consists of two streams, each of which requires 24 credits. Students ordinarily will elect one or the other of these streams:

1. Experimental Neurosciences: BIO 351, BIO 460, BIO 461, PHY 325, PSY 355, and a seminar in advanced neuroscience;
2. Formal Models in the Neurosciences: APM 357 or APM 435, APM 436, BIO 460, PSY 352, PSY 353, and one of the following courses: PSY 355, ALS 340, or ALS 360.

Students interested in the concentration in neurosciences are advised to consult the concentration coordinator no later than the beginning of the junior year.

CONCENTRATION IN PREPROFESSIONAL STUDIES IN MEDICINE, DENTISTRY, AND OPTOMETRY

COORDINATOR: *Egbert W. Henry (Biological Sciences)*

COMMITTEE: *Gottfried Brieger (Chemistry), Dennis M. Callewaert (Chemistry), John R. Reddan (Biological Sciences), Robert L. Stern (Chemistry), Nalin J. Unakar (Biological Sciences), Robert H. Edgerton (Engineering), Barry S. Winkler (Biological Sciences)*

Students intending to pursue careers in the medical, osteopathic, or dental professions are expected to complete a concentration consisting of the following:

1. Biology, 20 credits, including laboratories
2. Chemistry, 20 credits, including laboratories
3. Mathematics, 8 credits
4. Physics, 10 credits, including laboratories

In chemistry, mathematics, and physics courses, students should opt for the sequences that are more rigorous in academic content.

These are the minimum requirements for admission to the various medical, osteopathic, and dental schools in Michigan and elsewhere. The committee strongly recommends the following additional courses for better preparation for the Medical College Aptitude Test (MCAT) as well as the medical school curriculum:

1. Science: genetics (BIO 341, 342), developmental biology (BIO 323, 324), biochemistry (BIO 325, 326 or CHM 453, 454, 457, 458), and physiology (BIO 321 or 207, 208).
2. Humanities: vocabulary and etymology (ALS 102) and/or RHT 103.

Students intending to pursue a career in the optometric profession are advised to take the following courses:

1. Biology, 20 credits, including laboratory
2. Chemistry, 20 credits, including laboratory
3. Mathematics, 12 credits, including calculus (MTH 154, 155)
4. Physics, 10 credits, including laboratory
5. Introductory psychology, 4 credits; English, 8 credits; social science, 8 credits.

This concentration does not constitute a major. Students must elect a major from those offered by the university. Interested students must consult the advisory committee for counseling and assistance in planning their academic programs.

CONCENTRATION IN RELIGIOUS STUDIES

COORDINATOR: *Leonardas V. Gerulaitis (History)*

The religious studies program offers a series of courses on religion, both Western and Eastern, traditional and contemporary. These courses do not seek to

confirm or attack any particular religious point of view; they are taught in the same scholarly and objective spirit as other university courses and aim at understanding a pervasive human phenomenon. They are grouped into two types: historical studies and systematic studies.

At present, the program offers a concentration in religious studies consisting of at least 20 credits in religion, which may be taken jointly with a modified major (24 credits) in philosophy, or with a full major in any other department of the College of Arts and Sciences.

Students wishing to make religion the focus of an independent major will receive the support of the Committee on Religious Studies. Interested students should see the concentration coordinator for further information.

In addition to the religion courses, several collateral courses are suggested: ENG 312, HST 325, and PHL 205.

Courses with REL 200 numbers require only sophomore standing; courses with REL 300 numbers require one previous course in religious studies at Oakland University, unless identical with departmental courses having different prerequisites.

COURSE OFFERINGS

HISTORICAL STUDIES

REL 200 Topics in the Historical Study of Religion (4)
The topic varies. Samples include: the New Testament, medieval mysticism, early Buddhism, the Protestant Reformation, Christ and Caesar, eighteenth and nineteenth century attacks on religion. May be repeated for credit.

REL 202 The Jewish Tradition (4)
Selected ideas and institutions in the development of Judaism from its pre-exilic roots to the present. Offered in cooperation with the Jewish Chautauqua Society.

REL 203 The Christian Tradition (4)
Study of the most important Christian ideas and institutions from Jesus to the present.

REL 211 The Bible as Literature (4)
Identical with ENG 211.

REL 250 Philosophies and Religions of Asia (4)
Identical with PHL 250.

REL 295 Contemporary Religious Movements (4)
Begins with a review of institutional religion in America, then surveys underground church movements, Zen, Yoga, TM, and others. Field work possible.

REL 304 The Islamic Tradition (4)
Selected ideas and institutions in the history of Islam.

REL 307 American Religious History (4)
Identical with HST 307.

SYSTEMATIC STUDIES

REL 220 Topics in the Systematic Study of Religion (4)
The topic varies. Samples include: mythology, psychoanalysis and religion, religion and education, types of religious communities, shamanism, the hero. May be repeated for credit.

REL 225 Philosophy of Religion (4)
Identical with PHL 225.

REL 227 Psychology of Religion (4)
Basic data of religious experience in relation to motivation, cognitive structure, and personality; problems of religious symbolism, verbal and nonverbal; dynamics of religious movements; growth, propagation, and preservation of orthodoxy; varieties of reform.

REL 229 Religion and Literature (4)
Study of a few masterpieces of world religious literature, such as Greek tragedy, Hindu

epic, Dante and Milton, with an attempt to generalize about the use of religious themes in literature and about literature as an expression of religious belief.

REL 271 Magic, Witchcraft, and Religion (4)
Identical with AN 271.

REL 291 Religion and Contemporary Moral Problems (4)
Investigation of the theological and ethical reasons for the emergence of a new attitude toward moral questions. Protestant, Catholic, Jewish, and secular viewpoints on some of these: love, sex, civil disobedience, criminal punishment, violence, war, suicide, and death.

REL 305 Sociology of Religion (4)
Identical with SOC 305.

REL 390 Directed Readings in the Study of Religion (4)
Individual study of a topic not covered by regular courses, with guidance of a faculty tutor. May be repeated for credit.
Prerequisite: Permission of concentration coordinator.

CONCENTRATION IN SOCIAL JUSTICE AND CORRECTIONS

COORDINATOR: *Jesse R. Pitts (Sociology and Anthropology)*

This concentration requires at least 28 credits and is to be taken in conjunction with a full major in any department of the college. It provides career-oriented education for students interested in the social forces producing delinquency and crime, in the evaluation of social planning for crime prevention and control, and in the operation of police organizations and correctional institutions.

A student must be admitted formally to the program and meet the following requirements:

1. 12 credits chosen from SOC 320, 322, 323, 327, 330, 425, 437; PS 241 and 343.
2. 12 credits from HI 361, HI 461, ORG 330, 331, PHL 103, PHL 221, PS 241, PS 342, PS 343, PSY 220, 322.
3. 4 or 8 credits of SOC 430.

CONCENTRATION IN SOCIAL SERVICES

COORDINATOR: *Jacqueline R. Scherer (Sociology and Anthropology)*

This concentration requires 28 credits and is available to students throughout the university regardless of major. It is primarily for students who intend to pursue graduate studies in social services or who are interested in the analysis of social programs and social welfare policies. The social and psychological dimensions of service delivery are explored as these relate to professional development and the integration of theoretical and applied approaches to problem solving.

The following are required, distributed as follows:

1. SOC 314—The Social Context of Social Work, SOC 315—The Sociology of Poverty and Social Welfare
2. Psychological foundations (two of the following): PSY 220, 271, 311, and 331
3. Field experience: PSY 399, SOC 399 or equivalent course
4. Statistics: SOC 203 or equivalent statistics course
5. Elective (one from the following): HI 361, SOC 328, SOC 331, PSY 323, PSY 336, HRD 331

Students are requested to formally enroll in the program by completing an application at the Office of Sociology and Anthropology.

CONCENTRATION IN URBAN STUDIES

COORDINATOR: *Harry Gold (Sociology and Anthropology)*

COMMITTEE: *Johnetta Brazell (Placement and Cooperative Education), Dewitt S. Dykes (History), Oded Izraeli (Economics and Management), Nathan H. Schwartz (Political Science)*

The urban studies concentration is designed to provide a comprehensive interdisciplinary understanding of modern urban civilization and to develop an appreciation of some of the problems and policy issues confronting contemporary American urban communities. It is also designed to introduce some of the technical skills that are a prerequisite to the successful pursuit of career opportunities in a variety of urban-oriented public and private service or administrative organizations.

The concentration provides a carefully selected group of required core courses drawn from several departments, allows a relatively broad choice of electives and provides an interdisciplinary seminar designed to help integrate the knowledge and skills acquired in the program.

1. General Requirements
   a. Total of 28 credits in addition to the concentration prerequisite.
   b. Students must submit an advising plan to the concentration adviser and make application to the concentration coordinator to be admitted to the program as early as possible.
2. Prerequisite to the concentration: one course in statistics and/or methodology offered by a social science department or a statistics course offered by mathematical sciences.
3. Core: Students are required to complete three of the four core courses.
   a. PS 305 Politics of the Local Community
   b. ECN 309 Urban Economics
   c. SOC 445 Urban Sociology
   d. HST 223 History of American Cities
4. Electives: three courses from the list below; none of the courses may overlap with courses in the student's major and no more than two courses may be taken in a single department.
   AH 363 Modern Architecture and Urban Design
   HST 302 American Labor History
   PSY 326 The Psychology of Social Issues
   HRD 331 Introduction to Community Mental Health
   HRD 364 Career Development and Community Resources
   NCC 151 Introduction to Urban Studies
   ECN 356 Economics of the Public Sector
   SOC 331 Racial and Ethnic Relations
   SOC 343 Communities
   SOC 404 Sociology of Poverty and Social Welfare
   SOC 444 The Neighborhood
   PS 307 State Politics
   PS 350 Public Administration
   PS 353 Public Policy Analysis
   PS 455 Public Policy Evaluation
5. Senior Seminar: required of all students.
   CHD 490 Senior Seminar in Urban Studies (4)
   A seminar integrating knowledge of the urban arena through the exploration of diverse topics and the development of substantive research.
   Prerequisite: Permission of instructor
6. Internship. Although an urban internship or field experience is not required as part of the concentration, it is strongly recommended that students com-

plete such a course in their major department or another program in the university. Ideally the internship should be completed before the senior seminar.

CONCENTRATION IN WOMEN'S STUDIES

COORDINATOR: *Karen Beckwith (Political Science)*

COMMITTEE: *Barbara Hamilton (Rhetoric), Linda Hildebrand (Library), Linda Lentz (Education), Margaret B. Pigott (Rhetoric), Elizabeth Pinkstaff (Nursing), Jacqueline Scherer (Sociology), Janice Schimmelman (Art and Art History), Hoda Abdel-Aty Zohdy (Engineering)*

The women's studies concentration explores the contributions of women, through their work and lives, to the arts, the sciences, and society. The concentration opens areas of study and research related to women which arise from the various academic disciplines and to draw these areas together coherently. Participants discover information and generate questions that lead to understanding of the present position of women in society and to formulation of theories that may improve that position. This interdisciplinary concentration is a humanistic complement to any conventional academic major.

Twenty-eight credits are required, distributed as follows:

1. Core courses: WS 200, 300, and 400.
2. 2 credits of independent study (within the department of the cooperating instructor) taken concurrently with WS 300.
3. Remaining credits to be drawn from approved women's studies electives.

A list of women's studies electives for the current semester may be obtained from the coordinator or committee members.

COURSE OFFERINGS

WS 200 Introduction to Women's Studies (4)
This interdisciplinary survey introduces a broad spectrum of issues concerning women and presents some of the methodologies evolved by different disciplines.

WS 300 Women's Studies: Women in Transition (4)
This interdisciplinary, team-taught course focuses in depth on specific issues relating to the female experience, such as achievement, sexuality, or power. A 2-credit independent study, under the direction of one of the course instructors, is a required supplement.

WS 301 Special Topics (4)
An advanced course enabling students to sample various approaches to women's studies and to develop broader perspectives on women's studies.
Prerequisite: WS 200.

WS 400 Final Project in Women's Studies (4)
Each student with the help of a faculty adviser independently prepares a final project drawing upon knowledge from previous women's studies courses and from the methodology of some other discipline, preferably that of the student's major.

TEACHING MINOR IN SCIENCE

The teaching minor in science requires at least 24 credits, selected from courses offered in biological sciences, chemistry, and physics. Course selections must cover two of the three disciplines and must include 12 credits in each discipline applied to the minor. All courses must be at the levels of BIO 190, CHM 144, PHY 101, or above, and they may not include courses in the student's major discipline.

PRELAW STUDIES

ADVISER: *Jane Briggs-Bunting (Rhetoric, Communications, and Journalism)*

There is no formal prelaw curriculum at Oakland University because no set of

specific courses is necessary for admission to or success in American law schools. Students planning to attend law school after graduation should major in a field in which they have both interest and aptitude; the actual field is considerably less important for admission than the overall success of the student in college training as measured by cumulative grade point average and scores on the Law School Aptitude Test.

Rather than mastery of any particular subject matter, law schools require of the incoming student certain basic skills, particularly the ability to think logically and to express oneself orally and in writing in a coherent and precise manner. No one academic discipline possesses a monopoly on development of these abilities. The best advice to students planning legal careers is to choose courses such as logic and mathematics that emphasize analytical thinking and critical writing and to do well in them.

If there are any specific courses that might be recommended to prelaw students because of subject matter, they would be courses which deal with the operation of American institutions, particularly the basic courses in American politics, history, and economics. For students interested in general questions about law or legal techniques—from a liberal arts perspective and not as a technical discipline as taught in law school—the following courses should be of some interest: PHL 319 and PS 241, 342, 343; and JRN 403. It must be emphasized, however, that none of these courses is required for or restricted to prelaw students.

The library, the Department of Political Science, and the Career Advising and Placement Office maintain a collection of law school catalogs. Booklets containing application forms for the Law School Aptitude Test should be obtained early in the senior year from the Career Advising and Placement Office.

OFF-CAMPUS STUDIES PROGRAMS

The College of Arts and Sciences administers an off-campus independent study program which allows a student to propose his/her own course of study for the semester off campus. The following standards and procedures apply:

1. Any undergraduate student in good standing is eligible to participate in the program after completion of two semesters in residence.
2. A written proposal describing a course of activity will be prepared by a student applicant before beginning the program.
3. This proposal and the off-campus work it describes must receive support and involvement of at least three faculty members and approval of the dean.
4. All arrangements for off-campus work must be completed and filed with the office of the dean by the end of the advising period in the semester preceding the semester of off-campus study.
5. Part of the preparatory work must include the designation of course equivalents totaling at least 8 credits for the independent study to be accomplished. This is to be negotiated with supporting faculty members.
6. Whenever credit is sought toward completion of a major, the department, through its chairperson, must agree to the value of the independent work.
7. The dean of the college will require a release from parents absolving the university of responsibility for the well-being of students under 18 years of age while they are participating in off-campus independent study.
8. The initial approval of a program for a student will be for one semester with the provision that the student may request an extension of the program for additional semesters.
9. The student must be registered at Oakland University and pay the required fees during the independent study period.

Students interested in overseas study programs sponsored by other universities and organizations, both domestic and foreign, should contact the Overseas

Study Information Office located in the Center for International Programs. Information on work-study opportunities sponsored by institutions other than Oakland University can be obtained from the Career Advising and Placement Office and from the Center for International Programs.

HONORS COLLEGE

DIRECTOR: *Robert C. Howes (History)*

COUNCIL: *Sheldon Appleton (Political Science), Charles B. Lindemann (Biological Sciences), Lewis N. Pino (Chemistry), Norman Susskind (Modern Languages and Literatures), one sophomore, one junior, and one senior Honors College student*

The Honors College has been established by the faculty of Arts and Sciences for highly motivated students who wish an unusually challenging undergraduate education. It provides a specially designed general education and additional requirements in conjunction with a departmental major in the College of Arts and Sciences or in one of the professional schools. Students currently admitted to or enrolled at Oakland University may apply directly to the Honors College for admission; others must apply for admission to Oakland University as well. Application forms are available at the Honors College office. Courses with the HC prefix are open only to students who have been accepted into the Honors College.

REQUIREMENTS AND PROCEDURES

The Departmental Major

1. The student must complete a departmental major in the College of Arts and Sciences or a prescribed course of study in the School of Economics and Management, School of Human and Educational Services, School of Engineering and Computer Science, School of Nursing, or the Center for Health Sciences.
2. Honors College students must follow specially designated honors tracks in departments where they exist.
3. The Honors College Council will accept a student who is not pursuing a standard major (for example, a student with an independent major) if it deems that student's program to be of sufficient breadth, depth, and coherence.

The Honors College General Education Requirements

1. The student must successfully complete the four Honors College core courses (HC 201, 202, 203, 204).
2. The student must successfully complete at least one 4-credit course, outside his/her major, in each of three of the following five areas: I. literature and the arts (art, art history, communication arts, English, linguistics, modern languages and literatures, music); II. history, philosophy, area studies; III. social sciences; IV. natural sciences; V. mathematics. Any course that counts toward a major in a department of the College of Arts and Sciences will be acceptable in fulfillment of this requirement. Any other course must be specifically approved by the student's Honors College adviser or by the director of the Honors College. Nursing students must satisfy this requirement only in areas I and III.
3. The student must successfully complete a senior colloquium (HC 401).
4. The student must attain second-year foreign language proficiency.

Advanced Standing

1. The student (normally by the end of his/her fourth semester) shall apply for advanced standing in the Honors College. Following receipt of this application, the Honors College Council will interview the applicant. (The interview will be of a general nature, but will deal, in part, with material studied in the several Honors College core courses which the student will have completed.)
2. The council may (a) admit the student to advanced standing, (b) admit the student to advanced standing conditionally, or (c) ask the student to withdraw from the Honors College. If the student is admitted conditionally, he/she will be informed of the reasons.
3. Normally a student will not be considered for admission to advanced standing (or for removal of the condition of acceptance) later than the fourth week of the semester following that in which he/she shall have completed 80 credits.

The Independent Project

1. The student must successfully complete a major creative or scholarly work under the supervision of a faculty member after approval of the project by the Honors College Council. The independent project proposal should be submitted to the Council before the student completes his/her junior year. In any case, it must be approved by the council within the first four weeks of the semester following that in which the student completes 96 credits.
2. The student may receive departmental or Honors College independent study credit for all or part of this work. He/she may, but is not required to, register for HC 490.
3. This is to be an independently designed and completed project.
4. Completed independent project reports are due no later than one week prior to the last day of classes in the semester in which the student intends to graduate.

Graduation Grade Point Average and Graduation Honors

1. A grade point average of at least 3.30 is required for graduation.
2. The Honors College student may receive departmental and university graduation honors.

HONORS COLLEGE COURSE OFFERINGS

HC 201, 202, 203, 204 Honors College Core Courses (4 each)
Introductions to a range of ways of thinking characteristic of a modern university. Instructors for HC 201 will be drawn from art, art history, communication arts, English, linguistics, modern languages and literatures, or music. Instructors for HC 202 will be drawn from the history or philosophy departments or from the area studies program. Instructors for HC 203 will be drawn from the departments of economics, political science, psychology, or sociology/anthropology. Instructors for HC 204 will be drawn from the departments of biological sciences, chemistry, mathematical sciences, or physics. Offered annually. HC 201, 202, 203, and 204 may be repeated for credit as elective courses, provided that the discipline within the area is not repeated.

HC 401 Honors College Senior Colloquium (4)
Discussion of a broad topic of traditional concern or an issue of particular current significance. Offered annually.

HC 490 Independent Study (4)
Supervised instruction in the Honors College independent project. May be repeated for credit. Offered each semester.

NEW CHARTER COLLEGE

COCHAIRPERSONS: *Irving Torgoff (Psychology) and Leo Gerulaitis (History)*

FACULTY: *Lizabeth A. Barclay (Economics and Management), John Beardman (Art and Art History), Peter Bertocci (Anthropology), David C. Bricker (Education), Marc Briod (Education), Richard Brooks (Philosophy), Dolores Burdick (Modern Languages), Harvey Burdick (Psychology), Richard J. Burke (Philosophy), F. James Clatworthy (Education), John Cowlishaw (Biology), Peter Evarts (English), Thomas Fitzsimmons (English), Wilma Garcia (Rhetoric), Leo Gerulaitis (History), James Graham (History), Carol Halsted (Dance), Marvin Holladay (Music), Roy Kotynek (History), Vincent Khapoya (Political Science), Margaret Kurzman (Rhetoric), David Mascitelli (English), Donald Morse (English), Margaret Pigott (Rhetoric), Elizabeth Pinkstaff (Nursing), Jacqueline Scherer (Sociology), Robert Stern (Chemistry), Ronald Swartz (Education), Irving Torgoff (Psychology)*

ADJUNCT FACULTY: *Charles Morton (Philosophy), Laurel Torgoff (Clinical Psychologist), Bernard Travnikar (Child Counselor)*

Drawing on faculty from departments and schools throughout the university, New Charter College (NCC) offers an interdisciplinary, individual approach to learning. Students pursuing a major in the College of Arts and Sciences, School of Engineering, or Human Resources Development majors in the School of Human and Educational Services may fulfill part of their general education requirement through interdisciplinary course work in New Charter College. B.G.S. candidates will find the New Charter offerings to be broad, flexible, and challenging. Although New Charter College does not offer a major or a degree, degree candidates in any of Oakland University's schools or departments may augment their studies through course work in New Charter. Counseling is also available to students enrolled in New Charter courses.

Courses on all levels ending in numbers from 11-19 designate orientation toward the creative arts, those ending in 21-29 emphasize humanities, those ending in 31-39 are rooted in social sciences, those ending in 41-49 grow out of natural sciences, and those ending in 51-59 are oriented to community studies.

COURSE OFFERINGS

NCC 100 Individual in the University (4)
Exploration of general education in relation to life experiences and career development. Links personal competencies, goals, and needs to academic subject matter, the history and structure of the university, and critical evaluation of the processes and possibilities of higher learning.

NCC 101 Explorations in Interdisciplinary Studies (2 or 4)
An introductory course enabling students to sample various interdisciplinary approaches and to develop broader perspectives on interdisciplinary matter.

NCC 112 Creative Expression (4)
Exploration of communication with self and others within structured forms of dance, music, and drama. Visual arts and other media are used to implement expression where appropriate and possible. Graded S/N.

NCC 121 Images of Humanity (4)
Literature as a cross-cultural mirror. Literary works of various types will be explored, with emphasis on the ways that writers look outward in order to reflect the world in which they live. Satisfies general education in literature.

NCC 122 Alienation in Youth (4)
Problems and questions about why students and adolescents may reject the values of their native society, as well as the difficulties in bringing about genuine change in society and self.

NCC 123 Science Fiction, Detective Stories, and the Scientific Method (4)
Using representative works from science fiction, detective stories, and the philosophy of science, this class focuses on the effects of scientific discoveries on human life and culture.

NCC 131 Studies in Human Organization (4)
Interdisciplinary introduction to the behavioral sciences. Topics may range from the cross-cultural study of human relations and lifestyles to the dimensions of a contemporary American social problem.

NCC 141 Twentieth Century Science (4)
Exploration of current frontiers in scientific thought and conceptualization, in relation to contemporary society and its problems. No advanced specific knowledge of modern science is required. Satisfies general education in mathematical and natural science.

NCC 147 History of Science (4)
Several historical periods, from antiquity to the present, are examined to see how the development of science has been influenced by the intellectual climate of the era, and how new insights in the sciences have helped to shape different societies' perceptions of reality.

NCC 151 Introduction to Urban Studies (4)
Introduction to the interdisciplinary subject matter of urban studies. Guest speakers provide a wide range of perspectives on the problems and possibilities of human growth in modern American cities.

NCC 201 Topics in Interdisciplinary Studies (2 or 4)
An intermediate course enabling students to sample various interdisciplinary approaches and to develop broader perspectives on interdisciplinary subject matter.

NCC 210 Study Abroad (2 or 4)
An interdisciplinary topic relating to the culture of a foreign country or region, enriched by traveling and living in that area. Readings, discussion, and structured itineraries are designed to enhance general understanding of that culture in broader academic perspectives.

NCC 215 African Music as Oral Culture: West African Drumming (4)
West African drum ensemble traditions will be investigated in a performance context, and comparisons explored with other musical traditions of indigenous African cultures. Special attention is given to linguistic relationships in the tonality of African music.

NCC 223 Personal Worlds (4)
Philosophical and literary sources are used to explore the dreamlike and dramatic inner quality of personal worlds. Analogies are drawn between the fictional lives of others and the stranger within the self.

NCC 227 Those Were the Days (4)
From a contemporary perspective, cultural history, and social alienation in America during the 1950s and 1960s are studied. Themes of alienation as seen by different generations, sexes, and ethnic groups analyzed in relation to popular music, television, and film.

NCC 235 Perspectives on Psychic Research (4)
Survey and analysis of contemporary research into parapsychology and a wide range of observed or purported psychic phenomena—such as clairvoyance, mediumship, faith-healing, precognition, astral projection, etc.

NCC 241 Body and Soul (4)
Explores multiple approaches to self-knowledge, based on the writings of different authors who attempt to integrate human biology with psychology and culture. The question of reality of body and soul is examined in light of a systems approach to the life sciences.

NCC 252 Interpersonal Relationships: Marriage, Family, and Divorce (4)
Critical evaluation of individual feelings about tradition and change in marriage and parenthood, male and female roles, sexuality and companionship, marital conflict and divorce, and the single life.

NCC 300 Independent Study (2 or 4)
Advanced interdisciplinary reading on a topic of interest to the student, who assumes initiative for planning this reading project in conjunction with NCC faculty sponsor and approval of the NCC Executive Committee. Graded S/N. Offered every semester.
Prerequisite: Approved NCC contract.

NCC 301 Seminar in Interdisciplinary Studies (2 or 4)
An advanced course enabling students to sample various interdisciplinary approaches and to develop broader perspectives on interdisciplinary subject matter. Offered every year.
Prerequisite: Previous NCC course work or permission of instructor.

NCC 310 Creative Arts Contract (2 or 4)
Opportunity to develop artistic skills within context of aesthetic history and criticism. Student must submit learning contract, signed by NCC faculty sponsor and approved by NCC Executive Committee, by way of applying for permission to take this class. Graded S/N.
Prerequisite: Approved NCC contract.

NCC 321 Remedial Wisdom (4)
Confronts the student with the totality of problems facing an educated person today and explores various attempts to solve them.
Prerequisite: Senior standing or permission of instructor.

NCC 334 Human Sexuality (4)
Explores notion that sexuality connotes totality of being—the full expression of femaleness and maleness. Various cultural paradigms of the nature of sexuality are explored; biosocial nature of sexuality and the functional identity of mind and body are examined.

NCC 336 Ways of Knowing (4)
Intensive exploration of personal integration and growth, bridging reading with experience, through the study of humanistic psychology, transactional analysis, bio-energetic theory and technique, and Jungian syntheses.
Prerequisite: Permission of instructor.

NCC 351 The Geography of Values (4)
Explores community values in the context of change and development. Changing values and community development in local areas are researched and analyzed for a deeper understanding of the techniques and uses of social cartography.
Prerequisite: Previous NCC course work or permission of instructor.

NCC 400 Independent Research (2 or 4)
Advanced interdisciplinary research on a topic of interest to student. Student assumes initiative for planning research in conjunction with NCC faculty sponsor and approval of NCC Executive Committee. Substantive, well-documented paper is required.
Prerequisite: Approved NCC contract.

CENTER FOR THE FINE AND PERFORMING ARTS

The Center for the Fine and Performing Arts of the College of Arts and Sciences offers a Bachelor of Music degree. The center also functions as a service unit for the Bachelor of Arts degree with a major in music and for the Bachelor of Science degree with a major in music education offered by the College of Arts and Sciences.

GENERAL REQUIREMENTS FOR THE BACHELOR OF MUSIC DEGREE

I. General Degree Requirements

A student must:

1. Have successfully completed a minimum of 128 credits for the Bachelor of Music degree.
2. Have met all general undergraduate degree requirements.
3. Have been admitted to degree candidacy by the university and the College of Arts and Sciences, have completed all requirements for the Bachelor of Music, and have been admitted to study in at least one of the music specializations.

II. The Requirement of Proficiency in English Composition

The student must satisfy the university writing proficiency requirement as specified in the academic policies and procedures section of this catalog.

III. The General Education Requirement

For the Bachelor of Music degree, the student must complete a total of 32 credits from the courses listed below and described in the College of Arts and Sciences section, according to the following distribution:

Arts	4-8
Modern Languages	8-16
History, Literature, and Philosophy	8
Mathematics, Science, Social Studies, Area Studies	4-8

Arts

AH 100	Introduction to Western Art I
AH 101	Introduction to Western Art II
CIN 150	Introduction to Film
DAN 173	Dance History and Appreciation
THA 100	Introduction to Theatre
THA 268	Theatre History I
THA 269	Theatre History II

Modern Language

For the Bachelor of Music degree, 8 to 16 credits in a foreign language (or demonstration of proficiency equal to second semester of a language), and/or in courses selected from the following list, some of which are acceptable for certain Bachelor of Music degrees. Please consult the *Music Handbook* (available from the Department of Music).

ML 211	Diction for Singers, First Semester
ML 212	Diction for Singers, Second Semester
SCN 207	Semantics

SCN 303	Communication Theory
PHL 102	Introduction to Logic
PHL 170	Introduction to Formal Logic

History

HST 150	History of Western Civilization
HST 200	European History to 1300
HST 201/202	European History, 1300-1815; since 1815
HST 214/215	Introduction to American History

Literature and Philosophy

ENG 100	Masterpieces of World Literature
ENG 105	Shakespeare
ENG 111	Modern Literature
ENG 224	American Literature
ENG 241	British Literature
LIT 281	Continental European Literature in Translation I
LIT 282	Continental European Literature in Translation II
PHL 101	Introduction to Philosophical Thinking
PHL 103	Introduction to Ethics
PHL 204/205/206	History of Western Philosophy
PHL 250	Philosophies and Religions of Asia
NCC 121	Images of Humanity
ED 332	Literature for Children
HRD 301	The Nature of Man
HRD 302	Ethics and Personal Crises

Area Studies

AS 210	Introduction to China
AS 220	Introduction to Japan
AS 230	Introduction to Africa
AS 240	Introduction to India
AS 250	Introduction to Latin America
AS 260	Introduction to Russia and Eastern Europe
AS 270	Introduction to the Middle East

Mathematics and Science

MTH 104/105	Elementary Functions, Trigonometry
MTH 121	Linear Programming, Elementary Functions
MTH 122	Calculus for the Social Sciences
MTH 154-155	Calculus
MTH 185	Mathematics—Undergraduate Topics
STA 225	Probability and Statistics
BIO 104/105	Biology of the Human
BIO 190/200	Biology
BIO 300	Biology and Society
CHM 104	Introduction to Chemical Principles
CHM 144-145	General Chemistry
PHY 101/102	General Physics
PHY 104/105	Astronomy
PHY 106/107	Earth Sciences
PHY 125	The Physics of Music
PHY 127	Human Aspects of Physical Science
ENV 308	Introduction to Environmental Studies
NCC 141	Twentieth Century Science
CIS 122 or 123	BASIC Programming
CIS 130	Introduction to Computer Science

Social Sciences

SOC 100	Introduction to Sociology
AN 101	Evolution of Man and Culture
AN 102	Man in Culture and Society

AN 307	Cultural Anthropology and the Ethnographic Film
ECN 150	Basic Economics
ECN 200	Principles of Macroeconomics
ECN 328	American Economic Development
PS 100	Introduction to American Politics
PS 115	U.S. Foreign Policy
PS 131	Foreign Political Systems
PS 372, 373	Western Political Thought
PS 377	Communism
PSY 100	Foundations of Contemporary Psychology
PSY 130	Psychology and Society
HI 261	Fundamentals of Human Interaction

DEPARTMENT OF MUSIC

CHAIRPERSON: *David Daniels*

PROFESSOR: *Stanley Hollingsworth*

ASSOCIATE PROFESSORS: *Raynold Allvin, David Daniels, James Dawson, Robert Facko, Lyle Nordstrom, Flavio Varani*

ADJUNCT PROFESSOR: *David DiChiera*

SPECIAL INSTRUCTORS: *John Dovaras, Alice Engram, Marvin Holladay*

VISITING INSTRUCTORS: *Ron DeRoo, Mary Rashid*

LECTURERS: *Joyce Adelson, Beverly Labuta, Nancy LeValley, Richard Thurston, Carolyn Tower*

APPLIED MUSIC INSTRUCTORS: *Joyce Adelson (piano), Janice Albright (voice), Mary Bartlett (harp), Christopher Birg (classical guitar), Charles Boles, (jazz piano), Steven Carryer,(jazz guitar), Douglas Cornelsen (clarinet), James Dawson (saxophone), Ron DeRoo (jazz piano), Pamela Dion (bassoon), Alice Engram (voice), Ray Ferguson (harpsichord), Derek Francis (violin), Robert Gladstone (string bass), Marilyn Hedquist (voice), Elizabeth Ilku (harp), Mary Irvine (voice), Wesley Jacobs (tuba), Kent McDonald (piano/organ), Myron McDonald (percussion), Ervin Monroe (flute), Diann Moskal (voice), Lyle Nordstrom (recorder/lute), Patricia Adams Nordstrom (recorder/viola da gamba), Robert Pangborn (percussion), Edward Pickens (jazz string bass), Sam Sanders (jazz saxophone), Joseph Skrzynski (trombone/tuba), John Snow (oboe), Danny Spencer (jazz percussion), James Underwood (trumpet), Flavio Varani (piano), Charles Weaver (French horn), Herbert Williams (jazz trumpet), Ara Zerounian (viola)*

The Department of Music offers major programs leading to a Bachelor of Arts, Bachelor of Music, Bachelor of Science with a major in music education, and a Master of Music.

Prospective music majors must read the *Music Handbook* (available from the music office), and consult with a departmental adviser before beginning a music degree program. In addition, new students are expected to audition during the first week of classes in order to qualify for their chosen performing medium.

Core Requirements for all Degree Programs in Music

1. MUT 211-212, plus 8 credits from MUT 311, 312, 314, 410, 412, and 414.
2. Successful completion of the departmental ear training examination.
3. MUS 320 and two of the following: MUS 328, 329, 330, 334, 345, and 347.
4. Concert attendance requirement as described in the *Music Handbook*.

Requirements for the Liberal Arts Major in Music, B.A. Program

Forty-eight credits in music, with corequisites in art, theatre, and/or dance. This degree is for students who wish a broad general education without a high degree of specialization in music. For specific course requirements see *Music Handbook.*

Requirements for the Bachelor of Music Degree

The Bachelor of Music degree is for students who wish preprofessional and professional preparation in performance, early music, theory, composition, jazz, or commercial music. The degree is awarded upon completion of the requirements listed below, upon recommendation of the faculty of the Department of Music and the School of Performing Arts.

Prospective music majors must read the *Music Handbook* and consult with a departmental adviser before beginning work toward the degree.

Requirements for the Bachelor of Science in Music Education

For students who wish to teach in the public schools; the degree carries Michigan teaching certification. Specializations are possible in instrumental music education (72 credits of music, plus 24 in education) or choral music education (63 credits of music, plus 24 in education). Each specialization also requires a secondary teaching minor, and the choral specialization requires 8 credits of Singers' Diction (ML 211-212). For specific requirements, see the *Music Handbook.*

Requirements for the Secondary Teaching Minor in Music

The student must complete 28 credits in the Department of Music distributed as follows: 8 credits in music theory (MUT); 8 credits in applied music (MUA); four semesters (at least 4 credits) in music ensembles (MUE); a planned program of 8 credits (to be approved by a music adviser) selected from the following: MUS 149, 250, 295, 320, 350, 395, 401, 402, 441, 494, 495, 496. At least 14 of the 28 credits must be in courses numbered 300 or above.

Requirements for the Liberal Arts Minor in Music

Twenty-four credits of music chosen in consultation with a departmental adviser as follows: 8 credits of music theory (MUT); 6 credits of music history (MUS 320, 328, 329, 330, 334, 345, 347); 6 credits of applied music (MUA); 4 credits of music ensemble (MUE).

Foreign Language Requirement

Most music degrees require a foreign language. For requirements for each degree, see the *Music Handbook.*

Concert Attendance Requirement

Completion of a concert attendance card each fall and winter semester a student is enrolled, up to a maximum of four. See the *Music Handbook* for details.

Ensemble Requirement

At least half of the required ensemble credit must involve the student's major applied proficiency.

Major Standing

Prospective music majors must apply to the Department of Music for major standing after completing 48 total college credits, at Oakland University or elsewhere. Normally, transfer students should apply during the first semester at Oakland University. For details, consult the *Music Handbook*.

Auditions

New music majors must audition in their performing medium for a faculty committee within the first week of classes. See the *Music Handbook* for details.

Applied Music Juries

Music majors must play a jury in their major performing medium at the end of each fall and winter semester of applied study. Failure to do so will result in an "I" grade.

Music Specialization Requirements

Core Requirements for all Specializations: see above.

Specialization Requirements	Credits
1. Performance: Piano or Organ	
Ensembles (8 semesters; must include 4 semesters of accompanying)	8
Applied Major	32
Applied Minor	8
Pedagogy	4
Repertoire	4
Senior recital	
Recommended: Conducting (MUS 395)	
2. Performance: Voice or Guitar	
Ensembles (8 semesters; 1 semester of accompanying is recommended for voice majors)	8
Applied Major	32
Applied Minor (must be keyboard unless proficiency equivalent to MUA 471)	8
Repertoire	4
Senior Recital	
Recommended: Conducting (MUS 395)	
Language requirement for voice majors: ML 211-212 (Singers' Diction) and one year of Italian, French, or German	
3. Performance: Orchestral Instruments	
Ensembles (2 ensembles each semester for 8 semesters)	16
Applied Major	32
Applied Minor (must be keyboard unless proficiency equivalent to MUA 471)	8
Repertoire (via independent study)	2
Senior Recital	
Recommended: Conducting (MUS 395)	
4. Early Music	
Ensembles	12
Applied Major	24
Applied Minor	8
Keyboard (MUA 271 or equivalent proficiency)	4
Performance Practice	2
Bibliography (MUS 490)	2
Language Requirement: 16 credits of German, French, or Italian.	
Recommended: Additional credits in music history and Senior Recital	
5. Theory	
Additional theory courses beyond core requirement, chosen from MUT 311, 312, 314, 410, 412, 414	8
Composition	4

Ensembles (6 semesters)	6
Applied Major	12
Keyboard (MUA 471 or equivalent proficiency)	8
Orchestration (MUT 411)	4
Bibliography (MUS 490)	2
World Music	4
Apprentice College Teaching (MUS 497)	2
Conducting (MUS 395)	4
Recommended: Additional credits in music history.	

6. Composition

Composition	16
Additional theory courses beyond core requirement, chosen from MUT 311, 312, 314, 410, 412, 414	8
Orchestration (MUT 411)	4
Ensembles (6 semesters)	6
Applied Major	8
Keyboard (MUA 471 or equivalent proficiency)	8
Conducting (MUS 395)	4
Senior Recital	

7. Jazz

Ensembles (8 semesters)	8
Applied Major	16
Keyboard (MUA 376, 377, 476, 477)	8
Jazz Improvisation Workshop (MUE 341)	8
World Music	4
Recommended: Senior Recital	
Language requirement: French recommended; may also be completed by Singers' Diction (ML 211-212) or 8 credits in Linguistics and/or Speech Communication.	

8. Commercial

Ensembles (8 semesters)	16
Applied Major	16
Keyboard (MUA 471, or equivalent proficiency)	8
Literature of the American Music Theatre	2
Corequisites: Theatre (Technical Laboratory, Fundamentals of Acting, Dance and Movement, Costuming and Makeup)	16
Language Requirement: Must include ML 211-212	

COURSE OFFERINGS

ENSEMBLES

Ensembles are open to all students by audition. May be repeated for credit.

MUE 301 University Chorus (1 or 2)
Performance of the large choral masterpieces from all music periods.

MUE 302 University Community Chorus (1 or 2)
Festival-type mixed chorus for citizens of the surrounding communities who possess vocal experience. Performances of varied choral literature. Meets in the evening.

MUE 304 Oakland Chorale (1 or 2)
Performance of a wide range of choral chamber repertoire from Renaissance to the present.
Prerequisite: Permission of instructor.

MUE 305 Opera Chorus (1 or 2)
An ensemble which performs with the Michigan Opera Theatre.
Prerequisite: Permission of instructor.

MUE 306 Jazz and Show Ensemble (1, 2, or 3)
A performing ensemble emphasizing commercial, jazz, show, and swing choir repertory.
Prerequisite: Permission of instructor.

MUE 309 Meadow Brook Festival Chorus (1)
Performance of major choral masterpieces from all music periods under world-famous

conductors at Meadow Brook Music Festival. May be repeated for a total of 8 credits.
Prerequisite: Permission of instructor.

MUE 310 Vocal Improvisation Workshop (2)
A laboratory in vocal improvisation designed to increase skills in performing commercial and popular music.
Prerequisite: Permission of instructor.

MUE 320 University Orchestra (1 or 2)
Orchestral performance of repertoire from the eighteenth, nineteenth, and twentieth centuries. Several concerts per year, on and off campus. Accompaniments for solo concertos and university choral groups. Membership by audition. Graded S/N.

MUE 331 Concert Band (1 or 2)
An ensemble of wind instruments performing standard concert band literature.
Prerequisite: Permission of instructor.

MUE 340 Jazz Band (1 or 2)
A study of traditional and contemporary literature for large jazz ensembles within the Afro-American cultural context. Both conceptualization of the material and improvisational techniques will be explored and defined.

MUE 341 Jazz Improvisation Workshop (2)
A performance practice laboratory designed to increase improvisational skills indigenous to jazz performance and to identify systematically and use stylistic characteristics of various jazz subcategories.

MUE 350 Opera Workshop (1, 2, or 3)
Study and experience in various forms of musical theatre.
Prerequisite: Permission of instructor.

MUE 351 Musical Theatre Workshop (1 or 2)
Performance and study of repertory of the musical theatre.
Prerequisite: Permission of instructor.

MUE 360 Collegium Musicum (1 or 2)
Performance of Medieval, Renaissance, and Baroque music in various vocal and instrumental combinations. Period instruments and performance practices are emphasized. Graded S/N.
Prerequisite: Permission of instructor.

MUE 370 Guitar Ensemble (1 or 2)
Performance practice and techniques of classical guitar literature involving two or more players.

MUE 371 Woodwind Ensemble (1 or 2)
Ensembles of three or more saxophones performing appropriate literature.
Prerequisite: Permission of instructor.

MUE 373 Percussion Ensemble (1)
Performance of music for various combinations of percussion instruments.
Prerequisite: Permission of instructor.

MUE 380 Chamber Music (1 or 2)
Performing ensemble of various instrumentations. A spectrum of appropriate music literature, medieval through contemporary.

MUE 390 Accompaniment Practicum (1 or 2)
Experience in piano accompaniment of solo and/or ensembles, vocal and instrumental. May be repeated once for credit.
Prerequisite: MUA 370.

APPLIED MUSIC

The following courses each have four course number designations. Music majors are to enroll using the number which corresponds to the year in school—freshmen, 100 level; sophomores, 200 level; juniors, 300 level; seniors, 400 level.

Music faculty may adjust course numbers at the time of the entering audition, or after the first lesson.

Beginners must use the 100-level designation regardless of year in school. Students who have previously studied, either privately or in a college or university, should consult the *Music Handbook* to determine the appropriate course number. May be repeated for credit except where indicated.

The following courses are individual lessons and involve an applied music fee.

MUA 100, 200, 300, 400 **Voice (2 or 4)**
MUA 101, 201, 301, 401 **Piano (2 or 4)**
MUA 102, 202, 302, 402 **Organ (2 or 4)**
MUA 103, 203, 303, 403 **Harpsichord (2 or 4)**
MUA 104, 204, 304, 404 **Violin (2 or 4)**
MUA 105, 205, 305, 405 **Viola (2 or 4)**
MUA 106, 206, 306, 406 **Violoncello (2 or 4)**
MUA 107, 207, 307, 407 **String Bass (2 or 4)**
MUA 108, 208, 308, 408 **Flute (2 or 4)**
MUA 109, 209, 309, 409 **Oboe (2 or 4)**
MUA 110, 210, 310, 410 **Clarinet (2 or 4)**
MUA 111, 211, 311, 411 **Bassoon (2 or 4)**
MUA 112, 212, 312, 412 **French Horn (2 or 4)**
MUA 113, 213, 313, 413 **Trumpet (2 or 4)**
MUA 114, 214, 314, 414 **Trombone (2 or 4)**
MUA 115, 215, 315, 415 **Tuba (2 or 4)**
MUA 116, 216, 316, 416 **Timpani (2 or 4)**
MUA 117, 217, 317, 417 **Percussion (2 or 4)**
MUA 118, 218, 318, 418 **Harp (2 or 4)**
MUA 119, 219, 319, 419 **Guitar (classical) (2 or 4)**
MUA 120, 220, 320, 420 **Renaissance Winds (2 or 4)**
MUA 121, 221, 321, 421 **Viola da Gamba (2 or 4)**
MUA 122, 222, 322, 422 **Lute (2 or 4)**
MUA 123, 223, 323, 423 **Recorder (2 or 4)**
MUA 124, 224, 324, 424 **Saxophone (2 or 4)**
MUA 130, 230, 330, 430 **Piano (jazz) (2 or 4)**
MUA 131, 231, 331, 431 **Guitar (jazz) (2 or 4)**
MUA 132, 232, 332, 432 **Trumpet (jazz) (2 or 4)**
MUA 133, 233, 333, 433 **Saxophone (jazz) (2 or 4)**
MUA 134, 234, 334, 434 **Percussion (jazz) (2 or 4)**
MUA 135, 235, 335, 435 **Double Bass (jazz) (2 or 4)**
MUA 149, 249, 349, 449 **Applied Music (2 or 4)**

May be used to increase the number of private lessons in the student's major or minor performing medium. Must be taken with one of the applied music courses.

The following music courses are group lessons and involve an applied music fee.

MUA 171, 271, 371, 471 **Keyboard Technique (2 each)**
Development of the basic keyboard facility essential to any musician and some acquaintance with keyboard literature. May not be repeated for credit.
Prerequisite: Permission of instructor.

MUA 251 **Beginning Violin Class (1)**
MUA 252 **Beginning Violoncello Class (1)**
MUA 253 **Beginning Flute Class (1)**
MUA 254 **Beginning Clarinet Class (1)**
MUA 255 **Beginning Double Reed Class (1)**
MUA 256 **Beginning Trumpet Class (1)**
MUA 257 **Beginning Trombone Class (1)**
MUA 258 **Beginning Percussion Class (1)**
MUA 259 **Beginning Guitar Class (1)**

MUA 251 through 259 may be repeated for a total of 2 credits.

MUA 260 **Class Voice (2)**
Elementary aspects of singing, including diction, breath control, projection, and repertoire.

MUA 361-362 Vocal Literature I and II (2 each)
A survey of literature for the voice with emphasis on historical style. MUA 361 covers the Middles Ages through the nineteenth century, with emphasis on German song. MUA 362 continues through the nineteenth and twentieth centuries, emphasizing French, British, and American.
Prerequisite: ML 212 (may be taken concurrently) and permission of instructor.

MUA 370 Accompanying (1 or 2)
To help the pianist acquire knowledge of the basic skills required in the ensemble. Representative vocal and instrumental compositions are studied; emphasis is on rehearsal techniques and performance.

MUA 373 Piano Tuning and Technology (2 credits)
Basic skills in tuning and regulating a piano. Ability to set equal temperament as well as some discussion of historic temperaments.
Prerequisite: MUT 212.

MUA 375 Keyboard Ensemble Technique (2)
Class instruction in performance and repertory of multiple keyboard literature.
Prerequisite: Permission of instructor.

MUA 376, 377, 476, 477 Jazz Keyboard Practices (2)
Development of basic jazz keyboard techniques and skill including jazz chord and rhythm reading, melodic development, and voice leading. May not be repeated for credit.
Prerequisite: Keyboard proficiency demonstrated by audition.

MUA 395 Chamber Music Techniques (2)
Group instruction and coaching of performance of chamber music.
Prerequisite: Permission of instructor.

THEORY AND COMPOSITION

MUT 111 Beginning Musicianship (4)
Introduction to the techniques of reading and writing music, notation, pitch, and rhythmic organization, elementary sight singing, dictation, and keyboard familiarity. An elective for nonmusic majors.

MUT 205 Ear Training Preparation (1)
A required course for all full-time music majors who have not satisfied the ear training preparation. See *Music Handbook.* May be repeated for a maximum of 4 credits. Graded S/N.
Prerequisite: MUT 212.

MUT 211 Harmony and Ear Training I (4)
Beginning ear training and rudiments of tonal harmony. The harmonic practice of late eighteenth and early nineteenth centuries; composition and analysis in this style.

MUT 212 Harmony and Ear Training II (4)
Harmonic practice of the late nineteenth and early twentieth centuries; composition and analysis in this style.

MUT 311 Techniques of Musical Analysis (4)
Techniques of analyzing works of various styles and periods, with emphasis on tonal music.
Prerequisite: MUT 212.

MUT 312 Tonal Counterpoint (4)
The contrapuntal style of the eighteenth century; composition and analysis.
Prerequisite: MUT 212.

MUT 314 Jazz Theory (4)
Jazz notation, arranging, and composition.
Prerequisite: MUT 212.

MUT 315 Composition (4)
Private lessons in composition and composition laboratory. Studies, exercises, and projects concerning creativity and craft in music composition. For freshmen and sophomores. May be repeated for credit.
Prerequisite: MUT 312 and permission of instructor.

MUT 410 Twentieth Century Techniques (4)
Compositional practices in the 20th century; composition and analysis.
Prerequisite: MUT 212.

MUT 411 Orchestration (4)
A study of the orchestral instruments and their use in various combinations, including full orchestra and band. MUS 380, 383, 395, and MUT 410 are related courses.
Prerequisite: MUT 212.

MUT 412 Modal Counterpoint (4)
The contrapuntal style of the sixteenth century. Analysis and composition in this style. Offered in alternate years.
Prerequisite: MUT 212.

MUT 414 Jazz Composition and Arranging (4)
Composition and arranging technique for jazz ensembles. Includes study of jazz notational systems, idiomatic jazz practice, standard jazz forms, and orchestration for instruments and voice as used in jazz ensembles.
Prerequisite: Permission of instructor.

MUT 415 Advanced Theory/Composition (4)
Private lessons in composition and composition laboratory: studies, exercises, and projects concerning creativity and craft in composing music. For juniors and seniors. May be repeated for credit.
Prerequisite: MUT 312 and permission of instructor.

MUSIC HISTORY, LITERATURE, AND APPRECIATION

MUS 100 An Introduction to Music (4)
An introduction to the techniques of listening to great music, and a study of its elements, forms, and styles. Begins at the level of the student lacking previous musical experience. An elective for nonmusic majors.

MUS 250 World Music Survey I (4)
Introduction to selected music cultures to acquaint the student with a variety of musical functions and styles at various places and times. Emphasis is on demonstrations via live performances by visiting lecturers and guest artists. May be taken twice for a total of 8 credits.

MUS 300 Music Appreciation: Musical Styles (4)
Investigation of various large musical forms: symphony, sonata, concerto, string quartet, opera, oratorio, and solo song. Each area will be presented by three or four select works.

MUS 320 Survey of Music History and Literature (4)
A survey of music from medieval through modern contemporary, primarily for music majors.
Prerequisite: MUT 212.

MUS 328 Music of the Baroque Period (2)
Music history and literature of the Baroque period.
Prerequisite: MUS 320.

MUS 329 Music of the Classical Period (2)
Music history and literature of the Classical period.
Prerequisite: MUS 320.

MUS 330 Music of the Renaissance (2)
Music history and literature of the Renaissance period.
Prerequisite: MUS 320.

MUS 331 Opera and Music Drama (4)
A study of music drama from the lyric drama of the ancient Greeks to the present. Suggested as an elective for nonmusic majors.
Prerequisite: MUT 211.

MUS 334 Music of the Romantic Period (2)
Music history and literature of the Romantic period.
Prerequisite: MUS 320.

MUS 345 Twentieth Century Music (2)
A study of significant styles and composers from Debussy to the present.
Prerequisite: MUS 320.

MUS 347 History of Jazz (2)
A survey and historical study of the development of jazz, including significant periods and trends, stylistic analysis, and aesthetic foundations.
Prerequisite: MUS 320.

MUS 348 Advanced Jazz History (2)
An intensive study and stylistic analysis of the more recent trends of jazz and commercial music.
Prerequisite: MUS 347.

MUS 350 World Music Survey II (4)
Continuation of MUS 250. A study of selected cultures designed to find relationships between musical styles and functions in the society. Emphasis is on demonstrations through live performances of visiting lecturers and guest artists.

MUS 423 Performance Practices (2)
A study of the performing practices of music of earlier times. Content varies each semester. May be repeated a total of three times for credit with permission of instructor.
Prerequisite: Permission of instructor.

MUS 440 Piano Master Class (2)
Class study of piano literature for stylistic characteristics and technical considerations for proper performance.
Prerequisite: Permission of instructor.

MUS 490 Introduction to Music Bibliography (2 or 4)
An introduction to basic research materials and methods in musicology primarily for the music history and literature major.
Prerequisite: MUS 320 and a 400-level theory course.

MUS 491 Directed Research in Music History (4)
Directed individual reading and research for advanced music history majors.
Prerequisite: MUS 321, 322, and a 400-level theory course.

MUSIC EDUCATION

MUS 149 Music as an Art and as an Elementary School Subject (5)
Introduction to the techniques of listening to music and of teaching music in the elementary school. Begins at a level for the student lacking previous musical experience.

MUS 230 Studies in Choral Music (1, 2, or 3)
Seminar, independent study, and performance of choral music including vocal production techniques, performance practices, and historical foundations. Offered summer session.

MUS 231 Studies in Orchestral Music (1 or 2)
Seminars, independent study, and performance of orchestral music, including study of performance practices, theory, history, and chamber music of various periods. Offered summer session.

MUS 232 Studies in Piano Performance and Literature (2 or 3)
Master class in performance of selected piano works including historical performance practices, and technical considerations. Offered summer session.

MUS 233 Studies in Musical Expression through Movement (2 or 3)
Seminars in music theory and composition and in various forms of movement which express sound. Eurythmics and chironomy are studied as well as standard dance forms. Offered summer session.

MUS 380 Instrumental Methods (Strings) (2)
Provides the teacher with basic facilities and pedagogical techniques for the string family. Offered in alternate years.

MUS 383 Instrumental Wind Methods (2)
Provides the teacher with basic facilities and pedagogical techniques for the woodwind, brass, and percussion families. Offered in alternate years.

MUS 395 Conducting (4)
Basic techniques of conducting, including instrumental and choral. Participants elect to emphasize either instrumental or choral technique and will be assigned at least one hour per week as assistants in university performing groups or public school ensembles.
Prerequisite: MUT 212 and a 300-level theory course.

MUS 401 Teaching Music in Elementary Schools (4)
Organization and content of the general vocal music class in kindergarten through sixth grade. The development of musicality in the child. Emphasis on teaching music reading and ear training to young children.
Prerequisite: MUT 211 and a 300-level theory course.

MUS 402 Teaching Music in Secondary Schools (2)
The content and organization of the complete secondary school curriculum and the role music assumes in it. Selection of appropriate repertoire and development of the school music library.
Prerequisite: MUT 211 and a 300-level theory course.

MUS 403 Conducting Choral Music in Secondary Schools (2)
The organization and conducting of choral music in junior and senior high schools. The development of the adolescent and young adult voice.
Prerequisite: MUT 211 and a 300-level theory course.

MUS 404 Conducting Instrumental Music in Secondary Schools (2)
The organization and conducting of instrumental music in junior and senior high schools. Repertoire, materials, and techniques.
Prerequisite: MUT 211 and a 300-level theory course.

MUS 441-442 Music Pedagogy (4 each)
Principles of music instruction for the studio teacher. The first semester will be devoted to a survey of the field and to observation. The second semester will be devoted to supervised teaching.

MUS 445 Music Criticism (4)
A study of the techniques of evaluating musical performances and making appropriate verbal and written comments. Includes techniques of writing program notes.

MUS 480 Advanced Studies in Choral Conducting and Literature (1, 2, 3, or 4)
Independent and seminar work in advanced choral conducting. Emphasis is on interpretation of choral literature through research. Opportunities are provided for conducting experience in choral lab groups. Offered summer session.
Prerequisite: Choral conducting experience and one music history class.

MUS 481 Advanced Studies in Orchestral Conducting and Literature (1, 2, or 3)
Independent and seminar work in advanced orchestral conducting. Emphasis is on interpretation of orchestral literature through research. Opportunities are provided for conducting experience in a laboratory orchestra. Offered summer session.
Prerequisite: Conducting experience, music theory.

MUS 494 Directed Research in Music Education (2 or 4)
Directed individual reading and research in technology of, innovation in, and psychology of music instruction.
Prerequisite: Two courses from MUS 401, 402, 403, and 404.

MUS 496 Innovations in Music Instruction (2, 3, or 4)
Innovative patterns of music instruction. Materials, methods, and curricula appropriate to changing demands made on the public school music teachers. Offered summer session.
Prerequisite: Permission of instructor.

MUS 499 Special Topics in Music (1, 2, 3, or 4)
Current topics and issues in music performance and literature.
Prerequisite: Permission of instructor.

INDEPENDENT STUDY

MUS 295 Independent Study (1, 2, or 4)
Normally for freshmen and sophomores.
Prerequisite: Permission of department.

MUS 296 Problems in Applied Music (2)
Independent study in technique and literature of the student's major performing area. Graded S/N.
Prerequisite: Permission of department chairperson.

MUS 495 Independent Study (1, 2, or 4)
Normally for juniors and seniors.
Prerequisite: Permission of department.

MUS 497 Apprentice College Teaching (2)
Supervised participation in teaching an undergraduate course in music, together with discussion of teaching methods and objectives.
Prerequisite: Permission of department.

DEPARTMENT OF THEATRE AND DANCE

CHAIRPERSON: *David Stevens*

ADJUNCT PROFESSOR: *Terence E. Kilburn*

ASSOCIATE PROFESSORS: *Adeline Hirschfeld-Medalia, David Stevens*

ADJUNCT ASSOCIATE PROFESSOR: *Jerry Dahlmann*

ASSISTANT PROFESSORS: *Kimberly Sue Ater, James A. Hatfield*

ADJUNCT ASSISTANT PROFESSOR: *Thomas A. Aston*

SPECIAL INSTRUCTOR: *Carol Halsted*

LECTURERS: *Jacqueline M. Ammond, Shannon Jenkins, Philip McPhee, Judith D. Molina, Cornelia Sampson*

The Department of Theatre and Dance offers a minor in the theatre and a minor in dance. Courses are available in all aspects of both disciplines, including acting and directing, technical theatre, ballet, modern dance, jazz dance, and the history, literature, and theory of both theatre and dance. Students are served through basic courses in both disciplines and through courses specifically designed for general education. In addition, public performance programs in both disciplines are available for all students with interest and ability.

Requirements for the Liberal Arts Minor in Theatre

Twenty credits in theatre, distributed as follows:
1. 12 credits: THA 261, 267, and 363
2. 4 credits: THA 268 or 269
3. 4 credits: THA 450 or 462

Requirements for the Liberal Arts Minor in Dance

Twenty credits in dance, distributed as follows:
1. 12 credits: DAN 173, 376, and 372 or 373
2. 8 credits from all other dance courses.

COURSE OFFERINGS IN THEATRE

THA 100 Introduction to Theatre (4)
Theatre as an art form. Topics include acting, directing, design, dramatic literature, theatre history, theory, and criticism. Students will view selected plays.

THA 200 Topics in Theatre Arts (4)
Topics and problems, selected by the instructor, as temporary or experimental additions to the curriculum.

THA 213 Mime (4)
Introduction to the art of gesture and movement. Classical and traditional forms are explored, emphasizing active involvement in mime.

THA 230 Voice and Articulation (4)
Theory and application in voice, articulation, and pronunciation.

THA 261 Technical Laboratory (4)
Survey of techniques of scenery and costume construction and lighting, including proper use of tools and hardware in these three areas. Sixty hours of work on a major production are required.

THA 267 Fundamentals of Acting (4)
An introduction to the basic skills and knowledge required to perform a role in a stage production.

THA 268 Theatre History I (4)
History of the Western theatre from its primitive origins through the Renaissance, including dramatists, stages, productions, and acting. A few representative plays will be read.

THA 269 Theatre History II (4)
Continuation of THA 268 to the present. Includes a brief look at the theatre of the Orient. A few representative plays will be read.

THA 346 Non-Western Theatre and Dramatic Literature (4)
Identical with LIT 346.

THA 350 Oral Interpretation (4)
Oral expression of literature—prose, poetry, and drama—based on intellectual, emotional, and aesthetic analysis.

THA 362 Technical Design Laboratory (4)
Basic drafting and rendering for stage and costume will be covered as well as development of lighting plots. Twenty hours of work on a major production are required.
Prerequisite: THA 261.

THA 363 Practicum in Rehearsal and Performance (2)
Participation in a student production supervised by a faculty member. Students will maintain a running log, keeping track of their time and continuously evaluating their experiences. Credit is available for on-stage and backstage work. May be repeated for a total of 12 credits.

THA 365 Introduction to Makeup (4)
Theory and practice in theatre makeup.

THA 366 Introduction to Costuming (4)
Theory and practice in theatre costuming.

THA 368 Characterization (4)
Continuation of work on voice, body and concentration. Scene study focusing on the requirements of realistic acting.
Prerequisite: THA 230, THA 267.

THA 420 Improvisation and Theatre Games (4)
Group interaction such as improvisation, simulation, role-playing, sociodrama, creative dramatics, story and readers theatre, and educational games. Includes application of these techniques for group leadership, teaching, and theatre performance.
Prerequisite: THA 267.

THA 430 Advanced Voice and Articulation (4)
Advanced work on voice and articulation with emphasis on vocal requirements of the stage, film, and broadcasting performer. Some work on dialects and accents.
Prerequisite: THA 230 or permission of instructor.

THA 450 Directing Mini-Theatre Forms (4)
Direction and performance in theatre styles requiring minimal sets and appropriate for dinner

theatre, touring shows, special occasions, etc. Includes forms such as: story theatre, chamber theatre, readers theatre, documentary theatre, and media theatre.
Prerequisite: THA 267, 350, or equivalent.

THA 460 Theatre Management for School and Community (4)
Theory and practice in theatre organization and management. Includes publicity and promotion, box office procedures, production budgeting and auditing, house management, play selection, and production organization.
Prerequisite: Junior standing and two THA courses.

THA 462 Directing (4)
Theory and practice in play directing. Includes intensive work on interpretation of the playscript, casting, staging, rehearsal techniques, supervision of technical staff, and directing experience.
Prerequisite: THA 261, 267, and 363.

THA 464 Costume Design (4)
Introduction to costume history, drafting, cutting, and construction, as well as the technique of rendering.
Prerequisite:THA 261, 363, and 366.

THA 466 Advanced Stage Design (4)
The concepts of stage design, rendering, and drafting.
Prerequisite: THA 261, 362, and 363.

THA 467 Advanced Acting (4)
Continuation of work on body, voice and concentration. Focuses on the requirements of various acting and period styles.
Prerequisite: THA 230, THA 267, THA 368 and one course in dramatic literature or THA 268 or THA 269.

THA 480 Special Topics Seminar (4)
Group study of topics of special interest chosen by department faculty and students.
Prerequisite: Three theatre courses.

THA 490 Independent Study (2, 4, or 8)
Special research projects in theatre.
Prerequisite: Three theatre courses and permission of instructor.

THA 491 Internship (4, 8, or 12)
Experience working with professionals in a variety of performing arts settings.
Prerequisite: Three theatre courses and permission of supervising faculty.

THA 497 Apprentice College Teaching (4)
Assisting in teaching an undergraduate course in theatre, and discussions with the supervising faculty member on the principles, methods, and problems of such teaching.
Prerequisite: Junior standing and permission of instructor.

COURSE OFFERINGS IN DANCE

DAN 100 Ballet I (2)
DAN 101 Ballet II (2)
DAN 200 Ballet III (2)
DAN 201 Ballet IV (2)
DAN 300 Ballet V (2)
DAN 301 Ballet VI (2)
DAN 400 Ballet VII (2)
DAN 401 Ballet VIII (2)
Covers the technique of classical ballet in an eight-semester progression. The technique, style, aesthetic interpretation, and historical significance are presented in theory and practice.

DAN 402 Advanced Ballet: Partnering (2)
DAN 403 Advanced Ballet: Pointe and Variation (2)
Taken by ballet majors in conjunction with DAN 400 and 401.

DAN 110 Modern Dance I (2)
DAN 111 Modern Dance II (2)

DAN 210 Modern Dance III (2)
DAN 211 Modern Dance IV (2)
DAN 310 Modern Dance V (2)
DAN 311 Modern Dance VI (2)
DAN 410 Modern Dance VII (2)
DAN 411 Modern Dance VIII (2)
Covers the technique of modern dance in an eight-semester progression. The technique, style, and aesthetic interpretation are presented in theory and practice.

DAN 120 Jazz Dance I (2)
DAN 121 Jazz Dance II (2)
DAN 220 Jazz Dance III (2)
DAN 320 Jazz Dance IV (2)
DAN 420 Jazz Studies: Tap I (2)
DAN 421 Jazz Studies: Tap II (2)
Covers the technique of jazz dance in a six-semester progression. The technique, style, and musical relationships are presented in theory and practice.

DAN 150 Ballroom Dance (2)
Theory and technique of ballroom dance from 1900 to the present.

DAN 151 Folk and Square Dance (2)
Theory and technique of folk and square dance.

DAN 173 Dance History and Appreciation (4)
A historical survey of the development of theatre dance in Western culture. Course materials presented through lecture, discussion, films, slides, and viewing of live dance performances.

DAN 250 Primitive Dance I (2)
The study of primitive technique as devised by Katherine Dunham. Integration of African rhythmic dance and Afro-American dance style defines this popular dance form.

DAN 299 Dance Workshop (1 to 4)
A workshop designed to give students opportunities for participation in a variety of dance experiences led by performing artists. Normally offered in the spring and summer. Graded S/N.

DAN 330 Kinesiology for the Dancer (4)
Analysis of movement from an anatomical and mechanical point of view with emphasis on problems of dance technique. Also includes prevention and treatment of dance-related injuries.
Prerequisite: three dance courses.

DAN 350 Creative Dance for Children (4)
Methods and styles of teaching dance to children within schools, community centers, and private studios.
Prerequisite: one dance course.

DAN 351 Children's Dance Theatre: Rehearsal and Performance (4)
Choreography, rehearsal, and performance of a dance program for children that tours local elementary schools.
Prerequisite: permission of instructor.

DAN 372 Choreography I (4)
Theory of dance composition through reading, discussion, observation, and experimentation.
Prerequisite: One full year of dance.

DAN 373 Dance for the Musical Theatre (4)
A practical and theoretical survey of dance within musical theatre from 1900 to the present. Class material presented through actual participation with some discussion of the period and style of dance.
Prerequisite: One dance course.

DAN 376 Practicum: Dance Rehearsal and Performance (2 or 4)
A technique- and performance-based laboratory course. Each student will participate in a dance performance during the semester, either as a performer or a choreographer. Four credits are given for performance and choreography and 2 credits for performance only. May be

repeated for a maximum of 8 credits.
Prerequisite: Permission of instructor.

DAN 390 Historical Dance (2)
The study of Baroque, Renaissance, and nineteenth century social dance styles. Course includes practical, theoretical, and historical background.

DAN 470 Elementary Labanotation (4)
An introduction to Laban's system of movement notation.
Prerequisite: 12 credits in dance, including DAN 173.

DAN 472 Choreography II (4)
Continuation of DAN 372 at a more advanced level.
Prerequisite: DAN 372.

DAN 480 Senior Recital (2)
A dance program choreographed and performed by a student in the final year of dance study.
Prerequisites: senior standing, 24 credits in dance including DAN 173, 372, 376, and permission of instructor.

DAN 490 Independent Study (1, 2, or 4)
Permission of instructor. Graded S/N.

DAN 497 Apprentice College Teaching (2 or 4)
Supervised participation in teaching an undergraduate course in dance, together with discussion of teaching methods and objectives.
Prerequisite: Permission of instructor.

SCHOOL OF ECONOMICS AND MANAGEMENT

OFFICE OF THE DEAN
Ronald M. Horwitz, Dean
John E. Tower, Associate Dean
Kathleen G. Clark, Academic Adviser
Timothy W. Smith, Assistant to the Dean

AREA HEADS: *Daniel N. Braunstein (Organizational Behavior, Management, and Marketing),David P. Doane (Economics, Management Information Systems, and Quantitative Methods), David D. Sidaway (Accounting and Finance)*

PROFESSORS: *Eleftherios N. Botsas, Daniel N. Braunstein, Joseph E. Champagne, Karl D. Gregory, Ronald M. Horwitz, Robbin R. Hough, Sid Mittra*

ASSOCIATE PROFESSORS: *David P. Doane, Alice C. Gorlin, Oded Izraeli, Ravi Parameswaran, Alan Reinstein, Martha R. Seger, Miron Stano, John E. Tower*

ASSISTANT PROFESSORS: *Zewdineh Assefa, Lizabeth A. Barclay, Augustine K. Fosu, Paul O. Kingstrom, James E. Mallett, Thomas R. McCarthy, Scott A. Monroe, Gerald V. Post, Howard S. Schwartz, Leonard C. Schwartz, Teri M. Spinelli, Ronald L. Tracy*

INSTRUCTORS: *Elizabeth A. Frederick, Laura A. Stern*

SPECIAL INSTRUCTOR: *David D. Sidaway*

ADJUNCT PROFESSORS: *Paul F. Lorenz, Theodore O. Yntema*

VISITING ASSISTANT PROFESSOR: *Satnarine Heeralall*

VISITING INSTRUCTORS: *Frank P. Cardimen, Steven A. Dickson, Duncan J. Kretovich, Susan E. Moeller, Deborah P. Paruch*

LECTURERS: *Paul Banas, Howard Carlson, David W. Essig, Robert J. Forbes, Richard Heckman, Gary Lorenz, David Medved, Matthew Mendrygal, Douglas R. Munro, Dennis M. Polak, Richard Rappleye, Robert H. Schappe, Thomas Williams, Alan D. Woodell, Gregory Zegarowski*

BOARD OF VISITORS

Recognizing the need for a direct link between the industrial community and the School of Economics and Management, the school established a Board of Visitors in the fall of 1979. The board is comprised of outstanding corporate and professional leaders from the greater Detroit metropolitan area. Board members have been assisting the faculty of the school on several projects and providing consultation on goals and objectives, curricula designs, and research programs.

The members of the board are:

Mr. F. James McDonald, President, General Motors Corporation (Chairman, Board of Visitors)
Mr. James A. Aliber, Chairman of the Board, First Federal Savings and Loan Association of Detroit
Mr. Edward E. Barker, Jr., former Chairman and Chief Executive Officer, Pontiac State Bank
Mr. William E. Giles, former Editor and Vice-President, The Detroit News
Mr. William R. James, Vice-President, Capital Cities Communications
Mr. Kenneth E. Myers, President, William Beaumont Hospital Corporation

Mr. Harold A. Poling, Executive Vice-President, Ford North American Automotive Operations, Ford Motor Company
Mr. Robert H. Robinson, Office Managing Partner, Arthur Young & Company
Mr. Thatcher Root, President, Manley, Bennett, McDonald & Company
Mr. Alan E. Schwartz, Senior Partner, Honigman, Miller, Schwartz and Cohn

UNDERGRADUATE PROGRAMS

The School of Economics and Management offers undergraduate programs for persons interested in obtaining the skills and information necessary for the management of profit-making businesses, not-for-profit enterprises (e.g., health care institutions, educational institutions, cooperative societies), and governmental units. The programs include:

Bachelor of Arts with a major in economics (in cooperation with the College of Arts and Sciences, see page 69 for a description of this program)
Bachelor of Science with a major in economics
Bachelor of Science with majors in:

Accounting	International Management
Finance	Management Information Systems
General Management	Marketing
Human Resource Management	Quantitative Methods

Minors (For students earning degrees in other schools and colleges of the university):

Accounting	International Economics
Economics	Management
Finance	Quantitative Methods

THE MASTER OF BUSINESS ADMINISTRATION

For superior undergraduate students in any major, the School of Economics and Management offers the Master of Business Administration (M.B.A.) degree. The M.B.A. is a two-year professional program in management designed for the student who did not major in business or management. Undergraduate management or business majors may be admitted to the M.B.A. program.

For Oakland University undergraduates still working on a major other than one of the management areas, there is the possibility of obtaining both the undergraduate degree and the M.B.A. in an accelerated program. To be eligible, students should have a grade point average in the top 15% of their major. Students should apply for the accelerated program after they have earned a total of 80 credits (see the *Oakland University Graduate Study Catalog*).

COOPERATIVE EDUCATION

Students in the School of Economics and Management who are interested in combining relevant work experience with their college education are encouraged to participate in the university's cooperative education program. A student in the cooperative education program alternates at least two four-month periods of paid, full-time work experience with four-month periods of full-time classwork. Work placements provide jobs that are similar to those which our graduates would hold in business, nonprofit, and governmental organizations. The school, on occasion, also has unpaid internships which provide work experience.

AWARDS AND HONORS

In addition to being eligible for the honors available to all Oakland University undergraduates, majors in the School of Economics and Management are eligible for the following awards and honors:

American Marketing Award: Each year the American Marketing Association, in cooperation with the Detroit Chapter, awards certificates of achievement for scholarship and service to two marketing majors.

Financial Executives Institute Award: This award is presented annually to the undergraduate student majoring in accounting or finance who has demonstrated the highest standard of academic excellence. The student is honored at a meeting of the Detroit Chapter of the Financial Executives Institute. The selection is made by the accounting and finance faculty of the school.

Ernst and Whinney Award: Each year the junior accounting student who has demonstrated the greatest academic and leadership potential is selected by the accounting faculty to receive a cash award from the international accounting firm of Ernst & Whinney. The student is honored at a meeting of accounting students hosted by Ernst & Whinney.

Omicron Delta Epsilon: Omicron Delta Epsilon is a national honors society for promising economics students. Selection for membership is made by the economics faculty.

Ross Roy Inc. Award: Annually, Ross Roy Inc. Advertising Co. awards a certificate to the marketing student who has demonstrated the most outstanding achievement in the field of advertising and promotional strategy.

Wall Street Journal Student Achievement Award: This award is presented annually to the graduating senior who has demonstrated the greatest academic and leadership achievement in the school. The selection is made by the faculty.

School Honors are awarded by the School of Economics and Management to students with a minimum grade point average of 3.33 in courses taken from the School of Economics and Management.

REQUIREMENTS FOR THE BACHELOR OF SCIENCE DEGREE

The curriculum described below is effective for students entering the university in the 1983-84 academic year. Students enrolled prior to fall 1983 may opt to satisfy either the degree requirements of this catalog or of the catalog of the academic year in which they entered Oakland University, provided that such catalog is not more than six years old at the time of their graduation. Students who transfer to a major in the School of Economics and Management or who are readmitted to Oakland University will be required to follow the requirements of the catalog in force at the time they transfer or are readmitted. As a check on their preparation for graduation, students are encouraged to have a final program audit with the school's academic adviser the semester before the semester in which they plan to graduate. The responsibility for meeting the graduation requirements rests with the student.

The requirements of the university and the School of Economics and Management to obtain the Bachelor of Science degree are listed below.

I. General Requirements:

To earn the Bachelor of Science degree students must:

A. Complete at least 128 credits;
B. Complete at least 32 credits at Oakland University of which at least 16 credits must be in courses offered by the School of Economics and Management;
C. Complete at least 32 credits at the 300 level or above;
D. Take at Oakland University the last 8 credits needed to complete the baccalaureate requirements;
E. Earn a cumulative grade point average of at least 2.00 in courses taken at Oakland University and in courses taken in the School of Economics and Management;

F. Obtain certification of writing proficiency as described on page 23 of this catalog;
G. Be admitted to major standing in the major of the student's choice;
H. Complete the requirements for one of the majors in the School of Economics and Management;
I. Be in substantial compliance with all legal curricular requirements.

II. The General Education Requirement

Each school or college of the university establishes its own general education requirements. To earn the Bachelor of Science degree from the School of Economics and Management, students may satisfy the general education requirement by either fulfilling the general education requirement of the Honors College, or by taking 28 credits (36 credits for the Bachelor of Science in economics) distributed as follows:

1. One course from each of the following distribution fields:
   Area Studies
   Arts (art history, cinema studies, dance, music, studio art, theatre)
   History, Philosophy, and Religion
   Literature (English literature or literature in translation)
   Natural Science (biology, chemistry, environmental science, or physics)
   The courses listed in the distribution fields of the College of Arts and Sciences section of this catalog provide a guide to the courses available. Students may choose other courses, for which they have the prerequisites, from the required fields.
2. Two courses in one social science (a 100-level introductory course and a 200-level or higher course) or three courses in different social sciences other than economics. The social science fields available are anthropology, political science, psychology, and sociology (AN, PS, PSY, and SOC).
3. For economics majors only—two courses in the language and thought field as described in the distribution fields of the College of Arts and Sciences.

THE MANAGEMENT PROGRAM

The management program enables graduates to combine an in-depth study of one of the functional areas of business with a broader background in management. This combination will allow the graduate to understand and manage changing situations in either profit-oriented enterprises or in not-for-profit organizations, both public and private. In this program, a general education is combined with the development of rigorous analytical training which will enable the student to find new answers to the increasingly complex and changing problems faced by managers.

The management program offers the student the opportunity to major in general management or in a functional area of management: accounting, finance, human resources management, international management, marketing, management information systems, or quantitative methods. In addition to the majors in management listed above, the school offers a Bachelor of Science in economics. This economics program will be detailed after the descriptions of the management majors.

The individual major programs will be detailed below after a discussion of the precore and core program common to all the management majors.

Management Precore Program

As preparation for the various majors in the business management program, students must successfully complete a minimum of 56 credits in writing, general education, mathematics, computer science, economics, accounting, and statistics courses.

The required precore courses are:

		Credits
1. English Composition:		
RHT 100-101	or complete the writing proficiency requirement in another manner	0-8
2. Mathematics:		
MTH 102/103	College Algebra (if required)	0-4
MTH 121 and	Linear Programming, Elementary Functions	
MTH 122 or	Calculus for the Social Sciences	
MTH 154-155	Calculus	8
3. Computer Science:		
CIS 122, 123 or	BASIC Programming	
CIS 130	Introduction to Computer Science I (Pascal)	4
4. Economics:		
ECN 200 and	Principles of Macroeconomics	
ECN 201 or	Principles of Microeconomics	
ECN 210	Principles of Economics (a six-credit course that covers the material of both ECN 200 and ECN 201)	6-8
5. Accounting:		
ACC 200	Introductory Financial Accounting	4
ACC 210	Managerial and Cost Accounting I	4
6. Statistics:		
QMM 250	Statistical Methods	6
Total Credits		32-46

Suggested Program for the Management Precore

The following should be viewed as an example of an acceptable sequence of courses for the precore program.

Freshman Year:

First Semester	Credits	Second Semester	Credits
RHT 100	4	RHT 101	4
MTH 121 (MTH 102-103 if necessary)	4	MTH 122 (or MTH 121)	4
Social science course (100-level)	4	CIS 122, 123 or 130	4
History/philosophy course	4	Natural science course	4
	16/16		16/32

Sophomore Year:

ECN 200 (or ECN 210)	4	ECN 201 (or a literature course if ECN 210 taken)	4
ACC 200	4	ACC 210	4
Arts course	4	QMM 250	6
Social science course (200 level or above or MTH 122)	4	Area studies course	4
	16/48		18/66

Admission to Management Major Standing

To be eligible to take 400-level courses in the core of the management program or in their major, students must be admitted to major standing in their major. Admission to the management major programs is selective. The minimum requirements for consideration for admission to the management major programs are as follows:

1. Applicant's admissibility to, and retention in, the university.
2. Completion of the writing proficiency requirement.
3. A minimum cumulative grade point average of 2.50 or above in all of the

courses taken in the precore period at Oakland University and at all previous colleges.

4. A minimum grade of 2.0 in each of the following precore courses: MTH 121-122, CIS 122, 123 or 130, ECN 200-201 (or ECN 210), ACC 200, ACC 210, and QMM 250, or their equivalents.
5. Submission of an "Application for Major Standing" for the desired major during the semester in which the student expects to complete the precore requirements.

Students who are denied admission to major standing may try to remedy the deficiencies in their records and reapply, but they cannot take any 400-level courses until they are admitted to major standing in the school. It is university policy that courses can only be repeated twice.

Management Core Program

Each of the major programs in management requires the completion of a common core of courses which introduce students to the functional areas of business. The core courses required in all management major programs are:

		Credits
1. Composition Course:		
ENG 382	Business and Technical Writing (or ENG 380)	4
2. Management Core Courses:		
ECN 301	Intermediate Microeconomics	4
ORG 330	Organizational Behavior I	4
ORG 331	Organizational Behavior II	4
FIN 322	Managerial Finance I	4
MKT 302	Marketing	4
MGT 435	Management Strategies and Policies	4
QMM 443 or	Operations Management	
QMM 440	Management Science	4
		32

MGT 435 is a course that integrates the material in the core program and can only be taken after students have completed the rest of the core program.

Students complete their Bachelor of Science program by taking 16 additional credits or more, as specified in one of the majors in the management program. The available majors are detailed below. The courses in general education, the precore, the business management core, and the major along with any general electives needed to raise the total credits to 128, constitute the program for the Bachelor of Science degree.

Major in Accounting

Major Adviser: *David D. Sidaway*

The major in accounting prepares students for an accounting or auditing career in the public or private sector of profit-oriented and not-for-profit enterprises.

To obtain an accounting major the student must be admitted to major standing in accounting, complete the core program, and complete the 28 credits specified below with a grade of 2.0 or better in each course.

		Credits
Precore courses in accounting:		
ACC 200	Introductory Financial Accounting	4
ACC 210	Managerial and Cost Accounting I	4
Major courses in accounting:		
ACC 311	Intermediate Financial Accounting	4

ACC 312	Advanced Financial Accounting	4

Accounting electives—12 credits from the following:

ACC 410	Managerial and Cost Accounting II	
ACC 411	Auditing	
ACC 412	Government and Not-for-Profit Accounting	
ACC 413	Regulatory Agencies and the Accounting Profession	
ACC 414	Accounting Theory	
ACC 415	Tax Accounting	
ACC 416	Contemporary Issues in Accounting	
ACC 418	Computer-Based Accounting Systems	
ACC 420	Advanced Auditing Topics	
ACC 421	Advanced Tax Topics	
FIN 419	International Accounting and Financial Management	12
		28

Because of their specific requirements students who plan to take a professional accounting examination (CPA, CMA, or CIA) should discuss their course selection with an accounting faculty member before enrolling in a 400-level accounting course.

Note: Fifth Year Option—Although it is not required, it is suggested that students planning to take the Certified Public Accounting (CPA) examination should consider taking an additional year of 32 credits of study in accounting as recommended by the American Institute of Certified Public Accountants. During this fifth year the student should take the following 32 credits in addition to the courses required for the four-year accounting major: 20 credits of 400-level accounting courses; Managerial Finance II (FIN 422); Business Law (MGT 424); an additional quantitative methods course.

Major in Finance

Major Adviser: *Karl D. Gregory*

The major in finance develops the specific skills, modes of analysis, and institutional information useful in working in the accounting and finance areas of a profit-making business or a not-for-profit enterprise.

To obtain the major in finance, a student must: be admitted to major standing in finance; complete the core program; and complete the 24 credits specified below with a grade of 2.0 or better in each course:

		Credits
Core course in finance:		
FIN 322	Managerial Finance I	4
Major courses in finance:		
ACC 311	Intermediate Financial Accounting	4
ECN 321	Money, Credit, and the Economy	4
FIN 421	Investment Analysis	4
FIN 422	Managerial Finance II	4

Finance elective—one course from the following:

ACC 312	Advanced Financial Accounting	
ACC 410	Managerial and Cost Accounting II	
ACC 415	Tax Accounting	
ECN 356	Public Finance	
ECN 373	International Trade and Finance	
FIN 419	International Accounting and Financial Management	4
		24

Major in Human Resources Management

Major Adviser: *Daniel N. Braunstein*

The major in human resources management develops the requisite skills to administer the various personnel functions in organizations. It is primarily for students who intend to pursue careers where the management of people at work is a central concern (e.g., administration, personnel management, and labor relations). Emphasis is on acquiring an in-depth understanding of the tools and techniques used in the acquisition, development, and utilization of an organization's human resources. The program includes broad coverage of such topics as personnel psychology, personnel administration, and labor-management relations, in addition to a basic knowledge of organizational behavior.

To obtain the major in human resources management, a student must: be admitted to major standing in human resources management; complete the core program; and complete the 28 credits specified below with a grade of 2.0 or better in each course.

		Credits
Core courses in human resources management:		
ORG 330	Organizational Behavior I	4
ORG 331	Organizational Behavior II	4
Major courses in human resources management:		
MGT 433	Labor-Management Relations	4
ORG 434	Management of Human Resources	4
ORG 430	Organizational Research Methods	4
Human Resources electives—two courses from the following:		
ORG 431	Leadership and Group Performance	
ORG 432	Motivation and Work Behavior	
ORG 436	Decision-Making in Organizations	
ORG 437	Job Design	
ORG 438	Men and Women at Work	
ECN 468	Labor Economics	8
		28

Major in International Management

Major Adviser: *Eleftherios N. Botsas*

The major in international management develops the skills necessary for a manager to analyze management problems in diverse economic, political, social, legal, and market environments. Different accounting methods, exchange rates, regulatory systems, market structures, and the way they affect the behavior and profitability of firms are covered.

Proficiency in a foreign language is not required, but highly recommended.

To obtain the major in international management, the student must: be admitted to major standing in international management; complete the core program; and complete the 20 credits specified below with a grade of 2.0 or better in each course.

		Credits
Major courses in international management:		
ECN 373	International Trade and Finance	4
FIN 419	International Accounting and Financial Management	4
MKT 450	International Marketing	4
MGT 423	The Multinational Firm	4
International management electives—one course from the following:		
ECN 326	Economic Development	
ECN 341	The Soviet Economy	
ECN 350	Comparative Economic Systems	4
		20

Major in General Management

Major Adviser: *Daniel N. Braunstein*

The general management major allows the student to take advanced work in several of the functional areas of management. A student may not double major in general management and another major in the School of Economics and Management.

To obtain the major in general management, a student must: be admitted to major standing in general management; complete the core program; and complete any 16 credits in electives from the School of Economics and Management (ACC, ECN, FIN, MGT, MIS, MKT, ORG, or QMM) with a 2.0 or better in each course. These electives must be chosen from courses numbered 300 or higher and at least 8 credits must be at the 400-level. No more than 4 credits of independent study (490 courses) may be used to meet the major elective requirement.

Major in Management Information Systems

Major Adviser: *David P. Doane*

The major in management information systems specifies a set of courses that will provide more facility with computer languages, the use of computers in handling information processing in organizations, and the use of computers in management decision making.

To obtain the major in management information systems, a student must: be admitted to major standing in management information systems; complete the core program; and complete the 24 credits specified below with a grade of 2.0 or better in each course.

		Credits
Precore course in management information systems:		
CIS 130	Introduction to Computer Science I (Pascal—instead of CIS 122 or 123)	
Major courses in management information systems:		
CIS 220	Computer-Based Information Systems I (COBOL)	4
CIS 131	Introduction to Computer Science II (PL/1)	4
MIS 307	Management Information Systems	4
MIS electives—two courses, at least one of which is a 400-level MIS course, from the following:		
CIS 221	Computer-Based Information Systems II	
CIS 280	Introduction to Computer Organization and Assembly Programming	
CIS 340	File Systems Design	
CIS 342	Introduction to Information Structures	
CIS 445	Database Systems	
MIS 316	Systems Analysis	
MIS 400	Analysis of Complex Systems	
MIS 407	Computer Systems for Problem Solving	
MIS 444	Simulation in Management	
ACC 418	Computer-Based Accounting Systems	
QMM 452	Forecasting	8
		24

Major in Marketing

Major Adviser: *Ravi Parameswaran*

The major in marketing develops the specific skills, modes of analysis, and institutional information useful in working in the marketing area of a profit-making business or not-for-profit enterprise.

To obtain the major in marketing, a student must: be admitted to major standing in marketing; complete the core program; and complete the 24 credits specified below with a grade of 2.00 or better in each course.

		Credits
Core course in marketing:		
MKT 302	Marketing	4
Major courses in marketing:		
MKT 353	Marketing Management	4
MKT 404	Consumer Behavior	4
MKT 405	Marketing Research	4
Marketing electives—two courses from the following:		
MKT 406	Promotional Strategy	
MKT 420	Distribution Channels Management	
MKT 430	Sales Management/Sales Promotion	
MKT 450	International Marketing	
MKT 480	Seminar in Marketing	8
		24

Major in Quantitative Methods

Major Adviser: *David P. Doane*

The major in quantitative methods further develops the student's skills in statistics, computer analysis, and production management. The objective of this program is to provide the student with the extra technical abilities needed to cope with the rapidly changing technology facing business today. This program will prepare students for a range of entry-level positions in businesses or not-for-profit organizations that require statistical and quantitative skills.

To obtain the major in quantitative methods the student must: be admitted to major standing in quantitative methods; complete the core program; and complete the 30 credits specified below with a grade of 2.0 or better in each course.

		Credits
Precore courses in quantitative methods:		
CIS 130	Introduction to Computer Science I (Pascal—instead of CIS 122 or 123)	4
QMM 250	Statistical Methods	6
Core (course in quantitative methods)—choice of one of the following:		
QMM 443	Operations Management	
QMM 440	Management Science	4
Major courses in quantitative methods:		
CIS 131	Introduction to Computer Science II (PL/1)	4
Choice of one of the following:		
ECN 405	Econometrics	
QMM 452	Forecasting	4
Quantitative methods electives—two courses from QMM not previously taken or from:		
QMM 308	Project Management Techniques	
MIS 444	Simulation in Management	
STA 323	Design of Experiments	
STA 324	Data Analysis	
SOC 403	Computer Packages in Social Science	
MOR 342	Introduction to Operations Research	
MOR 346	Stochastic Models in Operations Research	8
		30

BACHELOR OF SCIENCE WITH A MAJOR IN ECONOMICS

Major Adviser: *David P. Doane*

The curriculum for the major in economics combines the concepts and tools of economic analysis, a broad general education, and courses in other areas of interest to the student. The student learns how economic analysis can be applied to major problems facing individuals, businesses, the nation, and the world today.

An education in economics is excellent preparation for entry into law schools, graduate schools of public administration or management, or a Master of Business Administration (M.B.A.) program. Economics is a flexible choice for the student seeking a rigorous, well-respected, and relevant major without specializing in a narrowly defined area. To be employed as a professional economist or to teach economics, a student normally will need to proceed to graduate school and obtain at least a master's degree in economics and preferably a doctorate.

The bachelor of science degree offers a more quantitative approach to economics than the bachelor of arts major in economics described in the College of Arts and Sciences.

Requirements for the Bachelor of Science with a Major in Economics

		Credits
1. English Composition:		
RHT 100-101	Composition I-II or complete the writing proficiency in another manner.	0-8
ENG 382	Business and Technical Writing (or ENG 380)	4
2. General education as detailed for the Bachelor of Science degree by the School of Economics and Management, including eight credits in the language and thought field as described by the College of Arts and Sciences		36
3. To obtain a further background in mathematics, computers, accounting, finance, and quantitative methods, the economics major must complete the following cognate courses:		
MTH 102/103	College Algebra (if necessary)	0-4
MTH 121 and	Linear Programming, Elementary Functions	
MTH 122 or	Calculus for the Social Sciences	
MTH 154-155	Calculus	8
CIS 122 or 123	BASIC Programming	
or CIS 130	Introduction to Computer Science I (PASCAL)	4
ACC 200	Introductory Financial Accounting	4
QMM 250	Statistical Methods	6
FIN 322	Managerial Finance I	4
Quantitative methods course: choice of one of the following -		
MIS 444	Simulation in Management	
QMM 440	Management Science	
QMM 443	Operations Management	
QMM 452	Forecasting	4
4. The required core courses for the economics major are:		
ECN 210 or	Principles of Economics (a six-credit course that covers the material of both ECN 200 and ECN 201)	
ECN 200 and	Principles of Macroeconomics	
ECN 201	Principles of Microeconomics	6-8
ECN 301	Intermediate Microeconomics	4
ECN 302	Intermediate Macroeconomics	4

ECN 405	Econometrics	4
ECN 418	Seminar in Economic Policy	4
or ECN 480	Seminar in Economic Theory	

5. Economics Electives: The economics elective requirement is 16 additional credits in courses numbered ECN 300 or higher. Eight of these economics credits must be in courses numbered ECN 400 or higher. No more than four credits in ECN 490 may be counted as economics electives. 16
6. General electives 6-20

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Economics Precore Program

The following should be viewed as an example of an acceptable sequence of courses for the economics precore program.

First Semester		Second Semester	
Freshman Year:			
	Credits		Credits
RHT 100	4	RHT 101	4
MTH 121 (MTH 102-103 if necessary)	4	MTH 122 (or MTH 121)	4
Social science course (100-level)	4	Natural science course	4
History/philosophy course	4	CIS 122, 123, or 130	4
	16/16		16/32
Sophomore Year:			
ECN 210 (or ECN 200)	6	Language and Thought course (or ECN 201 if ECN 200 taken)	4
ACC 200	4	QMM 250	6
Arts course	4	Area studies course	4
Language and Thought course (or MTH 122)	4	Social science course	4
	18/50		18/68

Admission to Major Standing in Economics

Admission to major standing for the Bachelor of Science in economics requires:

1. Certification of writing proficiency.
2. Completion of the following courses, or their equivalents, with a grade of 2.0 or better in each course: MTH 121-122, CIS 122, 123 or 130, ECN 210 (or ECN 200-201), and QMM 250.
3. Completion of 56 credits or more with a cumulative overall grade point of 2.50 or better.
4. Approval of an "Application for Major Standing."

Admission to major standing in economics is required before a student may take 400-level courses and graduate.

Although ECN 301 and ECN 302 are not required for major standing, the major in economics must obtain a grade of 2.0 or better in both ECN 301 and ECN 302 to graduate.

MINORS FOR NON-MANAGEMENT STUDENTS

For students in majors outside of the School of Economics and Management who wish to combine their major with an introduction to the skills, analytical techniques, and institutional material of economics or one of the areas of business, the school offers the following minors. To obtain one of these minors, students must complete the courses in the minor with an average grade of 2.00 or better. Students from major programs outside the School of Economics and Management may take

300-level courses in the school if there is space after the school's majors have been accommodated.

All students who are not majors in the School of Economics and Management, whether they have applied for a minor or not, are limited to a maximum of 28 credits in business courses at Oakland University or at other schools, excluding the basic economics courses, i.e., they may not take a total of more than 28 credits in ACC, ECN, FIN, MGT, MIS, MKT, ORG, or QMM courses (excluding ECN 150, ECN 200-201, and ECN 210). Majors in the School of Economics and Management may not take any of the following minors. Students may take only one minor in the School of Economics and Management.

Transfer students are required to take 12 credits in the minor at Oakland University and at least 8 of the 12 credits at Oakland University must be in 300-level courses or higher.

Minor in Accounting

Coordinator: *David D. Sidaway*

The minor in accounting consists of the following 20 credits:

		Credits
ACC 200	Introductory Financial Accounting	4
ACC 210	Managerial and Cost Accounting I	4
Twelve additional credits in accounting (ACC) courses for which the student has the prerequisites		12
		20

Minor in Economics

Coordinator: *David P. Doane*

The minor in economics consists of a minimum of 18 credits as follows:

		Credits
ECN 150 or	Basic Economics	
ECN 210 or	Principles of Economics	
ECN 200 and	Principles of Macroeconomics	
ECN 201	Principles of Microeconomics	4-8
Twelve additional credits in economics (ECN) courses for which the student has met the prerequisites (16 additional credits if the student took ECN 150).		12-16
		18-20

Minor in Finance

Coordinator: *Karl D. Gregory*

The minor in finance consists of the following 22 credits and any prerequisites required to take these courses:

		Credits
ACC 200	Introductory Financial Accounting	4
QMM 250	Statistical Methods	6
FIN 322	Managerial Finance I	4
Eight additional credits of finance (FIN) courses.		8
		22

Minor in International Economics

Coordinator: *Eleftherios N. Botsas*

The minor in international economics consists of a minimum of 18 credits as follows:

		Credits
Second-year proficiency in a foreign language.		
ECN 210 or	Principles of Economics	
ECN 200* and	Principles of Macroeconomics	
ECN 201	Principles of Microeconomics	6-8
ECN 373	International Trade and Finance	4
MGT 423	The Multinational Firm	4
Choice of one of the following courses:		4
ECN 326	Economic Development	
ECN 341	The Soviet Economy	
ECN 350	Comparative Economic Systems	
		18-20

Minor in Management

Coordinator: *Leonard C. Schwartz*

The minor in management consists of a minimum of 22 credits as follows:

		Credits
ECN 210 or	Principles of Economics	
ECN 200* and	Principles of Macroeconomics	
ECN 201	Principles of Microeconomics	6-8
ACC 200	Introductory Financial Accounting	4
ORG 330	Organizational Behavior I	4
Eight additional credits of SEM 300- or 400-level electives (ACC, FIN, MGT, MIS, MKT, ORG, QMM courses) for which the student has the prerequisites.		8
		22-24

Minor in Quantitative Methods

Coordinator: *David P. Doane*

The minor in quantitative methods consists of a minimum of 20 credits as follows:

	Credits
Statistics course (QMM 250, STA 226, or SYS 317)	4-6
Eight additional credits of quantitative methods (QMM) courses	8
Eight additional credits of quantitative methods or management information systems (QMM, MOR, MIS, or STA) courses.	8
	20-22

*ECN 150 can be substituted for ECM 200 in the minors

COURSE OFFERINGS

The following are the descriptions of required and elective courses offered in the past three years by the School of Economics and Management. The required precore and core courses for majors in the school (ACC 200, ACC 210, ECN 200-201, FIN 322, MGT 435, MKT 302, ORG 330-331, QMM 250, and QMM 440 or QMM 443) are normally offered each fall and winter semester and either in the spring or summer session.

The 300-level courses should be taken in the junior year (59-60 credits). The 400-level courses are designed for majors in the School of Economics and Management. Nonmajors may elect these 300- and 400-level courses if they meet the prerequisites and if there is space in the class after the majors have been accommodated. All students who are not majors in the School of Economics and Management are limited to a maximum of 28 credits in business courses at Oakland University or at other schools, excluding the basic economics courses, i.e., they may not take more than 28 credits in ACC, ECN, FIN, MGT, MIS, MKT, ORG, and QMM courses (excluding ECN 150, ECN 200-201, and ECN 210).

Accounting (ACC)

ACC 200 Introductory Financial Accounting (4)
Introduction to accounting information as an aid to decision-making for external users of financial statements. Students learn how to measure and record accounting data, derive financial statements, and analyze data presented in published financial reports.
Prerequisite: Sophomore standing.

ACC 210 Managerial and Cost Accounting I (4)
Analysis of accounting methods providing data for optimal managerial decisions, implementation, and control. Topics include cost allocation; cost, volume, and price relationship; product cost accounting and control systems; operations and capital budgeting; and related behavioral, reporting, and information processing aspects.
Prerequisite: ACC 200.

ACC 311 Intermediate Financial Accounting (4)
Study of financial accounting and reporting problems. Generally accepted accounting principles applicable to investments, inventories, productive resources, and debt and equity capital issues will be discussed. Emphasis is on providing useful information to external financial statement users.
Prerequisite: ACC 200 and ACC 210.

ACC 312 Advanced Financial Accounting (4)
Topics include accounting and reporting for foreign operations, partnerships, consolidated entities, interim financial statements, and segments of business enterprises.
Prerequisite: ACC 311.

ACC 410 Managerial and Cost Accounting II (4)
An analysis of available procedures and techniques to sharpen accounting analyses for managerial planning and control. Extends subjects introduced in ACC 210 to nonmanufacturing firms and decentralized firms, including transfer pricing and segment performance measurement.
Prerequisite: Major standing, ACC 210, and QMM 440 or QMM 443.

ACC 411 Auditing (4)
Introduction to the objectives, techniques, and standards of internal and external audits of the accounts of an enterprise. Generally accepted auditing standards will be critically examined.
Prerequisite: Major standing and ACC 312.

ACC 412 Government and Not-for-Profit Accounting (2)
The characteristics of not-for-profit entities are analyzed and used to define the basic concepts of accounting for funds. Accounting and reporting principles applicable to governmental units, hospitals, schools, eleemosynary and other nonprofit entities are discussed.
Prerequisite: Major standing and ACC 311.

ACC 413 Regulatory Agencies and the Accounting Profession (2)
The nature, origin, and workings of the SEC, ICC, and other agencies are examined. The legal framework, registration, and reporting requirements, professional liability, and the continuing issue of establishing generally accepted accounting principles are studied.
Prerequisite: Major standing and ACC 311.

ACC 414 Accounting Theory (4)
Selected topics of current interest in accounting theory. Opinions of the Accounting Principles Board (APB), the Financial Accounting Standards Board (FASB), and similar standard-setting committees of the accounting profession will be examined.
Prerequisite: Major standing and ACC 312.

ACC 415 Tax Accounting (4)
The concepts of taxation. The essential logic underlying the federal tax laws will be developed. The class will analyze individual and corporate income tax laws rather than train students to prepare current-year tax returns.
Prerequisite: Major standing and ACC 312.

ACC 416 Contemporary Accounting Issues (4)
An examination of the changes in accounting associated with infusions of theories of other disciplines: behavioral science, organizational theory, economic theory, and sociology. Also

considered are changes in the role of the accountant. The course may be repeated.
Prerequisite: Major standing and ACC 312.

ACC 418 Computer-Based Accounting Systems (4)
Examination of computer applications in accounting integrated with inventory control and related sales data processing. Internal security, auditing, and control features are stressed. Covers computer hardware, software, and data systems analysis.
Prerequisite: Major standing and MIS 307 or MIS 316.

ACC 420 Advanced Auditing Topics (2)
Examination of advanced topics in auditing. Emphasizes the philosophy, standards, concepts, and problem areas.
Prerequisite: Major standing and ACC 411.

ACC 421 Advanced Tax Topics (2)
Examination of advanced topics in tax accounting.
Prerequisite: Major standing and ACC 415.

ACC 490 Independent Study (2 or 4)
Qualified and highly motivated students may engage in independent individual research, directed readings, or group independent study, under the supervision of a faculty member. Offered every term.
Prerequisite: An overall grade point average of 3.00 or better, major standing, and an approved contract prior to registration.

Economics (ECN)

ECN 150 Basic Economics (4)
Survey of economics and its application to problems faced by societies, firms, and individuals. Includes both analytical and institutional aspects of economics. Intended for students not planning to major in economics or management.
Prerequisite: High school algebra.

ECN 200 Principles of Macroeconomics (4)
Examines the methodology of economics, scarcity, opportunity cost, supply and demand, market processes, determination of national income, fiscal policy, money and banking, monetary policy, inflation and unemployment, trade and international adjustments, development, and alternative economic systems. Not open to students who have completed ECN 150.
Prerequisite: High school algebra and sophomore standing.

ECN 201 Principles of Microeconomics (4)
Examines elasticity, markets, theory of consumer demand, market failures, organization of the firm, production and cost in the long and short run, competition, externalities, legal and regulatory environment of business.
Prerequisite: ECN 200 or ECN 150.

ECN 210 Principles of Economics (6)
Principles of macroeconomics and microeconomics, covering the same topics as ECN 200 and ECN 201 combined, but at an accelerated pace. Intended for highly motivated students with good writing and math ability. Not open to students who have completed a previous college economics course.
Prerequisite: High school algebra, sophomore standing, and a G.P.A. of 3.00 or better.

ECN 301 Intermediate Microeconomics (4)
Examines consumer behavior, cost functions, constrained optimization, decisions under uncertainty, price and output determination in competitive markets, the basis for regulatory law, and implications of microeconomic decisions for the efficiency of the market economy. Case studies will be analyzed.
Prerequisite: ECN 201 and MTH 122 or permission of instructor.

ECN 302 Intermediate Macroeconomics (4)
Construction, analysis, and interpretation of models of aggregate economic behavior, including the policy implications of alternative models, international interrelationships, assessment of contemporary controversies in national policy, and introduction to large econometric models.
Prerequisite: ECN 201 and MTH 122 or permission of instructor.

ECN 309 Urban Economic Problems (4)
Survey of contemporary urban economic problems, location and migration patterns, local public services and public finance in politically fragmented metropolitan areas, urban poverty and crime, housing, blight and renewal, quality of life, and transportation.
Prerequisite: ECN 150 or ECN 201 or ECN 210.

ECN 310 Economics of the Environment (4)
Application of the tools of economic analysis to problems of energy, ecology, and the environment. Topics include: externalities and public goods; optimum use of fixed national resources; the limits to economic growth and ecological aspects of principal pollution problems.
Prerequisite: ECN 150 or ECN 201 or ECN 210.

ECN 321 Money, Credit, and the Economy (4)
The course has three objectives: an introduction to banking and financial institutions; study of the U.S. money and capital markets; and the study of money's impact on the nation's economy.
Prerequisite: ECN 150 or ECN 201 or ECN 210.

ECN 326 Economic Development (4)
Application of the tools of economic analysis to the problems of economic development and growth.
Prerequisite: ECN 150 or ECN 201 or ECN 210.

ECN 328 American Economic Development (4)
Models and case studies of selected events in the growth and development of the American economy from colonial times to the present. Emphasizes the evolution of historical thought under the impact of economic analysis.
Prerequisite: ECN 150 or ECN 201 or ECN 210.

ECN 338 Economics of Human Resources (4)
Survey of the nature of labor markets, education and investment in human capital, unemployment, geographic and occupational mobility of labor, and effects of race, sex, and age in labor markets.
Prerequisite: ECN 150 or ECN 201 or ECN 210.

ECN 341 The Soviet Economy (4)
The history of Soviet economic development; analysis of the principles of operation of the Soviet economy; the relationship between administrative structure and decision-making; problems of resource allocation; evaluation of Soviet economic performance and Soviet economic reforms.
Prerequisite: ECN 150 or ECN 201 or ECN 210.

ECN 347 Problems in Health Economics (4)
Survey of problems of the health care industry, nature of the demand for health care services, patterns in resource allocation and provision of health care services, and government health care policy and its impact.
Prerequisite: ECN 150 or ECN 201 or ECN 210.

ECN 350 Comparative Economic Systems (4)
Comparative analysis of alternative forms of economic organization. The relationships between the economic system and resource allocation, pricing, income distribution, and growth. Capitalism, market socialism, and central planning are emphasized.
Prerequisite: ECN 201 or ECN 210 or permission of instructor.

ECN 356 Public Finance (4)
The role and impact of the public sector in a market economy. Includes: expenditure determination; the basis for taxation in terms of equity, efficiency, and flexibility; timing of cash flows; revenue source analysis; financing public debt; and discussion of current problems.
Prerequisite: ECN 201 or ECN 210 or permission of instructor.

ECN 373 International Trade and Finance (4)
International trade theory, the international monetary mechanism, exchange-rate regimes, the balance of payments, and economic interdependence.
Prerequisite: ECN 201 or ECN 210 or permission of instructor.

ECN 378 Economic Analysis of Law (4)
Economic analysis of basic institutions of legal systems. Emphasis is on laws that are not

directly intended to regulate the economy, including property, contract, tort, criminal, and procedural law. Labor and antitrust law will be discussed only tangentially.
Prerequisite: ECN 201 or ECN 210 or permission of instructor.

ECN 385 Industrial Organization (4)
The structure of American industry and the factors affecting it, with emphasis on economies of scale; barriers to entry; structure-behavior relationships, including pricing, product differentiation, and technical change; evaluation of performance, antitrust and regulation.
Prerequisite: ECN 201 or ECN 210 or permission of instructor.

ECN 405 Econometrics (4)
Estimation and testing of economic models using regression techniques. Includes experience with computer "packages," analytical report-writing, and case studies. Topics include dealing with violations of regression assumptions, binary variables, autoregressive and distributed lag models, and the structure of "large" simultaneous equations models.
Prerequisite: Major standing and ECN 301.

ECN 409 Urban Economics (4)
Survey of urban economics, location theory, and migration patterns. Includes analysis of local public services and public finance, housing, quality of life, transportation, and employment patterns.
Prerequisite: Major standing and ECN 301.

ECN 414 Engineering Economics (2)
Financial accounting models, relevant costs; capital budgeting, present value, rate of return, pay back, taxes, depreciation. Not open to management majors.
Prerequisite: MTH 256 or APM 257.

ECN 418 Seminar in Economic Policy (4)
Analysis of economic policy. Topics vary but may include: resource allocation, macroeconomic stability, economic growth, energy, public choice, global economic interdependence, and the environment.
Prerequisite: Major standing, ECN 301, and ECN 302.

ECN 467 Economics of Health Care (4)
Application of the tools of economic analysis to the health care industry and government health care policy. Examines the impact of the special characteristics of health care and the medical services industry on the pattern of health care produced, its distribution, and resource allocation within the industry.
Prerequisite: Major standing and ECN 301.

ECN 468 Labor Economics (4)
Economic analysis of the functioning of labor markets, with emphasis on investment in human capital; the role of education; unemployment; labor market differentiation by race, sex, and age; the geographic and occupational mobility of labor; and the inflation-unemployment trade-off.
Prerequisite: Major standing and ECN 301.

ECN 480 Seminar in Economic Theory (4)
Survey of topics in economic theory using mathematical models. Recommended for students planning graduate work in economics.
Prerequisite: Major standing, ECN 301, and ECN 302.

ECN 490 Independent Study (2 or 4)
Qualified and highly motivated students may engage in independent individual research, directed readings, or group independent study, under the supervision of a faculty member. Offered every term.
Prerequisite: An overall grade point average of 3.00 or better, major standing, and an approved contract prior to registration.

Finance (FIN)

FIN 320 Personal Financial Management (4)
The student is viewed as a business manager, responsible for all personal financial affairs. Topics include estate planning, retirement, insurance, investment, savings, and credit.
Prerequisite: ECN 201.

FIN 322 Managerial Finance I (4)
The basic elements of managerial finance. Topics include: capital budgeting techniques, financial structure and analysis, the cost of capital, and working capital management.
Prerequisite: ECN 201, ACC 200, and QMM 250.

FIN 419 International Accounting and Financial Management (4)
The application of the tools of accounting and financial analysis to cases and the problems of firms that have operations in several nations.
Prerequisite: Major standing, FIN 322, and ECN 373.

FIN 421 Investment Analysis (4)
Study of the aspects of security analysis and portfolio theory. Four areas are covered: investment management and the money and capital markets, the analytical procedures for appraising securities, portfolio analysis, and the assessment of capital market efficiency.
Prerequisite: Major standing and FIN 322.

FIN 422 Managerial Finance II (4)
The application of the tools of financial analysis to specific cases in the financial management of corporate businesses and not-for-profit enterprises.
Prerequisite: Major standing and FIN 322.

FIN 490 Independent Study (2 or 4)
Qualified and highly motivated students may engage in independent individual research, directed readings, or group independent study, under the supervision of a faculty member. Offered every term.
Prerequisite: An overall grade point average of 3.00 or better, major standing, and an approved contract prior to registration.

Management (MGT)

MGT 316 Ethics, Economics, and Business (4)
Ethical problems in business practices and institutions, and critical analysis of the concepts, presuppositions, and theories used in the description and explanation of economic phenomena. Identical with PHL 316.
Prerequisite: One course in philosophy or economics.

MGT 423 The Multinational Firm (4)
Analysis of the scope, structure, and environment (legal, social, political, and economic) of the multinational firm with emphasis on management strategies of planning, marketing, location, and finance across cultural and national boundaries.
Prerequisite: Major standing and ECN 301 or ECN 373.

MGT 424 Business Law (4)
The study of the legal framework in which business decisions are made and the types of economic conflict and political activity that have created this framework. Topics include: contracts, anti-trust legislation, conflict resolution, and regulatory agencies.
Prerequisite: Major standing.

MGT 433 Labor-Management Relations (4)
Analysis of management-employee relations in modern industry. Topics include: factors influencing the supply and demand for labor, evolution and governance of trade unions, collective bargaining, and public policy.
Prerequisite: Major standing.

MGT 435 Management Strategies and Policies (4)
Managerial problem perception and the application of economics, statistics, organizational behavior, accounting, finance, marketing, and quantitative methods to the systematic analysis of case studies.
Prerequisite: Major standing, completion of core program, and senior status.

MGT 468 Health Care Management (4)
Application of the management tools of economics, statistics, organizational behavior, marketing, finance, and quantitative methods to the systematic analysis of the management of health care institutions.
Prerequisite: Major standing and ECN 467.

MGT 490 Independent Study (2 or 4)
Qualified and highly motivated students may engage in independent individual research, directed readings, or group independent study, under the supervision of a faculty member. Offered every term.
Prerequisite: An overall grade point average of 3.00 or better, major standing, and an approved contract prior to registration.

Management Informations Systems (MIS)

MIS 307 Management Information Systems (4)
Examination of the development and operation of information systems in organizations. Topics include: information economics, management uses of information, alternative designs of information systems, data base concepts, management of the information system, telecommunications, and data security.
Prerequisite: ECN 301 and CIS 122, 123, or 130.

MIS 316 Systems Analysis (4)
Identifying goals, visualizing overall processes, and creatively designing approaches which effectively use resources to achieve desired ends. Draws upon quantitative, computer, and general skills available to the student.
Prerequisite: ECN 301 and CIS 122, 123, or 130, or permission of instructor.

MIS 400 Analysis of Complex Systems (4)
Modeling, instrumentation, and control of complex systems. Emphasizes design, implementation, and testing of information and control systems in unstructured and realistic contexts. Includes specification, evaluation, and selection of hardware and software systems, ranging from applications in microcomputers to large-scale computers.
Prerequisite: Major standing, ECN 301, and MIS 307 or MIS 316.

MIS 407 Computer Systems for Problem-Solving (4)
An advanced communications and problem-solving course in which students learn to specify and design systems for computers. Consists of field studies by teams of students leading to computerized solutions of "real-world" problems.
Prerequisite: Major standing, MIS 307, and 12 credits in higher-level programming languages.

MIS 444 Simulation in Management (4)
Computer simulation models using GPSS or an equivalent simulation language, plus simulation exercises using standard programming languages. Implications of models and sensitivity analysis for forecasting, planning, and decision-making in the management environment are explored.
Prerequisite: Major standing and MIS 307.

MIS 490 Independent Study (2 or 4)
Qualified and highly motivated students may engage in independent individual research, directed readings, or group independent study, under the supervision of a faculty member. Offered every term.
Prerequisite: An overall grade point average of 3.00 or better, major standing, and an approved contract prior to registration.

Marketing (MKT)

MKT 302 Marketing (4)
Analysis of the principles of marketing, marketing concepts and trends, and their relationship to other business principles. Special emphasis is placed on the study of the marketing mix.
Prerequisite: ECN 210 or ECN 201.

MKT 353 Marketing Management (4)
A study of the overall marketing strategies pertaining to problems experienced in today's economy. Uses the case study method to analyze these problems.
Prerequisite: MKT 302.

MKT 404 Consumer Behavior (4)
Study of factors influencing consumer behavior, structuring and managerial use of consumer decision-making models. Examination of social-psychological and economic variables on buying behavior including learning, motivation, attitude, personality, small groups, demo-

graphic and economic factors, and culture.
Prerequisite: Major standing and MKT 353.

MKT 405 Marketing Research (4)
Focus on the generation and management of information in marketing decisions. Covers the evaluation of additional marketing information; how it is acquired and used; the manager's role in market research; and the researcher's role in supplying marketing information.
Prerequisite: Major standing and MKT 353.

MKT 406 Promotional Strategy (4)
A study of the promotional tools of advertising, public relations, sales, and sales promotion. Emphasis on identifying the factors that become the basis for promotional decisions.
Prerequisite: Major standing and MKT 353.

MKT 420 Distribution Channels Management (4)
Examination of the management of marketing channel relationships. Focus on the characteristics and social, economic, and political relationships among wholesalers, agents, retailers, and the other agencies that comprise the distribution channels.
Prerequisite: Major standing and MKT 353.

MKT 430 Sales Management/Sales Promotion (4)
Examination of the function of sales management. Emphasis on the role of analysis, decision-making, strategy formation, and the impact of the "suction," or pull strategy provided by sales promotion.
Prerequisite: Major standing and MKT 353.

MKT 450 International Marketing (4)
The application of marketing principles to problems associated with the marketing of products and services in different nations. Cases in international marketing will be analyzed.
Prerequisite: Major standing, MKT 353, and ECN 373.

MKT 480 Seminar in Marketing (4)
Study of a selected topic or current marketing interest relevant to the management of the marketing function. Topics may include: industrial marketing, retail management, or any area not covered by a specific course.
Prerequisite: Major standing and MKT 353.

MKT 490 Independent Study (2 or 4)
Qualified and highly motivated students may engage in independent individual research, directed readings, or group independent study, under the supervision of a faculty member. Offered every term.
Prerequisite: An overall grade point average of 3.00 or better, major standing, and an approved contract prior to registration.

Organizational Behavior (ORG)

ORG 330 Organizational Behavior I (4)
The theoretical and empirical issues surrounding organizational management as it relates to individual and organizational processes, e.g., perception, learning, motivation, communication, decision-making, leadership, power, and authority.
Prerequisite: QMM 250 recommended.

ORG 331 Organizational Behavior II (4)
Applications of organizational behavior theory to management. Management's role in designing, supervising, and changing work behavior in organizations will be examined in the light of the organizational behavior literature.
Prerequisite: QMM 250 and ORG 330.

ORG 334 Human Development in Organizations (4)
Examination of the organizational behavior field for non-management majors. Topics include human resources management as well as applications of organizational behavior theory. For nonmanagement majors only: Management majors should take ORG 434.
Prerequisite: Junior standing.

ORG 430 Organizational Research Methods (4)
Use of various behavioral research strategies as input for managerial problem-solving. Review

of various methods of individual and organizational measurement devices, including industrial tests, morale surveys, etc.
Prerequisite: Major standing and ORG 331.

ORG 431 Leadership and Group Performance (4)
Comprehensive examination of selected theories of leadership. Emphasis on relevant empirical evidence and application of the theories to case studies which involve leadership behavior and group functioning.
Prerequisite: Major standing and ORG 331.

ORG 432 Motivation and Work Behavior (4)
Analysis of individual and organizational factors affecting employee motivation, performance, and satisfaction in the work environment. Topics include: the role of leadership, job design, environmental variation, compensation policies, goal-setting techniques, and group influences as each affects employee attitudes and behavior.
Prerequisite: Major standing and ORG 331.

ORG 434 Management of Human Resources (4)
Exploration and analysis of the role of the personnel function in modern organizations. Topics include: job analysis; manpower planning; recruitment, selection, and placement; performance analysis and appraisal; compensation policies and practices; employee information systems; and personnel research techniques.
Prerequisite: Major standing and ORG 331.

ORG 436 Decision-Making in Organizations (4)
An examination of different models and theories concerning decision-making in organizations. Individual, group, and organizational decision-making activities are analyzed and implications for management are drawn.
Prerequisite: Major standing and ORG 331.

ORG 437 Job Design (4)
Examination of the impact of job and organizational design strategies. The course will review and compare the "quality of work life," socio-technical systems, behavioral modification, and organizational development approaches.
Prerequisite: Major standing and ORG 331.

ORG 438 Men and Women at Work (4)
An investigation into the roles of men and women at work. Topics include: the labor force participation rates of men and women; historical and current perspectives of work roles, and the relevance of theory for the design of organizations and for human resource management.
Prerequisite: Major standing or permission of instructor.

ORG 490 Independent Study (2 or 4)
Qualified and highly motivated students may engage in independent, individual research, directed readings, or group independent study, under the supervision of a faculty member. Offered every term.
Prerequisite: An overall grade point average of 3.00 or better, major standing, and an approved contract prior to registration.

Quantitative Methods for Management (QMM)

QMM 250 Statistical Methods (6)
Statistical techniques useful in management and economic analysis. Emphasis on statistical description, hypothesis testing, statistical quality control, time series analysis, ANOVA, estimation, and regression techniques. Includes extensive computer exercises.
Prerequisite: MTH 122 or 154.

QMM 308 Project Management Techniques (4)
An examination of the various math-based techniques for managing projects. The topics include Program Evaluation Review Technique (PERT) and Crticial Path Method (CPM).
Prerequisites: MTH 122 and QMM 250.

QMM 440 Management Science (4)
Overview of models and applications of management science. Includes: acceptance sampling, statistical quality control, decision analysis, Bayesian analysis, inventory models, PERT and

CPM, queueing models, simulation, and linear programming.
Prerequisite: Major standing and ECN 301.

QMM 443 Operations Management (4)
Analysis of problems and case studies in production management in general manufacturing and service industries. Management science methods will be used to solve problems of inventory management, material control, acceptance sampling, quality control, plant and equipment investment, facility location, and operations scheduling.
Prerequisite: Major standing.

QMM 452 Forecasting (4)
Survey of analytical forecasting methods. Also covers simple econometric and distributed-lag models, seasonality, autocorrelation, qualitative methods, and the assessment of commercial forecasting services. Use of computer "packages" to prepare written and oral forecasts based on real data.
Prerequisite: Major standing or permission of instructor.

QMM 490 Independent Study (2 or 4)
Qualified and highly motivated students may engage in independent individual research, directed readings, or group independent study, under the supervision of a faculty member. Offered every term.
Prerequisite: An overall grade point average of 3.00 or better, major standing, and an approved contract prior to registration.

SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

OFFICE OF THE DEAN

Mohammed S. Ghausi, Dean and John F. Dodge Professor of Engineering
Howard R. Witt, Associate Dean
Carl T. Isaacs, Adviser
Gregory P. Knoff, Assistant to the Dean
Frederick J. Lutz, Engineering Cooperative Education Coordinator
Kenneth A. Meade, Adviser

PROFESSORS: *David H. Evans, Donald R. Falkenburg, Mohammed S. Ghausi (John F. Dodge Professor), William G. Hammerle, Richard E. Haskell, J. Carroll Hill, Joseph D. Hovanesian, Yau Y. Hung, Glenn A. Jackson, Keith R. Kleckner, Nan K. Loh, John J. Metzner, Ronald R. Mourant, Gilbert L. Wedekind, Tung H. Weng, Thomas G. Windeknecht, Howard R. Witt*

ASSOCIATE PROFESSORS: *David E. Boddy, Janusz W. Laski, Ronald J. Srodawa, Sarma R. Vishnubhotla*

ASSISTANT PROFESSORS: *Hoda S. Abdel-Aty-Zohdy, Osman D. Altan, Bhushan L. Bhatt, Robert P. Judd, Brian P. Sangeorzan, Christian C. Wagner, Mohamed A. Zohdy*

SPECIAL INSTRUCTOR: *Jerry Marsh*

ADJUNCT PROFESSORS: *Martin A. Erickson, Michael Marcotty, Kenneth A. Meade*

ADJUNCT ASSOCIATE PROFESSORS: *Ronald R. Beck, George W. Buckley, Mark M. Shamamy*

ADJUNCT ASSISTANT PROFESSORS: *Frank W. Bliss, Susanne M. Gatchell, Steven L. Plee, Ranjit K. Roy*

BOARD OF VISITORS

The Board of Visitors for the School of Engineering and Computer Science is composed of leaders in industry. They assist the School of Engineering and Computer Science in developing educational and research programs to meet the rapidly expanding requirements in the technical world. The board is available as a body or individually for consultation on such matters as curriculum, research, facilities, equipment requirements, special subjects, and long-range planning. Board members are:

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Mr. Rupert Atkin, Vice-President, Engineering, TRW, Inc.
Dr. Paul F. Chenea, Vice-President (Retired), Research Laboratories, General Motors Corporation
Dr. W. Dale Compton, Vice-President, Scientific Research, Ford Motor Company
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Mr. R. Jamison Williams, R. J. Williams Company
Mr. John D. Withrow, Vice-President, Engineering, Chrysler Corporation

PROGRAMS

The Oakland University School of Engineering and Computer Science is an interdisciplinary oriented academic unit that offers programs leading to the degree of Bachelor of Science in engineering in computer, electrical, mechanical and systems engineering, and to the degree of Bachelor of Science in computer and information science. In addition, programs in engineering chemistry and engineering physics that lead to the Bachelor of Science degree are offered jointly with the College of Arts and Sciences.

Oakland University's engineering programs prepare students for a career in an industrial-based society. Recognizing that today's engineer must be able to solve complex problems transcending narrow categories as well as specialized problems, the engineering programs blend an interdisciplinary core with specialized study in the elected major. Oakland University graduates are prepared to enter the traditional fields of government, product design, development, manufacturing, sales, service and systems analysis, as well as newer areas of application such as robotics, transportation, pollution control, energy systems, computer and information processing, medical electronics and automotive electronics, or to pursue graduate study for research and teaching careers. A growing number of students also find that their undergraduate engineering education is excellent preparation for careers in business, law, and medicine.

The baccalaureate program in computer and information science provides a solid foundation for a career in computer science. The digital computer has assumed a central role in society and has become an important tool in nearly all phases of business, health care systems, energy, commerce, industry, education, and research. Thus, persons interacting with computers have diversified complementary interests. To meet these employment needs Oakland's computer and information science program encourages a broad outlook and multidisciplinary viewpoint. It balances the practical with the abstract in providing the requisite technological training. A broad educational experience is insured by requiring completion of a minor in a related field and a general education component.

Oakland University offers an optional Cooperative Plan of Education to qualified engineering and computer and information science students. Prior to participating under this plan a student must complete the first two years of his/her selected major on a regular schedule. Beginning with the junior year the cooperative education student alternates four-month semesters of full-time study with equal periods of meaningful full-time employment in business, industry, or government. The employment provides practical training which must be related to the student's field of study and forms an integral part of the educational program. It provides the immediate benefits of permitting the student to relate academic studies to practical applications as well as to have early contact with practitioners in the field. The program coordinator and the employer work together to ensure that the

practical training becomes progressively more challenging and carries increasingly greater responsibilities as the student advances through the curriculum. Admission requirements and program conditions are detailed on page 224.

The School of Engineering and Computer Science also offers a minor in computer and information science for nonmajors.

Programs leading to the degrees of Master of Science and Doctor of Philosophy are available in the school. These degree programs are detailed in the *Oakland University Graduate Study Catalog.*

ACCREDITATION

All academic programs of the university are accredited by the North Central Association of Colleges and Schools. In addition, Oakland University's undergraduate programs in computer, electrical, mechanical and systems engineering have been fully accredited by the Accreditation Board for Engineering and Technology (ABET), the professional accrediting agency for engineering programs in the United States.

PREPARATION FOR ADMISSION

Entering freshmen planning to major in engineering or computer science should present at least three years of high school mathematics, including trigonometry. A solid background in English composition is essential for all majors. For engineering students additional preparation should include course work in chemistry and physics. Although drafting and machine shop practice courses are useful they are not necessary. Normally, a B average is required for admission to programs in the School of Engineering.

A student planning to transfer into one of the engineering programs should present the following: four semester courses in analytic geometry and calculus including linear algebra and differential equations; two semester courses in introductory college physics using the calculus; and one or two courses in college chemistry. Other credits in mathematics, science, or engineering will be evaluated with reference to courses required for graduation in the Oakland University engineering curriculum. Technician course credits do not generally apply to these requirements.

Community college students who plan to transfer into an engineering program are advised to take the engineering transfer program as prescribed by the Michigan Engineering College-Community College Liaison Committee. A brochure describing this transfer program is available from any community college or the School of Engineering and Computer Science. Generally, community college graduates with the associate degree have satisfied the general education requirements of Oakland University's School of Engineering and Computer Science.

A student planning to transfer into the computer and information science program should complete one year of course work in calculus and a course in linear algebra. One course in programming in a high-level language such as PASCAL or PL/1 and one in computer organization and assembly programming are desirable. If possible, further course work in computer science should be planned in advance with an adviser at Oakland University to ensure compatibility with our requirements.

ACADEMIC POLICIES OF THE SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

Transfer Policy

The programs offered by the School of Engineering and Computer Science are designed to meet accreditation criteria as well as to reflect the Oakland University

philosophy of an education. Thus, it is emphasized that the programs are more than a mere assemblage of courses. They seek to integrate the fundamental mathematical and scientific background into advanced analysis and design work through a careful blending of theory and experiment to produce a meaningful educational experience. To ensure the integrity of its programs the School of Engineering and Computer Science has adopted the following transfer policy. Records of students transferring to Oakland University from other academic institutions are evaluated and transfer credit is granted as appropriate. Once matriculated at Oakland University students are expected to complete all remaining course work for their degree at Oakland University. Exceptions which permit taking courses at another institution must have the prior written consent of the associate dean of engineering and computer science. A student who has completed 62 semester hours of credit from any accredited institution(s), including Oakland University may not transfer additional credits from a community or junior college.

Internal Transfer

Applications from students wishing to transfer into programs in the School of Engineering and Computer Science from other majors or from undecided status within Oakland University will be considered upon completion of the following course work.

Engineering programs: MTH 154-155 Calculus and PHY 151-152 Introductory Physics

Computer and information science program: MTH 154-155 Calculus and CIS 130-131 Introduction to Computer Science

Plan of Study

Each student in the school is assigned an adviser who should be consulted regularly for assistance in planning a program of study. Engineering and computer and information science majors are encouraged to complete a Plan of Study form, which is a timetable of courses to be taken for undergraduate credit. It should be submitted no later than the end of the semester in which the student completes 48 credits. Transfer students should submit a Plan of Study when they enter Oakland University, regardless of the number of credits they already have earned. The student completes the form in consultation with his/her adviser, and it is then approved by the dean's office. The student is responsible for updating the plan regularly, preferably each semester. Although advisers are obligated to assist students in planning their programs, the responsibility for fulfilling degree requirements remains with the student.

Work Load

Students are referred to page 25 of this catalog for details of allowable course load. It is important for students to strike a balance between course load and other commitments. To carry a full load of 16 credits per semester a student should not be employed for more than 20 hours per week. A student employed 40 hours per week should not carry a course load of more than 4 credits per semester.

Academic Standing

The performance of students in the School of Engineering and Computer Science will be reviewed at the end of each semester to determine academic progress.

Good academic standing in the school requires a cumulative quality point average of at least 2.00 in courses required a) within the major, b) in cognate mathematics and science courses, and c) in all courses taken at Oakland University.

The quality point average is determined by dividing the honors points a student has earned by the hours elected, with N and WN grades included and assigned 0 honor points. Students who fall below 2.00 in cumulative quality point average in one or more of the three designated categories will be placed in provisional status by the School of Engineering and Computer Science. A student may also be warned for unsatisfactory progress as determined from an excess of substandard grades, inconsistent academic performance, or erratic attendance.

While in provisional status a student must have his/her program of study approved by the associate dean of engineering and computer science. If a student fails to remove the provisional conditions after one semester, generally he/she will be ineligible to continue in programs of the School of Engineering and Computer Science. Provisional status may be continued if the student is judged to be making substantial progress toward early removal of his/her deficiency. For part-time students a semester will be considered to be 12 consecutive credits of course work attempted. A student ineligible to continue in the school may be permitted to enroll in another school or college within the university.

Students on provisional status may not serve on School of Engineering and Computer Science committees.

The above rules have been established by the committee on instruction of the school. Students wishing to appeal a ruling regarding their academic status within the school must address a written petition to the committee on instruction.

Unsatisfactory Performance

Grades of N, WN, and numerical grades less than 2.0 are considered substandard.

A course in which a grade of N, WN, or below 2.0 has been earned may not be subsequently passed by competency examination or independent study.

A student within the School of Engineering and Computer Science who repeats a course in which a grade below 2.0 has been earned must repeat that course at Oakland University.

Prerequisites

In planning their schedules students should ensure that they satisfy prerequisite and corequisite conditions for courses. Students who have registered for courses for which they do not meet the conditions will have their registration canceled and they will be liable for any financial penalties that this incurs.

Independent Study and Project Courses

Independent study and project courses CIS 294, 490, 494, and EGR 290, 294, 490, 494 are available to provide enrichment opportunities for qualified students. They are not intended to substitute for regular course offerings, but rather to allow students to investigate an area of interest outside the scope of regular courses, to examine a subject more deeply than can be accommodated in regular courses, or to gain an educational experience beyond that of regular course work. To be permitted to register in an independent study or project course a student must have submitted a meaningful plan of work and have the approval of a faculty member who will supervise it and the associate dean of engineering and computer science. Application forms are available in the Office of the Dean, 248 Dodge Hall.

Academic Conduct

It is expected that students will abide by the principles of truth and honesty which are essential to fair grading. Academic misconduct in any form is not permitted in the School of Engineering and Computer Science. If a student is found

guilty of academic misconduct by the university academic conduct committee, in any course offered by the school, then in addition to the penalties imposed by the committee, the instructor may assign penalties from a reduced grade for the assignment to a grade of N for the entire course.

It should be noted that all assignments must be the independent work of each student, unless the professor in charge gives explicit permission relaxing such a requirement.

For a detailed description of the university academic conduct policy students are referred to the *Schedule of Classes,* the *Oakland University Student Handbook,* or page 28 of this catalog.

Petitions

Waiver of a specific academic requirement may be initiated by submission of a petition of exception as described on page 26 of this catalog.

A student seeking a review of his/her academic standing within the school or who wishes to grieve a matter should submit a written petition to the associate dean of engineering and computer science for handling according to the established procedures.

DEGREE REQUIREMENTS AND REGULATIONS

General Requirements for the Degrees of Bachelor of Science in Engineering and Bachelor of Science

The following general requirements must be met by a student seeking the baccalaureate in computer engineering, electrical engineering, mechanical engineering, systems engineering, engineering chemistry, engineering physics or computer and information science.

1. Have completed at least 128 credits for all engineering programs and at least 124 credits for the computer and information science program. At least 32 credits must be in courses at the 300-level or above.
2. Have completed at least 32 credits at Oakland University. (Refer to the transfer policy of the School of Engineering and Computer Science for further clarification.) For a student majoring in :
   a) computer, electrical, mechanical, or systems engineering, at least 24 credits must be in engineering core or professional subjects required for the major.
   b) engineering chemistry and engineering physics, at least 16 credits must be in required engineering courses and 16 credits in chemistry courses or 16 credits in physics courses required for the major.
   c) computer and information science, at least 20 credits must be in computer and information science courses required for the major.
3. Have taken at Oakland University the last 8 credits needed to complete baccalaureate requirements.
4. Have demonstrated writing proficiency by meeting the university standard in English composition.
5. Have completed the general education requirement of the elected major program.
6. Have completed at least 8 credits of free electives.
7. Have been admitted to major standing in the elected major program.
8. Have completed all requirements specified for the elected major program.
9. Have a cumulative grade point average of courses taken at Oakland University of at least 2.00.
10. Have completed an application for degree card at the Office of the Registrar, and have paid the graduation service fee.
11. Be in substantial compliance with all legal curricular requirements.

Graduation Check

Students are encouraged to participate in a graduation check in the office of the dean during the semester preceding the one of anticipated graduation.

Double Major

To be certified for two majors in engineering, the student must complete all requirements of both programs. Further, in addition to the credit hours needed for one major the student must complete a minimum of 12 credit hours in pertinent technical courses applicable to the second major. Students seeking two degrees should refer to the requirements on page 25.

General Education

All Oakland University students must take a series of courses distributed for broad exposure to a liberal education. To satisfy the general education requirements students in the School of Engineering and Computer Science must complete course work distributed as follows:

All programs other than engineering chemistry and physics:

1. Complete 24 credits in general education courses. Up to 8 credits in English composition courses may be part of the 24 general credits, but they do not apply to any designated field group.
2. Complete at least 4 credits in each of two of the five designated field groups, and at least 8 credits in a third field group. The field groups are arts; history, philosophy, and area studies; language and thought; literature; social sciences. Majors in engineering or computer and information science may use these additional courses within field groups: arts—AH 363, DAN 173; social science —ECN 201, 301, 302, and ORG 330; language and thought—PHL 370. Engineering students may also use ECN 150, 200, or 201 to satisfy the economic requirement of their elected major.

For engineering chemistry and engineering physics:

1. Complete at least 24 credits of general education with 4 credits each in arts, literature, and social sciences; 8 credits in language and thought; and 4 credits in history, philosophy, and area studies.

For a description of the field groups students are referred to the College of Arts and Sciences section of this catalog.

The general education requirement may also be met by completing the general education program of the Honors College of Arts and Sciences.

Engineering Schedule

Engineering curricula, particularly in the first two years, are highly structured. The program, given below for the first year, is not a required course sequence, but a recommended schedule for students who have the necessary prerequisites.

Semester 1	**Semester 2**
English composition or distribution requirement	English composition or distribution requirement
EGR 101	ECE 171
MTH 154	MTH 155
CHM 144 or 164	PHY 151

Scheduling for the remaining years depends on the student's selected major but should be tailored to meet major standing requirements promptly. Students should refer to the student handbook for the School of Engineering and Computer Science for suggested schedules.

Students not prepared to enter MTH 154, CHM 144 and PHY 151 without additional preparation in the subject area will have to modify their schedules accordingly. Such students may require additional time to complete degree requirements unless they attend during the spring/summer session following the freshman year to make up deficiencies.

Admission to Major Standing

To be eligible to enroll in 300- and 400-level courses and to be a baccalaureate candidate, a student in the School of Engineering and Computer Science must be admitted to major standing in his/her elected major. The general regulations pertaining to admission to major standing are:

Students Required to Apply: All students following programs in computer engineering, electrical engineering, mechanical engineering, systems engineering, engineering chemistry, engineering physics, and computer and information science are required to apply for major standing.

Timing of Application: The application for major standing must be submitted during the semester in which students will complete all requirements for admission. Students without major standing status will not be permitted to enroll in 300- and 400-level engineering, computer and information science, chemistry and physics courses of their elected program.

Conditional Status: Conditional major standing may be granted to students who are on track towards meeting major standing requirements and are performing at a satisfactory level, but who may be a course short of satisfying all requirements. The top priority of students granted conditional major standing shall be to remove outstanding deficiencies.

Enrollment Limitations: If enrollment limitations are in effect, it is likely that not all students meeting minimum criteria will be admitted to major standing. Admission will be granted to the students with the best academic qualifications.

Admission to major standing in each of the major programs of the School of Engineering and Computer Science requires successful completion of preparatory work. Requirements include *certification in English composition* and satisfactory completion of course work in mathematics, science, and in the major as designated below.

Mathematics: Computer and electrical engineering—MTH 154, 155, 256 and APM 257. Mechanical and systems engineering—MTH 154, 155 and either MTH 254 (or APM 263) or MTH 256 and APM 257. Engineering chemistry and engineering physics—MTH 154, 155, 254. Computer and information science—MTH 154, 155, 256 and APM 263.

Science: Computer, electrical, mechanical, and systems engineering—CHM 144, PHY 151, 152. Engineering chemistry—CHM 144, 145, 149, 342, PHY 151, 152. Engineering physics—CHM 144, 145, PHY 151, 152, 158. Computer and information science—one of the sequences CHM 144-145, CHM 164-165, PHY 151-152, BIO 190-200.

Major: Computer, electrical, mechanical and systems engineering—EGR 101, ECE 171, ME 221, CIS 131. Engineering chemistry—EGR 101, ECE 171, ME 221. Engineering physics—EGR 101, ECE 171, ECE 222. Computer and information science—CIS 130, 131, 280.

To satisfactorily complete the mathematics, science and major requirements for major standing a student must: a) have an average grade of at least 2.00 in each of the three groupings; b) have not more than two numerical grades below 2.00; and c) have not repeated a particular course more than two times, and not repeated more than three different courses. The only courses exempt are those in which a W grade is earned.

Transfer students who satisfy the requirements for major standing using transfer credits are given a conditional major standing status if the requirements

are met with less than five courses which were taken at Oakland University. This excludes courses which are used for satisfying the writing proficiency. The conditional status will be removed when the student successfully completes at least five Oakland University courses which are required for major standing and/or for the major. However, a student must obtain a grade of 2.0 or higher for each of the courses taken to remove conditional status but not specifically required for major standing.

Approved Science Courses

Courses approved as science electives for majors in computer, electrical, general, mechanical and systems engineering are: biology courses numbered 190 and higher; CHM 145, 165, and chemistry courses numbered 225 and higher except CHM 270 and 497; ENV 308, 372, 373; and physics courses numbered 317 and higher, except PHY 341. Special topics and independent study courses require prior approval.

Professional Electives

An engineering student may fulfill a 4-credit professional elective requirement with EGR 490 Senior Engineering Project or EGR 494 Independent Study if the course is approved and directed by a member of the faculty of the student's elected major program, or if the course has been approved in advance by petition.

Free Electives

Students entering the School of Engineering and Computer Science are expected to have adequate preparation for the required introductory courses in mathematics, physics, and chemistry. *Courses in mathematics, physics, and chemistry which are more elementary than MTH 154, PHY 151, and CHM 144, may not be presented for credit toward a degree in engineering.* Specifically, the following courses, and equivalents, are not recognized for credit: MTH 100 to 105, MTH 121 to 123; PHY 101, 102 and 140; and CHM 104, 110 and 140.

New courses in mathematics, physics, or chemistry that may be introduced in the future will be added to the above list, if the content so warrants. A current list of disallowed courses is maintained in the Office of the Dean of Engineering and Computer Science and is available for inspection.

COMPUTER ENGINEERING

Chairperson: *Richard E. Haskell*

Major technological advances are being made in the computer field at a rapid pace and it is essential that computer engineering graduates are not only aware of these advances but are prepared to work in this changing environment. Students should gain a strong background in the fundamentals of computer engineering and develop a willingness to accept and thrive on change. The computer engineering program at Oakland University is designed to provide the student with the basic knowledge and skills needed to function effectively in computer related activities in the 1980s. A balance between theoretical and practical experience and an emphasis on both software and hardware aspects of computers are key elements in the computer engineering major at Oakland University.

Program requirements for the baccalaureate in computer engineering are:

		Credits
General Education		24
Mathematics and Science		
MTH 154-155	Calculus	8
MTH 256	Introduction to Linear Algebra	3
APM 257	Introduction to Differential Equations	3
APM 263	Discrete Mathematics	4
CHM 144	General Chemistry	4
PHY 151-152	Introductory Physics	8
Approved science elective		4
		34
Engineering Core		
CIS 131	Introduction to Computer Science II	4
EGR 101	Introduction to Engineering	4
EGR 372	Properties of Materials	4
ECE 171	Introduction to Digital Logic and Microprocessors	4
ECE 222	Introduction to Electrical Circuits	4
ME 221	Statics and Dynamics	4
ME 341	Thermodynamics	4
SYS 317	Engineering Probability and Statistics	3
SYS 325	Lumped Parameter Linear Systems	3
		34
Required Professional Subjects		
ECE 326	Electronic Circuit Design	4
ECE 378	Design of Digital Systems	4
ECE 464	Computer Organization and Architecture	4
ECE 470	Microprocessors and Microcomputers	4
CIS 342	Introduction to Information Structures	4
		20

Professional Electives: 8 credits chosen from

ECE 418	Switching Theory and Digital Logic (4)	
ECE 484	Electronic Devices (4)	
CIS 413	Pattern Recognition (4)	
CIS 417	Applied Numerical Methods: Approximations (4)	
CIS 418	Applied Numerical Methods: Matrix Methods (4)	
CIS 445	Database Systems (4)	
CIS 450	Operating Systems (4)	
CIS 465	Translation of Computer Languages (4)	
SYS 469	Simulation in Engineering (4)	
EGR 490	Senior Engineering Project (2-8)	
EGR 494	Independent Study (2-4)	
ECN 414	Engineering Economics (2)	
		8

Economics Requirement

The economics requirement may be met by completion of ECN 414 as a professional elective or by completion of ECN 150, 200 or 201 as a part of the social science distribution requirement.

Free Electives

For limitation on free electives see page 212. 8

Total 128

In addition to previously stated requirements, satisfactory completion of the program requires: a) an average grade of at least 2.00 for courses taken to fulfill the mathematics and science requirements, and for courses taken to fulfill the engineering core and professional subjects requirement; and b) that the 300-level engineering core courses and the professional subjects be completed with not more than two grades below 2.0 and not more than a total of three repeat attempts.

ELECTRICAL ENGINEERING

Chairperson: *Richard E. Haskell*

Electrical engineering is a broad field encompassing a number of disciplines. The undergraduate program in electrical engineering at Oakland University is designed to provide the student with the basic knowledge and skills needed to function as an electrical engineer in the 1980s. Students obtain a solid grounding in the fundamentals of analog and digital circuits, electronics, electromagnetics, and electronic devices. In addition the strong laboratory component with numerous design opportunities allows the student to relate theoretical ideas to practical problems. The faculty in electrical engineering are engaged in research related to new developments in the field. These activities contribute to a strong up-to-date undergraduate curriculum.

Program requirements for the baccalaureate in electrical engineering are:

		Credits
General Education		24
Mathematics and Science		
MTH 154-155	Calculus	8
MTH 254	Multivariable Calculus	4
MTH 256	Introduction to Linear Algebra	3
APM 257	Introduction to Differential Equations	3
CHM 144	General Chemistry	4
PHY 151-152	Introductory Physics	8
Approved science elective		4
		34
Engineering Core		
CIS 131	Introduction to Computer Science II	4
EGR 101	Introduction to Engineering	4
EGR 372	Properties of Materials	4
ECE 171	Introduction to Digital Logic and Microprocessors	4
ECE 222	Introduction to Electrical Circuits	4
ME 221	Statics and Dynamics	4
ME 341	Thermodynamics	4
SYS 317	Engineering Probability and Statistics	3
SYS 325	Lumped Parameter Linear Systems	3
		34
Required Professional Subjects		
ECE 326	Electronic Circuit Design	4
ECE 378	Design of Digital Systems	4
ECE 426	Advanced Electronics	4
ECE 445	Electric and Magnetic Fields	4
ECE 484	Electronic Devices	4
ECE 437	Introduction to Communication Electronics (4) or	
SYS 431	Automatic Control Systems (4)	4
		24
Professional Electives: Additional 4 credits chosen from		
ECE 437	Introduction to Communication Electronics (4)	
ECE 470	Microprocessors and Microcomputers (4)	
ECE 487	Integrated Electronics (4)	
CIS 417	Applied Numerical Methods: Approximations (4)	
CIS 418	Applied Numerical Methods: Matrix Methods (4)	
EGR 490	Senior Engineering Project (2-4)	
EGR 494	Independent Study (2-4)	
SYS 431	Automatic Control Systems (4)	
ECN 414	Engineering Economics (2)	
		4

Economics Requirement
The economics requirement may be met by completion of ECN 414 as a professional elective or by completion of ECN 150, 200 or 201 as a part of the social science distribution requirement.

Free Electives
For limitations on free electives see page 212. 8

Total 128

In addition to previously stated requirements, satisfactory completion of the program requires: a) an average grade of at least 2.00 for courses taken to fulfill the mathematics and science requirements, and for courses taken to fulfill the engineering core and professional subjects requirement; and b) that the 300-level engineering core courses and the professional subjects be completed with not more than two grades below 2.0 and not more than a total of three repeat attempts.

MECHANICAL ENGINEERING

Chairperson: *Joseph D. Hovanesian*

The field of mechanical engineering offers a broad spectrum of career opportunities in such areas as design, analysis, test development, research, and the manufacturing of numerous products. The curriculum is based on a solid foundation in mechanics of solids, thermodynamics, fluid mechanics, transfer and rate mechanisms, materials, design of mechanical systems, and electrical theory. A strong laboratory experience is interwoven through the curriculum, and opportunities are provided to allow students to relate theoretical ideas to practical problems. The option of selecting several of the senior-level courses allows for great flexibility in the choice of the optional areas of specialization within mechanical engineering.

Program requirements for the baccalaureate in mechanical engineering are:

		Credits
General Education		24
Mathematics and Science		
MTH 154-155	Calculus	8
MTH 254	Multivariable Calculus	4
MTH 256	Introduction to Linear Algebra	3
APM 257	Introduction to Differential Equations	3
CHM 144	General Chemistry	4
PHY 151-152	Introductory Physics	8
Approved science elective		4
		34
Engineering Core		
CIS 131	Introduction to Computer Science II	4
EGR 101	Introduction to Engineering	4
EGR 372	Properties of Materials	4
ECE 171	Introduction to Digital Logic and Microprocessors	4
ECE 222	Introduction to Electrical Circuits	4
ME 221	Statics and Dynamics	4
ME 341	Thermodynamics	4
SYS 317	Engineering Probability and Statistics	3
SYS 325	Lumped Parameter Linear Systems	3
		34
Required Professional Subjects		
ME 331	Introduction to Fluid and Thermal Energy Transport	4
ME 361	Mechanics of Materials	4
One course chosen from Group A *and* one from Group B:		

Group A		
ME 461	Analysis and Design of Mechanical Structures (4)	
ME 486	Machine Design (4)	4
Group B		
EGR 490	Senior Engineering Project (4)	
ME 454	Solar and Alternate Energy Systems (4)	
ME 482	Fluid and Thermal Energy Systems (4)	4
		16

Professional Electives (Chosen from Group A or Group B or from the following)

ME 421	Dynamics (4)	
ME 438	Fluid Transport (4)	
ME 448	Thermal Energy Transport (4)	
ME 455	Combustion Processes (4)	
ME 456	Energy Systems Analysis (4)	
ME 472	Mechanical Properties of Materials (4)	
ECN 414	Engineering Economics (2)	
Not more than 4 credits from:		
EGR 407	Environmental Engineering (4)	
EGR 490	Senior Engineering Project (2 to 4)	
EGR 494	Independent Study (2 to 4)	
SYS 431	Automatic Control Systems (4)	
SYS 469	Simulation in Engineering (4)	
SYS 483	Production Systems (4)	
CIS 417	Applied Numerical Methods: Approximations (4)	
CIS 418	Applied Numerical Methods: Matrix Methods (4)	
		12

Economics Requirement

The economics requirement may be met by completion of ECN 414 as a professional elective or by completion of ECN 100, 150, 200 or 201 as a part of the social science distribution requirement.

Free Electives

For limitations on free electives see page 212. 8

Total 128

In addition to previously stated requirements, satisfactory completion of the program requires: a) an average grade of at least 2.00 for courses taken to fulfill the mathematics and science requirements, and for courses taken to fulfill the engineering core and professional subjects requirement; and b) that the 300-level engineering core courses and the professional subjects be completed with not more than two grades below 2.0 and not more than a total of three repeat attempts.

SYSTEMS ENGINEERING

Chairperson: *Donald R. Falkenburg*

Systems engineering is a broad discipline with roots in a diverse spectrum of engineering fields. The coordination of engineering tasks and the assembly of a complex array of subsystems such as in the Apollo and Space Shuttle programs is typical of the systems approach to problem solving and design.

The systems engineering program at Oakland University contains two options: (1) Dynamic Systems and Control, (2) Computer-Aided Systems Design. The first option prepares the student for the field of control engineering. The curriculum combines courses from electrical and mechanical engineering along with the systems engineering control sequence. It has been designed to teach the fundamentals of mechanical systems, control system design techniques, as well as the practical matter of implementing the controllers in modern electronic hardware.

The second stem emphasizes the important role of the computer in systems design. This curriculum is anchored in a strong computer science component, which

along with professional courses prepares a student for a career in simulation, computer-aided design and systems of optimization.

		Credits
General Education		24
Mathematics and Science		
MTH 154-155	Calculus	8
MTH 256	Introduction to Linear Algebra	3
APM 257	Introduction to Differential Equations	3
*APM 263	Discrete Mathematics (4) or	
*MTH 254	Multivariable Calculus (4)	4
CHM 144	General Chemistry	4
PHY 151-152	Introduction to Physics	8
Approved science elective		4
		34

*MTH 254 required for Dynamic Systems and Control option and APM 263 required for Computer-Assisted Systems Design option

Engineering Core		
CIS 131	Introduction to Computer Science II	4
EGR 101	Introduction to Engineering	4
EGR 372	Properties of Materials	4
ECE 171	Introduction to Digital and Microprocessors	4
ECE 222	Introduction to Electrical Circuits	4
ME 221	Statics and Dynamics	4
ME 341	Thermodynamics	4
SYS 317	Engineering Probability and Statistics	3
SYS 325	Lumped Parameter Linear Systems	3
		34

Professional Subjects for Dynamics Systems and Control Option (28 credits)

Required Professional Subjects		
ECE 326	Electronic Circuit Design	4
ECE 378	Design of Digital Systems	4
ME 421	Dynamics	4
SYS 431	Automatic Control Systems	4
SYS 433	Modern Control System Design	4
		20

Professional Electives: 8 credits chosen from

SYS 410	Systems Optimization and Design (4)
SYS 422	Intelligent Robotics (4)
SYS 458	Electrical Energy Systems (4)
SYS 463	Foundations of Computer-Aided Design (4)
SYS 469	Simulation in Engineering (4)
SYS 483	Production Systems (4)
SYS 485	Statistical Quality Control (4)
EGR 407	Environmental Engineering (4)
EGR 490	Senior Engineering Project (2-8)
EGR 494	Independent Study (2-4)
ECE 426	Advanced Electronics (4)
ECE 437	Introduction to Communication Electronics (4)
ECE 470	Microprocessors and Microcomputers (4)
ECE 471	Microprocessor Systems Applications (4)
ME 331	Introduction to Fluid and Thermal Energy Transport (4)
ME 361	Mechanics of Materials (4)
ME 454	Solar and Alternate Energy Systems (4)
ME 482	Fluid and Thermal Energy Systems (4)
CIS 413	Pattern Recognition (4)
CIS 417	Applied Numerical Methods: Approximations (4)
CIS 418	Applied Numerical Methods: Matrix Methods (4)

ECN 414	Engineering Economics (2)	
		8

Professional Subjects for Computer-Assisted Systems Design Option (28 credits)
Required Professional Subjects

CIS 342	Introduction to Information Structures	4
CIS 418	Applied Numerical Methods: Matrix Methods	4
SYS 410	Systems Optimization and Design	4
SYS 463	Foundations of Computer-Aided Design	4
SYS 469	Simulation in Engineering	4
		20

Professional Electives: 8 credits chosen from

SYS 422	Intelligent Robotics (4)	
SYS 458	Electrical Energy Systems (4)	
SYS 483	Production Systems (4)	
SYS 485	Statistical Quality Control (4)	
EGR 407	Environmental Engineering (4)	
EGR 490	Senior Engineering Project (2-8)	
EGR 494	Independent Study (2-4)	
CIS 413	Pattern Recognition (4)	
CIS 416	Artificial Intelligence (4)	
CIS 417	Applied Numerical Methods: Approximations (4)	
CIS 439	Software Engineering (4)	
CIS 445	Database Systems (4)	
CIS 450	Operating Systems (4)	
CIS 465	Translation of Computer Languages (4)	
CIS 470	Microprocessors and Microcomputers (4)	
CIS 471	Microprocessor Systems Applications (4)	
CIS 495	Special Topics (2-4)	
ECN 414	Engineering Economics (2)	
		8

Economics Requirement
The economics requirement may be met by completion of ECN 414 as a professional elective or by completion of ECN 100, 150, 200 or 201 as a part of the social science distribution requirement.

Free electives
For limitations on free electives see page 212. 8

Total 128

In addition to previously stated requirements, satisfactory completion of the program requires: a) an average grade of at least 2.00 for courses taken to fulfill the mathematics and science requirements, and for courses taken to fulfill the engineering core and professional subjects requirement; and b) that the 300-level engineering core courses and the professional subjects be completed with not more than two grades below 2.0 and not more than a total of three repeat attempts.

ENGINEERING CHEMISTRY

Program Advisers: *Joel Russell, Howard R. Witt*

The program in engineering chemistry, which is a joint offering of the School of Engineering and Computer Science and the College of Arts and Sciences, leads to the Bachelor of Science degree. It provides for in-depth study in chemistry along with basic preparation in engineering.

Program requirements for the Bachelor of Science degree in engineering chemistry are:

		Credits
General Education		24
Mathematics, Physics and Computer Science		
MTH 154-155	Calculus	8
MTH 254	Multivariable Calculus	4
APM 257	Introduction to Differential Equations	3
PHY 151-152	Introduction to Physics	8
CIS 327	Computer Techniques in Chemistry	2
		25
Chemistry		
CHM 144-145	General Chemistry	8
CHM 149	Chemistry Laboratory	2
CHM 234-235	Organic Chemistry	8
CHM 237	Separations and Spectroscopy Laboratory	2
CHM 342-343-344	Physical Chemistry	9
CHM 348	Physical Chemistry Laboratory	2
CHM 471	Macromolecular Chemistry	3
plus 6 credits from		
CHM 462-463	Inorganic Chemistry (4)	
CHM 472	Macromolecular Chemistry II (3)	
CHM 477	Molecular Laboratory (2)	
CHM 570	Industrial Chemistry (3)	6
		40
Engineering		
EGR 101	Introduction to Engineering	4
ECE 171	Introduction to Digital Logic and Microprocessors	4
ECE 222	Introduction to Electrical Circuits	4
ME 221	Statics and Dynamics	4
ME 331	Introduction to Fluid and Thermal Energy Transport	4
SYS 325	Lumped Parameter Linear Systems	3
plus 8 credits from		
ME 438	Fluid Transport (4)	
ME 448	Thermal Energy Transport (4)	
ME 455	Combustion Processes (4)	
ME 482	Fluid and Thermal Energy Systems (4)	
SYS 431	Automatic Control Systems (4)	8
		31
Free Electives		
For limitations on free electives see page 212.		8
	Total	128

In addition to the previously stated requirements satisfactory completion of the program requires an average grade of at least 2.00 in the courses taken to satisfy the engineering and chemistry requirements and in the courses prescribed for the mathematics, physics, and computer science requirement.

ENGINEERING PHYSICS

Chairperson: *Howard R. Witt*

The program in engineering physics, which is a joint offering of the School of Engineering and Computer Science and the College of Arts and Sciences, leads to the Bachelor of Science degree. It is intended for well qualified students who seek a broad education in physics and mathematics along with basic preparation in engineering.

Program requirements for the Bachelor of Science degree in engineering physics are:

		Credits
General Education		24
Mathematics and Science		
MTH 154-155	Calculus	8
MTH 254	Multivariable Calculus	4
APM 257	Introduction to Differential Equations	3
CHM 144-145 or (CHM 164-165)	General Chemistry	8
PHY 151-152	Introductory Physics	8
PHY 158 or 159	Physics Laboratory	2
PHY 317	Modern Physics Laboratory	2
*PHY 341 or (ECE 326)	Electronics	(4)
PHY 351	Intermediate Theoretical Physics	4
PHY 361	Mechanics I	4
PHY 371	Modern Physics	4
One of:		
PHY 331	Optics	
PHY 381	Electricity and Magnetism I	
PHY 472	Quantum Mechanics I	4
		51-55

*Students taking PHY 341 and planning to take advanced ECE courses should also take PHY 347. For these students PHY 347 may be counted as part of the technical elective requirement.

Engineering		
EGR 101	Introduction to Engineering	4
ECE 171	Introduction to Digital Logic and Microprocessors	4
ECE 222	Introduction to Electrical Circuits	4
ECE 326 or (PHY 341)	Electronic Circuit Design	(4)
ME 341	Thermodynamics	4
SYS 317	Engineering Probability and Statistics	3
SYS 325	Lumped Parameter Linear Systems	3
Plus three 4-credit, 400-level engineering electives of the same designation, at least two of which must be chosen from the list of approved design electives.		12
		34-38

Technical Electives (Additional 7 to 8 credits chosen from the following)

MTH 256	Introduction to Linear Algebra (3)
APM 263	Discrete Mathematics (4)
PHY 318	Nuclear Physics Laboratory (2)
PHY 331	Optics (4)
PHY 372	Nuclear Physics (4)
PHY 381	Electricity and Magnetism I (4)
PHY 418	Modern Optics Laboratory (2)
PHY 472	Quantum Mechanics I (4)
CIS 131	Introduction to Computer Science II (4)
ME 331	Introduction to Fluid and Thermal Energy Transport (4)
ME 361	Mechanics of Materials (4)
Any EGR, ECE, ME, or SYS 400-level courses	

7-8

Free Electives

For limitations on free electives see page 212. 8

Total 128

In addition to the previously stated requirements satisfactory completion of the program requires an average grade of at least 2.00 in the mathematics and science courses and also in the engineering and computer science courses taken to meet program requirements.

Approved design electives for engineering physics (Two courses are required as part of the engineering core of the degree program.)

ECE 426	Advanced Electronics (4)
ECE 437	Introduction to Communication Electronics (4)
ECE 470	Microprocessors and Microcomputers (4)
ME 454	Solar and Alternate Energy Systems (4)
ME 461	Analysis and Design of Mechanical Structures (4)
ME 482	Fluid and Thermal Energy Systems (4)
ME 486	Machine Design (4)
SYS 410	Systems Optimization and Design (4)
SYS 483	Production Systems (4)

An approved EGR 490 or PHY 490 may count for one of the design electives.

Students should note that some approved design electives have prerequisites that are not automatically met by completion of the required courses in engineering. Thus, careful selection of technical electives is essential to preserve choice in later selection of design electives.

COMPUTER AND INFORMATION SCIENCE

Chairperson: *Glenn A. Jackson*

The program in computer and information science leads to the degree of Bachelor of Science. It prepares the student for professional practice in systems programming, software design, and computer applications or for graduate study in computer science by providing a solid foundation based on the organization, processing and display of information. Through choice of a minor, a student can broaden his/her area of expertise to include such diverse subjects as: computer engineering, business applications, management science, or any other area that utilizes the computer in everyday operations.

Program requirements for the Bachelor of Science degree in computer and information science are:

		Credits
General Education		24
Mathematics		
MTH 154-155	Calculus	8
MTH 256	Introduction to Linear Algebra	3
APM 263	Discrete Mathematics	4
STA 226	Applied Statistics (or approved substitute)	4
		19
Science (One of the following sequences)		
CHM 144-145	General Chemistry	
CHM 164-165	General Chemistry	
PHY 151-152	Introductory Physics	
BIO 190-200	Biology	
		8
Computer and Information Science Core		
CIS 130-131	Introduction to Computer Science	8
CIS 280	Introduction to Computer Organization and Assembly Programming	4
CIS 335	Programming Languages	4
CIS 342	Introduction to Information Structures	4
CIS 450	Operating Systems	4
		24

Computer and Information Science Electives 20 credits chosen from the list of courses approved as computer and information science electives. At least 8 credits must be at the 400-level and an additional 4 credits at the 300-level or above.	20
Approved Minor	20
Free Electives	9
Total	124

Satisfactory completion of the program requires: a) an average grade of at least 2.00 for the required courses in mathematics, and for the computer and information science and elective courses, and for the approved minor; and b) that not more than two grades below 2.0 be presented, and not more than three repeat attempts be used, in completing the computer and information science elective requirement beyond CIS 130, 131 and 280.

Approved Computer and Information Science Electives.

Courses approved as electives for the computer and information science program include: CIS 220, 248, 340, 358; all 400-level CIS courses but not more than 4 credits of CIS 490; ECE 378, 418, 464, 470, 471; SYS 469, 483. Not more than 4 credits of course work may be simultaneously counted toward the CIS major and the computer engineering minor requirements.

Approved Minor

Computer and information science students must complete an approved minor with an average grade of at least 2.00. Approved minors are in:

Computer Engineering	Chemistry	Economics
Applied Mathematics	Linguistics	Finance
Applied Statistics	Physics	Management
Biology	Accounting	Quantitative Methods

Other minors or alternate programs may be approved by petition. Each student must apply to the coordinator of the program for assistance in planning the minor and to obtain certification. Courses used to satisfy courses for a minor may also be used to meet other program requirements, except that CIS courses may not be used towards both major and minor requirements. Also students may not receive credit for both CIS 470 and ECE 470 and for both CIS 471 and ECE 471.

Although it is not a requirement, it is recommended that computer and information science majors complete PHL 370 Symbolic Logic.

CONCENTRATIONS AND MINORS

Students who wish to add an established minor or concentration or otherwise participate in an interdepartmental program must apply to the coordinator of the appropriate program committee or of the department involved for admission and assistance in planning a program.

Described below are the requirements for the minors and concentrations that have been approved for engineering and/or computer and information science students. Students planning a medical, dental, or optometry career are advised to take the concentration in preprofessional studies in medicine, dentistry, and optometry.

Computer Engineering: (R.E. Haskell, Coordinator) For computer and information science majors. To obtain the minor in computer engineering a student must complete the following courses (20 credits) with an average grade of at least 2.00: ECE 171, 222, 326, 378, and one course from ECE 418, 426, 437, 464, 470, 471, 484, 487, and EGR 490.

Applied Mathematics: (Jerrold W. Grossman, Coordinator) For engineering and computer and information science majors. To obtain a minor in applied mathematics, the student must complete the following courses with a grade of 2.0 or better in each: MTH 254, MTH 256, APM 331, STA 226 (or another approved statistics course), and two other courses chosen from APM 257, APM 263, and courses labeled MTH, APM, STA, or MOR with a number of 300 or higher (with the exception of MTH 414 and 497). Students should consult an adviser in the Department of Mathematical Sciences in planning their program.

Applied Statistics: (Harvey Arnold, Coordinator) For engineering and computer and information science majors. To obtain a concentration in applied statistics the student must complete at least 16 credits in statistics with an average grade of at least 2.00 including STA 226 (or other approved introductory course), STA 322, STA 323 and STA 324. Students should consult an adviser in the Department of Mathematical Sciences in planning their programs.

Biology: (Nalin J. Unakar, Coordinator) For computer and information science students. To obtain a liberal arts minor in biology the student must take a minimum of 20 credits in biology, including BIO 190, 195 and 200, and at least 8 credits in courses numbered 300 or higher.

Chemistry: (Paul Tomboulian, Coordinator) For computer and information science students. To obtain a liberal arts minor in chemistry (26 credits) the student must take CHM 144-145, 149, 225, 203-204 or 234-235, and 342. For engineering students to obtain the minor in chemistry an engineering student must complete the following courses (24 credits) with an average grade of 2.00 or better: CHM 144, 145, 149, 203, 342, 471, 570.

Environmental Studies: (Paul Tomboulian, Coordinator) For engineering students. To obtain a concentration in environmental studies an engineering student must complete the following courses (24 credits): a) CHM 203, ENV 308, EGR 407; b) 8 credits of electives chosen from ENV 362, 372, 373, 481, and BIO 301; and c) 4 credits of EGR 490 or 494 on an approved environmental engineering topic.

Linguistics: (William Schwab, Coordinator) For computer and information science students. To obtain the liberal arts minor in linguistics the student must complete the following courses (20 credits) with an average grade of at least 2.00: a) ALS 176 or one 200-level LIN course; b) LIN 301; c) at least 12 credits at the 300 or 400 levels; and d) at least 4 credits at the 400 level.

Physics: (Abraham Liboff, Coordinator) For computer and information science students. To obtain the liberal arts minor in physics a student must complete 20 credits including the following courses with an average grade of at least 2.00: PHY 151-152, 158 or 159, and at least 8 credits in physics numbered 300 or higher.

Accounting: (David D. Sidaway, Coordinator) For computer and information science students. To obtain the minor in accounting the student must complete the following courses (20 credits) with an average grade of at least 2.00: ACC 200, 210, and 12 additional credits in accounting (ACC) courses for which the student has the prerequisites.

Economics: (David P. Doane, Coordinator) For engineering and computer and information science students. To obtain the minor in economics offered by the School of Economics and Management engineering and computer and information science majors must complete the following courses (18-20 credits) with an average grade of at least 2.00: a) ECN 150 or ECN 210 or ECN 200-201; and b) 12 additional credits in economics (ECN) courses for which the student has the prerequisites (16 additional credits if the student took ECN 150).

Finance: (Karl D. Gregory, Coordinator) For computer and information science students. To obtain the minor in finance the student must complete the following courses (22 credits) and any prerequisites required: ACC 200, QMM 250, FIN 322, and 8 additional credits of finance (FIN) courses. An average grade of at least 2.00 is required.

Management: (Leonard C. Schwartz, Coordinator) For engineering and computer science students. To obtain the minor in management a student must complete the following courses (22-24 credits) with an average grade of at least 2.00: ECN 210 or ECN 200-201, ACC 200, ORG 330, and 8 additional 300- or 400-level electives (ACC, FIN, MGT, MIS, MKT, ORG, QMM) for which the student has the prerequisites.

Quantitative Methods: (David P. Doane, Coordinator) For computer and information science students. To obtain the minor in quantitative methods (19-22 credits) the student must complete the following courses with an average grade of at least 2.00: a) QMM 250, STA 226 or SYS 317; b) 8 additional credits of QMM courses; and c) 8 additional credits of QMM, MOR, MIS, or STA courses.

REQUIREMENTS FOR ADMISSION TO COOPERATIVE EDUCATION PROGRAM

Students interested in the cooperative education program in engineering or computer and information science should apply through the Office of the Cooperative Education Coordinator, Room 159 Dodge Hall. To be admitted a student must:

1. be admitted to major standing in an engineering major or in computer and information science. In addition engineering students must have completed the mathematics sequence appropriate to their elected major.
2. have a cumulative grade point average of at least 2.80.
3. have the approval of the School of Engineering and Computer Science, the cooperative education coordinator for the school, and the employer.

Transfer students must have completed at least one semester of full-time study at Oakland University before acceptance into the program, including at least 8 credits of course work in the major.

Conditions for Cooperative Education Students

To remain in good standing in the cooperative education program the student must:

1. complete alternate semesters of full-time study and full-time work experience.
2. complete at least 12 credits of work appropriate to his/her elected major during each semester of study and maintain a cumulative grade point average of at least 2.80.
3. complete EGR 391 Cooperative Engineering or CIS 391 Cooperative Computer and Information Science during the semester following each training assignment.
4. submit a satisfactory training report within four weeks of the beginning of the semester following each training assignment as a part of the requirements for EGR 391 or CIS 391.
5. receive a satisfactory employer evaluation for each training assignment.

The grade assigned in EGR 391 or CIS 391 will give weight to the employer's evaluation, the student's written training report, the progress interview with the coordinator, and the student's participation in regularly scheduled classes.

Students not meeting the conditions for good standing will be liable for dismissal from the cooperative education program.

MINOR IN COMPUTER AND INFORMATION SCIENCE FOR NONENGINEERING MAJORS

Coordinator: *Glenn A. Jackson*

The School of Engineering offers a minor in computer and information science to students in nonengineering majors. Many combinations are feasible.

Requirements for majors in the College of Arts and Sciences are 20 credits in CIS courses, including: a) CIS 122 or 123 or 130; b) two courses from CIS 131, 220, 221, 280; and c) 8 credits from CIS courses labled 300 or higher (only 4 credits of CIS 490 may be applied toward this requirement). Students seeking a minor will need to obtain permission from the office of the dean, School of Engineering and Computer Science for clearance to register for 300- and 400-level courses in CIS.

COURSE OFFERINGS IN THE SCHOOL OF ENGINEERING

The course offerings in engineering are listed under the following designations: EGR—Engineering; ECE—Electrical and Computer Engineering; ME—Mechanical Engineering; SYS—Systems Engineering. The computer and information courses carry the CIS designation. To register for 300- and 400-level courses in the School of Engineering and Computer Science students must have been admitted to major standing.

COURSE OFFERINGS IN ENGINEERING

EGR 101 Introduction to Engineering (Core) (4)
An introduction to the principles of engineering: communications, professional practice, design, analysis and computation. Laboratory work includes the use of microcomputers applied to design problems in computer, electrical, mechanical and systems engineering. Corequisite: MTH 154.

EGR 106 Machine Shop Practice (2)
Introduction to basic machining principles and machine shop techniques, uses of the lathes, milling machines, and other power machines. Emphasis is on practical experience.

EGR 108 Engineering Drawing (2)
Introduction to the use of drafting instruments and procedures. Geometric construction and projection, dimensioning, tolerancing, and graphic symbols.

EGR 290 Engineering Project (2 to 4)
Introductory laboratory project. Topic must be approved prior to registration. May be taken more than once. Offered every semester.

EGR 294 Independent Study (2 to 4)
Introductory laboratory project. Topic must be approved prior to registration. May be taken more than once. Offered every semester.

EGR 295 Special Topics (2 to 4)
Introductory and intermediate level of study of special topics in engineering. May be taken more than once.

EGR 360 History of Automobile Design (4)
Identical with AH 360.

EGR 363 Modern Architecture and Urban Design (4)
Identical with AH 363.

EGR 372 Properties of Materials (Core) (4)
The atomic, molecular, and crystalline structure of solids, including a description of x-ray analysis, metallography, and other methods for determining structure; correlation of structure with the electric, magnetic, and mechanical properties of solids. With laboratory. Prerequisite: CHM 144, PHY 152, major standing.

EGR 391 Cooperative Engineering (1)
A seminar course for cooperative engineering students to be taken in the semester following

each training assignment. A report of the training assignments must be submitted within four weeks of the beginning of the course. May be repeated up to 3 times.
Prerequisite: Consent of the Cooperative Education Coordinator.

EGR 400 Engineering Seminar (1)
Lectures and discussions conducted by faculty, graduate students, and speakers from industry and other universities. Emphasis is on current research interests of the school. May be taken twice.

EGR 407 Environmental Engineering (4)
A design course that includes consideration of resources and recycling in terms of available energy; economic-thermodynamic combined situations are illustrated through field trips and guest speakers. A group or individual project is required.
Prerequisite: ME 341.

EGR 490 Senior Engineering Project (2 to 8)
Independent work on advanced laboratory projects. Topic must be approved prior to registration. May be taken more than once.

EGR 494 Independent Study (2 to 4)
Advanced individual study in a special area. Topic must be approved prior to registration. May be taken more than once.

EGR 495 Special Topics (2 to 4)
Advanced study of special topics in engineering. May be taken more than once.

COURSE OFFERINGS IN ELECTRICAL AND COMPUTER ENGINEERING

For additional related courses students should refer to the course offerings in Systems Engineering (SYS) and Computer and Information Science (CIS).

ECE 171 Introduction to Digital Logic and Microprocessors (Core) (4)
Introduction to digital logic and microprocessors. Machine language programming of microprocessors. Use of microcomputers for laboratory data acquisition and analysis.
Prerequisite: EGR 101 or CIS 130, and MTH 154.

ECE 222 Introduction to Electrical Circuits (Core) (4)
Logic circuits, introduction to logic gates, and Boolean algebra; resistive DC circuits, Kirchhoff laws, Thevenin and Norton theorems, transients in RL and RC circuits, and reactance. With laboratory.
Prerequisite: MTH 155 and ECE 171.

ECE 326 Electronic Circuit Design (4)
Analysis and design of solid-state electronic circuits. Piecewise linear, graphical, and small signal analysis of diode circuits; applications. Bipolar and field effect transistor circuit analysis: v-i characteristics, graphical analysis, load lines, biasing, amplification, hybrid parameters, and small signal analysis; blocking and coupling capacitors. Loaded two-ports and properties of CE, CB, and CC stages. Multistage amplifier design. Introduction to operational amplifier circuits and applications. With laboratory.
Prerequisite: ECE 222, MTH 155, PHY 152 and major standing.

ECE 378 Design of Digital Systems (4)
Development of the components and techniques at the gate and flipflop level needed to design digital systems for instrumentation, communication, control, and related fields. Topics include combinational logic circuits, memory devices, sequential circuits, and organization of digital systems.
Prerequisite: ECE 326.

ECE 418 Switching Theory and Sequential Machines (4)
Combinational switching functions, minimization and analysis, implementation using relay circuits, TTL, CMOS and other popular logic families. Symmetric functions, threshold logic, and interative circuits. Analysis and synthesis of clock mode, level mode and pulse mode sequential circuits. Design and implementation of digital systems. Turing machines and finite automata.
Prerequisites: ECE 378, APM 263.

ECE 426 Advanced Electronics (4)
Advanced operational amplifier circuits. Performance characteristics, offset compensation, bandwidth limitations. Inverters, buffers, differential amplifiers; lowpass, highpass, bandpass, and notch filters; sensitivity analysis. Audio power amplifiers: feedback, distortion reduction, bandwidth. Bipolar and field effect transistors at high frequencies: gain-bandwidth calculations from the hybrid-pi equivalent circuit. Tuned circuits and resonant loaded amplifiers. With laboratory.
Prerequisites: ECE 326, SYS 325.

ECE 437 Introduction to Communication Electronics (4)
Analysis and design of analog and digital electronic data communication systems. Spectral analysis; amplitude and angle modulation; demodulation techniques; filtering; frequency- and time-division multiplexing. The sampling theorem and digital data transmission. Introduction to detection theory. With laboratory.
Prerequisites: SYS 325, ECE 326.

ECE 445 Electric and Magnetic Fields (4)
Fundamentals of electric and magnetic fields. Fundamental laws, basic postulates, Maxwell's equations, electrostatics, magnetic fields of steady currents, time varying fields, waves, transmission lines, reflection and refraction of interfaces, guided waves, radiation, and elementary radiators. Use of computers to solve practical problems.
Prerequisite: SYS 325, MTH 254.

ECE 464 Computer Organization and Architecture (4)
Stored program computers, organization of arithmetic-logic unit, central processing unit, main and auxiliary memory, input/output units and exercises in microprogramming. Central and distributed processing computer networks, architecture of some main frame computers and some microprocessors, parallel and pipeline processing.
Prerequisites: CIS 280, ECE 378.

ECE 470 Microprocessors and Microcomputers (4)
Introduction to microprocessors and microcomputers; the CPU on a chip; interfacing microprocessors with external systems; programming considerations; logic design with microcomputers; hands-on laboratory experience. Credit may not be earned for both ECE 470 and CIS 470.
Prerequisite: ECE 378 or 418.

ECE 471 Microprocessor Systems Applications (4)
The design of microprocessor-based equipment and systems. Interfacing techniques; serial asynchronous and synchronous communications methods; direct memory access, A/D and D/A converters, peripheral interface devices, computer graphics. Project-oriented course. Credit may not be earned for both ECE 471 and CIS 471.
Prerequisite: ECE 470.

ECE 484 Electronic Devices (4)
Basic concepts of quantum mechanics as applied to electronic devices. Semiconductor physics, including carrier densities, diffusion and conduction mechanisms. Theory of P-N junction and junction devices. Also included are FET, CCD, and MOS devices. Fabrication and fundamentals of integrated circuits.
Prerequisites: EGR 372 and ECE 326.

ECE 487 Integrated Electronics (4)
Crystal growth—bulk and epitaxial techniques. Fabrication of P-N junctions. Ion implantation. Integrated circuits technology; semiconductor materials; tunnel diodes, photodiodes; light-emitting diodes; semiconductor lasers; switching devices.
Prerequisite: ECE 484.

COURSE OFFERINGS IN MECHANICAL ENGINEERING

ME 221 Statics and Dynamics (Core) (4)
Introduction to mechanics, particle statics and dynamics, equilibrium, analysis of structures, and dynamics of rigid bodies about fixed axes. With laboratory.
Prerequisites: MTH 155 and CIS 130. Corequisite: PHY 151.

ME 331 Introduction to Fluid and Thermal Energy Transport (4)
Fundamentals of fluid mechanics; conservation principles; viscous and inviscid flow; laminar and turbulent flow; boundary layer theory; heat transfer; fundamental modes; conduction, convection, and thermal radiation, and applications to problems of engineering interest. With laboratory.
Prerequisite: ME 341 and major standing.

ME 341 Thermodynamics (Core) (4)
Introduction to thermal energy, thermodynamic properties and equilibrium, basic physical laws of thermodynamics, entropy and its consequences, reversible energy transfers in both open and closed systems, and application of thermodynamics to systems involving energy conversion and transport. With laboratory.
Prerequisites: CHM 144 or 164 and major standing. Corequisite: MTH 254 or APM 263.

ME 361 Mechanics of Materials (4)
Introduction to the mechanics of deformable bodies: distribution of stress and strain in beams, shafts, columns, pressure vessels, and other structural elements. Yield and fracture criteria of materials with applications to design. With laboratory.
Prerequisites: EGR 372, ME 221, and major standing.

ME 421 Dynamics (4)
Kinematics and dynamics of systems of particles. General theory of rotating coordinate frames, work-energy principle, relative motion, Lagrange's equations. Introduction to rigid body motion.
Prerequisite: ME 221 and SYS 325.

ME 438 Fluid Transport (4)
Continued study of the fundamentals of fluid mechanics and their applications, angular momentum principle; generalized study of turbomachines, potential flow of inviscid fluids, laminar and turbulent boundary layer theory, dimensional analysis and similitude, compressible flow.
Prerequisites: ME 331, 341, and APM 257.

ME 448 Thermal Energy Transport (4)
Continued study of basic concepts, properties, and descriptions of three modes of heat transfer (conduction, convection, and thermal radiation), theoretical, numerical, and analogical methods of steady, transient, and single- and multi-dimensional problems. Includes laboratory.
Prerequisites: ME 331, 341 and APM 257.

ME 454 Solar and Alternate Energy Systems (4)
The analysis and design of energy conversion systems. Principles of optimum power transfer and efficiency. Availability analysis of systems for heating, chemical conversion and electrical generation. Emphasis on solar applications and alternative energy technology.
Prerequisites: ME 331 and ME 341.

ME 455 Combustion Processes (4)
Thermodynamics of state, mixtures, Gibbs free energy; chemical equilibrium, stoichiometry; chemical reaction kinetics, reaction rate, mixing, catalyst action; fluid vaporization, condensation, atomization; applications, spark and compression ignition, continuous combustion.
Prerequisite: ME 341.

ME 456 Energy Systems Analysis (4)
Thermodynamics of non-reacting mixtures, psychrometry. Concepts of availability and irreversibility. Power cycles; vapor, gas and combined cycles. Reciprocating engines and compressors. Refrigeration and heat pump cycles; vapor compression system, air-conditioning. Thermodynamics of reacting mixtures; combustion.
Prerequisite: ME 341.

ME 461 Analysis and Design of Mechanical Structures (4)
Use of methods of advanced mechanics of materials to design mechanical structures to meet elastic strength criteria.Topics include plates and shells, torsion of noncircular cross-sections, curved and composite beams, energy methods, and mechanical stability.
Prerequisite: ME 361.

ME 472 Mechanical Properties of Materials (4)
Mechanical behavior of materials, with emphasis on defect structures in metals. True stress-

strain properties of real materials. Plastic deformation and fracture of materials. Theories of yield and fracture strength. Cyclic loading behavior including cumulative damage. Creep, temperature, and rate-of-loading effects.
Prerequisite: ME 361.

ME 482 Fluid and Thermal Energy Systems (4)
Study of systems involving fluid and thermal phenomena. Includes conventional and unconventional energy conversion, fluid and thermal energy transport, and applications in environmental pollution. Analysis, design, and optimization of systems are emphasized using basic integral, differential, and lumped parameter modeling techniques. The course bridges conventional engineering design disciplines.
Prerequisites: ME 331 and 341 and APM 257.

ME 486 Machine Design (4)
Analysis and design of machine elements and systems. Stress, strain, strength, and cost considerations. Design optimization criteria. Applications of fasteners, shrink-fits, springs, bearings, lubrication, power transmitting elements, and complex structures subjected to static and/or dynamic loads.
Prerequisite: ME 361.

COURSE OFFERINGS IN SYSTEMS ENGINEERING

For related courses students should refer to the course offerings in electrical and computer engineering (ECE).

SYS 317 Engineering Probability and Statistics (Core) (3)
Elements of probability for discrete and continuous random variables. Examples and problems from quality control, communication, reliability, and other engineering areas.
Prerequisite: Major standing. Corequisite: MTH 254 or 256.

SYS 325 Lumped-Parameter Linear Systems (Core) (3)
Laplace transform methods, transfer functions, and impedance concepts in the analysis of electrical and mechanical lumped-parameter linear systems. Natural and forced behavior of first- and second-order systems. Relationship between pole-zero pattern and dynamic response. Frequency response methods. Computer techniques for analysis and design.
Prerequisites: ECE 222, APM 257, and major standing.

SYS 410 System Optimization and Design (4)
Computer techniques for systems optimization and design. Direct and indirect search techniques including gradient methods and the Newton-Raphson algorithm, linear programming. The course emphasizes a capstone design experience involving systems modeling, simulation and optimal design.
Prerequisites: SYS 469, CIS 418.

SYS 422 Intelligent Robotics (4)
Overview of industrial robots and components. Geometry of robots and control. Machine intelligence. Programming languages for motion and vision. Laboratory experience with computer controlled robots.
Prerequisite: SYS 325.

SYS 431 Automatic Control Systems (4)
Performance specifications for automatic control systems. Modeling transfer functions, signal flow graphs and Mason's gain formula. Static error coefficients, stability theory and Routh's criterion. The root locus method. Frequency response and the Nyquist criterion. Design of compensation networks.
Prerequisite: SYS 325.

SYS 433 Modern Control System Design (4)
Classical design methodology for control systems, state variable modeling, linear input-output systems, modal analysis, state feedback control, system design by pole-placement methods. The course emphasizes a capstone design experience in which the student is required to model, design, implement and evaluate a controller for a physical system.
Prerequisite: SYS 431.

SYS 458 Electrical Energy Systems (4)
Generation and transmission of electrical energy systems. Analytical methods for solution of

planning/operational problems with computer utilization. Analysis of synchronous machines, transformer excitation, prime mover governing, transmission networks and loads. System dynamic performance under disturbance conditions, line switching, and parameter variations with attention to frequency and voltage control strategies.
Prerequisite: SYS 325.

SYS 463 Foundations of Computer Aided Design (4)
The design of computer graphics software for electrical, mechanical and systems engineering. Raster graphics fundamentals, fill algorithms, transformations, curve generation, user input techniques, and 2-D animation. Application programs using data structures are written in PASCAL.
Prerequisite: CIS 342.

SYS 469 Simulation in Engineering (4)
Basic modeling and simulation methodology for discrete and continuous systems. The selection of input parameters and probability distributions. On-line user interactive graphical displays for output analysis and validation.
Prerequisite: CIS 342.

SYS 483 Production Systems (4)
Computer manufacturing systems which control the flow of manufactured products from forecast to ordering: parts explosion, bill-of-material, Pareto distribution and inventory control, lead times, shop floor control, etc. All illustrated by a computer system.
Prerequisite: SYS 317.

SYS 485 Statistical Quality Control (4)
Fundamentals of statistical quality control with particular emphasis on applications. Control charts for mean and range for variable, control charts for attributes, cusum charts, runs and other process quality monitoring topics. Single, double, and multiple sampling inspection plans, sequential sampling, and related topics.
Prerequisite: SYS 317.

COURSE OFFERINGS IN COMPUTER AND INFORMATION SCIENCE

For additional computer courses students should refer to the course offerings in Electrical and Computer Engineering (ECE).

CIS 121 Introduction to Computer Programming (2)
An introduction to the FORTRAN programming language. Topics covered include data storage and manipulation; simple and formatted I/O; control structures; subprogramming. Emphasis is on engineering and scientific applications.
Prerequisite: Ability to program in at least one high level language.

CIS 122 BASIC Programming (4)
An introduction to computer programming and problem solving using the BASIC language on personal computers. Graphics applications are used to develop programming skills. Other application areas include string manipulation and word processing; data processing and file operations; interactive programming techniques. No credit granted after completion of CIS 123 or CIS 130.
Prerequisite: MTH 103 or equivalent.

CIS 123 BASIC Programming (4)
An introduction to computer programming and problem solving using the BASIC language. Elementary applications are used to develop programming skills and may include: file operations; interactive programming techniques. No credit granted after completion of CIS 122 or CIS 130.
Prerequisite: MTH 103 or equivalent.

CIS 130 Introduction to Computer Science I (4)
Introduction to digital computers and digital computation, and algorithmic programming language such as PASCAL. Students lacking a good background in high school mathematics should enroll in CIS 122 or 123. Offered every semester.
Prerequisite: MTH 104 or equivalent.

CIS 131 Introduction to Computer Science II (4)
Introduction to numerical methods; data structures and nonnumerical applications; another important algorithmic language such as PL/1. Offered fall and winter semesters.
Prerequisite: CIS 130 and MTH 154 or MTH 122.

CIS 220 Computer-Based Information Systems I (4)
Introduction to business data processing using the COBOL programming language. Emphasis is on structured programming and top-down development in an interactive environment.
Prerequisite: Ability to program in at least one high level language.

CIS 221 Computer-Based Information Systems II (4)
Continuation of CIS 220. Advanced capabilities of the COBOL language are studied. Topics include report writer, relative, direct, and indexed files, data dictionaries, debugging. Sophisticated business data processing systems will be programmed. Credit applies to graduation but not the major.
Prerequisite: CIS 220 or equivalent.

CIS 224 Computer Awareness and Personal Computing (4)
Introduction to computers and their role in education. The impact of personal computers on education at the elementary and secondary school levels. How computers can be used for computer-aided instruction and computer-managed instruction. A look at the future role and social impact of personal computers. Enrollment limited to majors in the School of Human and Educational Services.

CIS 248 Systems Analysis and Design (4)
Function and responsibility of the systems analyst, including techniques in interviews, charts, design, analysis, development, presentation, and implementation. Other topics discussed include cost/benefit analysis, EDP auditing, COM, and word processing.
Prerequisite: CIS 220

CIS 280 Introduction to Computer Organization and Assembly Programming (4)
Introduction to the internal structure and operation of a digital computer. Hardware organization, machine language, instruction execution, digital arithmetic, addressing techniques, and digital representations of data. Assembly language, macro- and micro-programming, program segmentation, and linking and loading vs. relocatable modules.
Prerequisites: One of CIS 130, 122 or 123 and MTH 154 or 122.

CIS 294 Independent Study (2 to 4)
Introductory and intermediate level individual study in a special area of computer science. Topic must be approved prior to registration.

CIS 295 Special Topics (2 to 4)
Introductory and intermediate level study of special topics in computer science. May be taken more than once.

CIS 325 Computer Usage in Education (4)
Examination of computer-assisted and computer-managed instruction as they relate to learning in the classroom. The student will gain experience in the programming language BASIC. This skill will be applied to the creation of programs in a hands-on experience with microcomputers. Enrollment is limited to majors in the School of Human and Educational Services.
Prerequisites: ED 215, 224, 345 and CIS 224, or permission of instructor.

CIS 327 Computer Techniques for Chemistry (2)
Computer programming and applications designed to acquaint chemistry students with problem-solving techniques and use of computers in data processing.
Prerequisites: MTH 154 and CHM 225. Corequisite: CHM 441.

CIS 335 Programming Languages (4)
Fundamental concepts in programming languages studied by means of comparative language analysis. Several high-level languages are studied in some depth and their approaches to the fundamental issues in language design are compared. Issues include: data types and structures; control structures; binding times; run-time storage organization; flexibility versus efficiency; compiled versus interpreted languages; strong versus weak typing; block structure and scope of names.
Prerequisites: CIS 131, 280, MTH 256 and major standing.

CIS 340 File Systems Design (4)
Study of hardware configurations and software systems design for data-oriented applications. Characteristics of mass-storage devices and the impact of the characteristics on data processing algorithm design; standard file access techniques; file design for data processing applications.
Prerequisites: CIS 131, 280 and major standing.

CIS 342 Introduction to Information Structures (4)
Elementary data structures and their application in computer programming. Linear lists, arrays trees, forests and generalized lists and their implementation using sequential and linked storage. Recursive and nonrecursive algorithms for representative data structure operations. Searching, sorting, hashing and elementary memory management.
Prerequisites: CIS 131, 280, APM 263 and major standing.

CIS 358 Microcomputer Systems Software (4)
Microprocessor architecture, machine code, assembly language design and programming. Detailed design of basic systems such as I/O subroutines, monitors, text editors, assemblers, disassemblers, disk I/O, printer control, traces, relocators and hardware checkout. Software development using treaded interpretive languages.
Prerequisite: CIS 280, major standing.

CIS 391 Cooperative Computer and Information Science (1)
A seminar course for cooperative computer and information science students to be taken in the semester following each training assignment. A report of the training assignment must be submitted within four weeks of the beginning of the course. May be repeated up to 3 times.
Prerequisite: Consent of the Cooperative Education Coordinator.

CIS 413 Pattern Recognition (4)
Applications of digital computer techniques to a variety of problems in pattern recognition; linear decision functions, Bayes decision theory, maximum likelihood estimation, multivariate normal features, nonparametric techniques, feature selection, clustering, and unsupervised learning. Applications include industrial inspection and the processing of remote sensing, biomedical, and pictorial data.
Prerequisites: MTH 256, CIS 342, and a course in statistics.

CIS 416 Artificial Intelligence (4)
Introduction to artificial intelligence including: (1) current techniques in AI for knowledge representation and use, search methods, means-end analysis, network systems, production systems, frames, expert systems, genetic and other learning algorithms; (2) existing applications of AI with MYCIN, NETL, DENDRAL, checker player, chess player, natural language understanding; (3) an AI project requiring the creation of a working intelligent system in the student's area of interest.
Prerequisites: CIS 335, CIS 342 and major standing.

CIS 417 Applied Numerical Methods: Approximations (4)
Propagation of errors; classical methods for the solution of non-linear equations, summation of series, approximation of functions, numerical integration, numerical solution of differential equations and the Fast Fourier Transform. Emphasis on student development of general purpose subroutines for use in engineering and scientific applications.
Prerequisites: CIS 131, MTH 254 or 256 and major standing.

CIS 418 Applied Numerical Methods: Matrix Methods (4)
Systems of linear and nonlinear equations, eigenvalue problems, optimization methods, statistical methods.
Prerequisites: MTH 256, CIS 131 and major standing.

CIS 438 Programming Methodology (4)
Systematic approach to the design and analysis of computer programs. Program development cycle; semantical analysis of programs; program control structures and structured programming; abstract data structures; top-down step-wise refinement programming synthesis; testing; program metrics.
Prerequisite: CIS 342 and major standing.

CIS 439 Software Engineering (4)
The course will study, in a realistic environment, the techniques and methodology of developing

programs for user applications. Topics include specifications, top-down modular design, structured programming, documentation, testing, and verification.
Prerequisite: CIS 342.

CIS 445 Database Systems (4)
A study of the design and implementation of relational, hierarchical, and network database systems. Query/update data languages, conceptual data model; physical storage methods; database system architecture. Database security and integrity. Relational data base systems are emphasized. A project involving an on-line data base system is normally assigned.
Prerequisite: CIS 342.

CIS 450 Operating Systems (4)
Introduction to computer operating systems. A multi-programming operating system is viewed as a collection of cooperating processes designed for efficient use of the resources of the computer. Process control and synchronization, memory management, and device management are the major topics.
Prerequisites: CIS 342 and either CIS 335 or a knowledge of PASCAL.

CIS 455 Introduction to Computer Graphics (4)
An introduction to the software and hardware aspects of computer graphics systems. Vector and raster displays. Typical data structures and programming language requirements. Emphasis on real time interactive graphics systems.
Prerequisite: CIS 342.

CIS 459 System Programming (4)
Introduction to the organization of computer systems with equal emphasis on both hardware and software as complementary entities. Views a system as a multilayer, hierarchically nested family of virtual machines. Topics: machine language level; executive (kernel) level; assembly level; batch, multiprogramming and time-sharing systems; file systems; design of multilevel machines. Class project.
Prerequisite: CIS 342, major standing.

CIS 465 Translation of Computer Languages (4)
The student is directed through development of a compiler for a simple language that can be executed on a simulated computer. Topics include: overview of grammars and languages; scanning input strings from a source language; parsing via bottom-up methods; internal forms for source programs; semantic routines; and symbol table organization. The compiler is constructed in a high-level language such as PL/1.
Prerequisite: CIS 342. Corequisite: CIS 335.

CIS 470 Microprocessors and Microcomputers (4)
Introduction to microprocessors and microcomputers; the CPU on a chip; interfacing microprocessors with external systems; programming considerations; logic design with microcomputers; hands-on laboratory experience. Credit may not be earned for both CIS 470 and ECE 470.
Prerequisites: CIS 280 and 342.

CIS 471 Microprocessor System Applications (4)
The design of microprocessor-based equipment and systems. Interfacing techniques; serial asynchronous and synchronous communications methods; direct memory access, A/D and D/A converters, peripheral interface devices, computer graphics. Project-oriented course. Credit may not be earned for both CIS 471 and ECE 471.
Prerequisite: CIS 470.

CIS 490 Computer and Information Science Project (2 to 8)
Independent work on an advanced project. Topic must be approved prior to registration. May be taken more than once.

CIS 494 Independent Study (2 to 4)
Advanced individual study in a special area. Topic must be approved prior to registration. May be taken more than once.

CIS 495 Special Topics (2 to 4)
Advanced study of special topics in computer and information science. May be taken more than once.

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UNDERGRADUATE CURRICULUM

The School of Human and Educational Services (formerly School of Education) offers programs preparing students for careers in teaching as well as related human service activities. The programs include a Bachelor of Science in elementary education, teaching certification for secondary education, and a Bachelor of Science in human resources development with specializations in early childhood, youth and adult services, and training and development. An advising office is located in 402 O'Dowd Hall, telephone 377-4182.

The elementary education program enables a person to secure a Michigan teaching credential which certifies one to teach all subjects K-8, as well as the ninth-grade subject areas of one's major or minor fields.

Requirements for the Bachelor of Science Degree in Elementary Education

In order to complete the Bachelor of Science degree, the student must:

1. Complete 125 credits.
2. Complete at least 32 of these credits at Oakland University.
3. Complete at least 32 of these credits in courses at the 300 level or above.
4. Take the last 8 credits needed to complete the baccalaureate requirements at Oakland University.
5. Have a cumulative grade point average of at least 2.50.
6. Be in substantial compliance with all legal curricular requirements.
7. Satisfy the university requirement of proficiency in English composition as described in the policies and procedures section of this catalog.
8. Complete or place out of by examination MTH 109 or 101, 102.
9. Complete a general education requirement of 25 credits.
10. Complete a core program of 24 credits.
11. Complete the childhood curriculum studies program of 28 credits.
12. Complete ED 455.
13. Complete a major concentration of 36 credits, or two minor concentrations of 24 credits each, in a field outside of education.

General Education Requirement

The student must complete all the following courses: ENG 345, SCS 105, ALS 176, MTE 310, MTE 311, and MUS 149. In addition, the student must also complete one of the following courses: SS 100, AS 210, 220, 230, 240, 250, or 260.

Admission to the Elementary Education Undergraduate Program

Criteria for admission to the elementary education undergraduate program include a grade point average of 2.50 for a minimum of 12 graded credits, a minimum grade of 2.50 in ED 110, and completion of the application form for program admission. Students who wish to obtain a major concentration in early childhood education may substitute ED 220 and 221 for ED 110, if a minimum grade of 2.50 is obtained in both ED 220 and 221. Courses which carry no numerical or letter grades are excluded from the calculation of grade point average.

A candidate for the elementary education program whose grade in ED 110 is lower than 2.5 must repeat ED 110 with at least a 2.5 before applying for admission to the program. ED 110 and admission to the program are prerequisites for all other elementary education courses.

Continuation in the Program

Grades in courses submitted for credit in the elementary education program must be 2.00 or better. To continue in the program, the student must maintain a minimum overall grade point average of 2.50. Students whose grades fall below the minimum may request review by the curriculum instruction and leadership extended area before registration for the next semester. Students who do not request a review will be dropped from the program.

A student will not be permitted to register for student teaching unless he/she has attained an overall grade point average of at least 2.50 at the time of application. Students not meeting this requirement may request one review by the Curriculum Instruction and Leadership Extended Area before registering for student teaching.

Core Program

The student in elementary education must complete the following core program of 24 credits.

1. Foundation

ED 110	Public Education for the Future

2. Philosophy, Sociology, Anthropology, History

ED 210	Social and Philosophical Issues in Elementary Education

Plus any two of the following:

ED 350a	Educational Implications
ED 350b	History of Public Education
ED 350d	The Formal Education of Women
ED 350e	Schooling and Social Stratification
ED 350f	Education and Moral Development
ED 350h	Independent Study

3. Human Behavior

ED 215	Educational Psychology for Elementary Teachers
ED 355a	Identifying and Diagnosing Learning and Behavior Problems in Children
ED 355b	Testing and Assessment
ED 420	Interaction Laboratory for Teacher Development

Childhood Curriculum Studies

The student in elementary education must complete the following courses in childhood curriculum studies:

ED 331	Teaching of Reading
ED 333	Teaching the Language Arts

ED 414	Reading Appraisal in the Elementary Classroom
ED 455	Internship
MTE 312	Intuitive Euclidean Geometry
MTE 313	Geometry, Statistics, Probability
PE 163	Movement Education
PE 363	Teaching Physical Education and Play Activity, Preschool to Grade 3
or PE 364	Teaching Physical Education and Recreation Activity, Grades 4 through 6
SCS 305	Teaching Science to Children
SS 470	Teaching Social Studies in the Elementary School

MAJOR/MINOR CONCENTRATIONS

A major (36 credits) or two minor concentrations (24 credits each) are required as part of the elementary education program. These are academic areas in which the student specializes. Designated required courses previously listed can also be used as part of these concentrations. Modifications can be made with adviser approval.

MAJOR OPTIONS

Fine Arts

Music: MUT 111, 211, and MUS 320; one MUA or MUE course; 2 credits from MUS 328, 329, 330, 331, 334, 345, 347, 348; 8 credits from MUS 233, 380, 383, 395, 403, 404, 441, 494, 496, 499, and MUT 212, 311, 312, and 314. Cognate: MUS 401, AH 100, and THA 420.

Art History Concentration: AH 101, 100 and 208 or 300; AH 350, 364, and 490. Cognate: MUS 149, AH 100, and THA 420.

Theatre Concentration: THA 100, 267, and 350; and three courses from THA 213, 230, 363, 450, and 462. Cognate: MUS 149, AH 100, and THA 420.

Language Arts

English: ENG 345; two courses from ENG 200, 301, 303, 304, 306, and 250; ENG 210 or 310; one course from ENG 300, 301, 312, and 342; and ED 333. Cognate: ALS 176 or LIN 207; one course from SCN 320, 321, THA 350, and 420; and ED 332.

Linguistics: ALS 176, LIN 207, 301, and 303; one course from ALS 335, 340, and 360; and ED 333. Cognate: ENG 345; THA 350, or 420; and ED 332.

Speech Communication: SCN 201, 320, or 321, and THA 420; two courses from THA 230, 267, 350, 450, SCN 375, 376, 305, and JRN 200; and ED 333. Cognate: ALS 176 or LIN 207; ENG 345; and ED 332.

Mathematics

MTE 310, 311; STA 225 or 226; MTH 121-122 or MTH 154-155, MTH 104-105; and MTE 410. Cognate: MTE 312 and 313 and an additional 4 credits in mathematics (MTE 418 suggested). (Mathematics courses not on this list may be taken with permission of the Department of Mathematical Sciences Education Committee.)

Mathematics/Science

MTE 310 and 311; SCS 105; MTE 410; any biology course; any physics course; and any chemistry course. Cognate: MTE 312 and 313, SCS 305, and one mathematics course from the mathematics major or one science course from the science major. (The combined mathematics/science grouping certifies a person to teach science only in the ninth grade.)

History/Social Science

Afro-American Emphasis: AS 230; HST 292 and 366; PS 103; SOC 205 and 331; AH 208. Cognate: SS 470 and ED 350.

Disciplinary Approach: SS 100 and ECN 150; one course from AS 210, 220, 230, 240, 250, and 260; and four courses from HST 201, 202, 214, 215, PS 100, 131, and 305 (select at least one from history and at least one from political science). Cognate: SS 470 and ED 350.

Ethnic Studies: SS 100; five courses from AS 210, 220, 230, 240, 250, 260, AN 371, and AN 381; and SOC 331. Cognate: SS 470 and ED 350.

International Emphasis (African Studies): AS 230; HST 285; three courses from AN 251, 305, 352, SOC 381; and PS 333. Cognate: SS 470 and ED 350.

Latin American Studies: AS 250; five courses from AH 307, HST 261, 262, 363, 365, 366, 367, PS 335, AS 300, 385, 390; and AS 490. Cognate: SS 470 and ED 350.

Problems Approach: SS 100; five courses from HST 100, PS 110, PSY 130, 220, 271, 310, 325, AN 305, 310, 392, 460, SOC 205, 300, 331, 335, 336, 408 and 445; and one course from HST 491, PSY 480, AN 480, and SOC 480. Cognate: SS 470 and ED 350.

Urban Studies: SS 100; PS 305; and ECN 309; and HST 214-215, SOC 445. Cognate: SS 470 and ED 350.

Natural Science

BIO 104 and 105, or BIO 190 and 200; PHY 101-102, or PHY 106 and 107, or PHY 104 and 105 and CHM 104 and 140 or CHM 144-145. (The student is also strongly urged to take the accompanying 1-credit laboratories with each course, if available.) Cognate: SCS 105 and 305. Recommended: one course from ENV 308, ENV 312, and BIO 301.

Modern Language

Courses in the chosen language numbered 111 and 114; 112 and 115; 211 and 214; 212 and 215; and 216, 314, 316, 318, 320, and 355.

MINOR OPTIONS

Fine Arts

Music Concentration: MUT 111 or 211; MUS 320; and selection from major concentration. Cognate: same as major.

Art History Concentration: One course from AH 101; AH 350; and any other AH course. Cognate: same as major.

Theatre Concentration: THA 100, 267, and 350. Cognate: same as major.

Language Arts

English: ENG 345, ED 333, and ENG 210 or 310. Cognate: same as major.

Linguistics: ALS 176 or LIN 207; LIN 301; and ED 333. Cognate: same as major.

Speech Communication: SCN 321, SCN 201, and ED 333. Cognate: same as major.

Mathematics

MTE 310, 311, 410, and one other mathematics course from the major list. Cognate: same as major.

Mathematics/Science

MTE 310 and 311, SCS 105, and one science course from science major listing. Cognate: MTE 312, 313, SCS 305, and one mathematics course from mathematics major listing. The combined mathematics/science grouping certifies a person to teach science only in the ninth grade.

History/Social Science

Afro-American Emphasis: AS 230; HST 292 and 366; and PS 103. Cognate: SS 470 and ED 350.

Disciplinary Approach: SS 100; one course from AS 210, 220, 230, 240, 250, and 260; and two courses from HST 201, 202, 214, 215, PS 100, 131, and 305. Cognate: SS 470 and ED 350.

Ethnic Studies: SS 100; two courses from AS 210, 220, 230, 240, 250, 260, AN 371, and 381; and SOC 331. Cognate: SS 470 and ED 350.

International Emphasis—African Studies: AS 230; PS 333; HST 285; and AN 305. Cognate: SS 470 and ED 350.

Latin American Studies: AS 250; and three courses from AH 307, HST 261, 262, 363, 365, 366, 367, PS 335, AS 300, 385, and 390. Cognate: SS 470 and ED 350.

Problems Approach: SS 100; and three courses from HST 100, PS 110, PSY 130, 220, 271, 310, 325, AN 305, 310, 392, 460, SOC 205, 300, 315, 331, 335, 336, 445, and 408. Cognate: SS 470 and ED 350.

Urban Studies: SS 100, PS 100, PS 305, and ECN 309. Cognate: SS 470 and ED 350.

Natural Science

Any 4-credit biology course, any 4-credit physics course, and any 4-credit chemistry course. Cognate: SCS 105, 305, and one course from ENV 308, 312, or BIO 301.

Modern Languages

Twenty-four credits in one language. Required courses 314, 316, 318. In addition ED 428 must be taken.

Optional Professional Concentrations

Students wishing to enhance the quality and breadth of their teaching credential may use their free electives in a professional concentration. At present these are available in the following fields:

Early childhood
Human resources development
International education/semester abroad
Reading and language arts

TEACHING CERTIFICATION FOR SECONDARY EDUCATION

The College of Arts and Sciences offers Bachelor of Arts degrees with certification for secondary teaching credentials provided by the School of Human and Educational Services. Majors are available in the following subject areas:

Social Studies
Music

Teaching minors are available in the following subject areas:

Biology
Chemistry
English
History
Physics
*Political Science
*Psychology
Science

Mathematics	Social studies
Modern languages	*Sociology
Music	Speech (see communication arts)

*These minors are for social studies majors only

SPONSORSHIP FOR MICHIGAN TEACHER CERTIFICATION

The state Department of Education certifies teachers in Michigan. It issues provisional certification to candidates deemed qualified by colleges and universities. This provisional certificate can be converted to a continuing certificate after a period of teaching and additional studies (see graduate catalog). Oakland University sponsors its graduates for the Provisional Elementary and the Provisional Secondary Certificate if the following requirements are met:

1. Elementary Education: Listed under requirements for B.S. degree in elementary education.
2. Secondary Education: Completion of a university baccalaureate degree with a teaching major and one appropriate teaching minor; and successful completion of ED 100, 200, 344, 345, 338, 427, 428. Social studies majors must also complete ED 370 and 454.
3. Elementary and Secondary Education: Completion of ED 455 (internship) with a grade of 2.50 or better.

Undergraduate students applying for state certification must be accepted to a degree program in the School of Human and Educational Services.

THE MASTER OF BUSINESS ADMINISTRATION

For superior undergraduate students in any major, the School of Economics and Management offers the Master of Business Administration (M.B.A.) degree. This is a two-year professional program in management designed for the student with a nonbusiness undergraduate major. Undergraduate management or business majors may take a variation of the standard M.B.A. program.

For Oakland University undergraduates still working on a major other than one of the management areas, there is the possibility of obtaining both the undergraduate degree and the M.B.A. in an accelerated program. To be eligible, a student should have a grade point average in the top 15% of her/his major. The student should apply for the accelerated program in her/his junior year (see the *Oakland University Graduate Study Catalog*).

HUMAN RESOURCES DEVELOPMENT

The School of Human and Educational Services offers a Bachelor of Science degree in human resources development (HRD). This program prepares students for service-action careers related to human problems, services, and social change. It provides an opportunity to acquire knowledge and skills usable in a wide range of human service activities. Students may select a major specialization in youth and adult services, training and development, or early childhood.

A major goal is to develop potential leaders who have the analytic abilities, communication and organization skills, and experimental know-how to respond to human needs in an era of rapid social change. The basic approach to the program is joining of understanding, skills, and service. Problem-solving and decision-making abilities are developed through field experiences and an on-the-job internship.

Requirements for the Bachelor of Science Degree

Candidates for the degree of Bachelor of Science in human resources development must meet the following requirements:

1. Complete 124 credits.
2. Complete at least 32 credits at Oakland University.
3. Complete at least 32 credits in courses at the 300 level or above.
4. Take the last 8 credits needed to complete the baccalaureate at Oakland University.
5. Have a cumulative grade point average of at least 2.00.
6. Be in substantial compliance with all legal curricular requirements.
7. Satisfy the university requirement of writing proficiency.
8. Complete 32 credits of general education with 3 to 12 credits in at least five of the six designated areas.
9. Complete a minimum specialization of 64 credits in early childhood education, training and development, or youth and adult services, which consists of:
   a. 24-32 credits of courses in an area of specialization.
   b. 24-28 credits in supporting cognate courses.
   c. 8-12 credits of internship.
10. Have a cumulative grade point average of 2.50 in courses in the specialization.

General Education

The designated field groups and course subjects applicable to each are:

a. **Arts**
   AMS 201
   Art and art history courses (SA and AH)
   Music courses (MUS)
   Theatre courses (THA)
   Dance and movement courses (DAN 100, 101, 110, 111, 120, 121, 173, 200, 372, 373, 376)

b. **History, Philosophy, and Area Studies**
   AMS 202
   History courses (HST)
   Philosophy courses (PHL) except PHL 102 and 170
   Area studies courses (AS)

c. **Language and Thought**
   Foreign language courses (CHE, FRH, GRM, HIUR, IT, RUS, SPN, ML)
   Speech communication courses (SCN)
   PHL 102 and 170
   Journalism courses (JRN)
   Applied languages studies courses (ALS)
   Linguistics courses (LIN)

d. **Literature**
   AMS 203
   English courses (ENG)
   Literature courses (LIT)

e. **Mathematical and Natural Sciences**
   Mathematics courses (MTH or MOR, MTE, and STA)
   Biology courses (BIO)
   Science studies courses (SCS)
   Chemistry courses (CHM)
   PE 304
   Physics courses (PHY)
   Environmental courses (ENV)

f. **Social Sciences**
   AMS 204
   Sociology courses (SOC)
   Anthropology courses (AN)

Political science courses (PS)
Psychology courses (PSY)
Social studies courses (SS)

Note: New Charter College courses (NCC) may be counted in any of the above categories in which the subject matter applies, e.g., NCC 122 in social sciences, NCC 123 in literature. General education requirements may also be fulfilled through the Honors College program.

Specialization in Early Childhood

The human resources development degree program with a specialization in early childhood develops competencies for design, evaluation, and licensure of child care facilities and direction of child care centers, family and day care, and group day care homes. The program also provides education for training parents and paraprofessionals in the care and education of young children, as well as dealing effectively with young children and their development in a variety of settings.

Admission Requirements

Students may apply for admission to the early childhood program after satisfactory completion of ED 220 and 221. Criteria for admission include a grade point average of 2.50 for a minimum of 16 graded credits and a minimum grade of 2.50 in ED 220 and 221. Courses which carry no numerical or letter grades are excluded from the calculation of grade point average.

A student who wishes to enter the early childhood program but whose grade in ED 220 and 221 is lower than 2.50 must repeat ED 220 and 221 with at least a 2.50 before applying for admission to the program. ED 220 and 221 and admission to program are prerequisites for all other early childhood courses.

Continuation in the Early Childhood Specialization

Grades in courses submitted for credit in the early childhood program must be 2.0 or better. To continue in the program, the student must maintain a minimum overall grade point average of 2.50. Students whose grades fall below the minimum may request review by the early childhood faculty before registration for the next semester. Students who do not request a review will be dropped from the program.

A student will not be permitted to register for the internship unless she/he has attained an overall grade point average of at least 2.50 at the time of application. Students not meeting this requirement may request one review by the early childhood faculty before registering for student teaching.

Specific Requirements to Complete the Program

1. Area of Specialization (32 credits): ED 220, 221, 223, 224, 225, 320, 324, 325, and 326.
2. Cognate Courses (24 credits)
   a. PSY 271 and one course from AN 305, PSY 326, SOC 335, or a family-oriented social science course.
   b. Additional courses related to development of children, selected with adviser assistance. Possible choices are ED 320 or 450.
3. Internship (12 credits): ED 456 (Internship in Early Childhood).
   May not be taken with any other courses.

Specialization in Youth and Adult Services

This specialization has been developed in cooperation with agency and industry employers in the community. It prepares students for a wide variety of human service occupations in such settings as employment and training programs, proba-

tion and correctional guidance, mental health, substance abuse, youth or family services, and services for older persons.

Students develop helping profession competencies through human interaction courses, special topic courses in human resources development, and field experiences, culminating in the internship.

Admission Requirements

Students may be admitted to the youth and adult specialization after satisfactory completion of HI 361 and 363. Criteria for admission include a grade point average of 2.50 for a minimum of 16 graded credits and a minimum grade of 2.50 in HI 361 and 363. Courses which carry no numerical or letter grades are excluded from the calculation of grade point average.

An applicant whose grade in either HI 361 or 363 is lower than 2.5 must repeat the course and earn a grade of 2.5 before admission to the program.

Continuation in the Youth and Adult Services Specialization

Grades in courses submitted for credit in the 64-credit Specialization in Youth and Adult Services must be 2.00 or better. To continue in the program and to enroll in HRD 490 (internship), a student must maintain a minimum overall grade point average of 2.50 or better. Students not meeting this requirement may request one review by the HRD area faculty for permission to register for internship.

Specific Requirements to Complete the Program

1. Specialization courses (32 credits)
   a. Completion of a 16-credit core curriculum including HI 361, HI 363, HRD 362, and HRD 366.
   b. 12-16 additional credits in HI/HRD courses other than HRD 490.
2. Cognate courses (24 credits)
   a. One course in psychology, 200-level or above.
   b. One course in sociology or anthropology, 200-level or above.
   c. One social change course: HRD 401, ECN 309, ECN 343, PS 305, SOC 205, 314, 336, 350, 441, 468.
   d. A selection from HRD 301, 302, 402, or other behavioral science courses (200 level or above. PSY, SOC, AN, PS, ECN, MGT, ORG, HBS) to total 24 cognate credits.
3. Research or statistics (4 credits)
   One course within either the specialization or cognate requirement as follows: HRD 390—Special Project in Human Resources Development (applies to specialization course requirement) OR a course in research design or statistics: ECN 304, PSY 250, PSY 311, PSY 357, SOC 202, SOC 203, STA 225, STA 226 (apply to cognate course requirements).
4. Internship: HRD 490 (8-12 credits)

Specialization in Training and Development

Training and development is the process of systematically developing human resources within a work organization to create motivation and increase efficiency. The specialization in training and development requires course work in behavioral sciences, human relations, training, and program delivery. These courses provide preparation for a variety of careers in government, health and human services, and business and industry. An internship during one semester of the senior year provides work experience in an appropriate setting.

Admission Requirements

Students may be admitted to the training and development program after completion of 16 graded credits with a grade point average of 2.50. Criteria for admission include completion of a beginning college level course in economics, sociology, psychology, and English composition (writing proficiency).

Continuation in the Training and Development Specialization

Grades in courses submitted for credit in the training and development specialization must be 2.0 or better. To continue in the program, a student must maintain a minimum grade point average of 2.50. Students not meeting this requirement may request one review before registering for internship.

Specific Requirements to Complete the Program

1. Specialization courses (28 credits)
   a. One course in each of the following categories
      (1) HI 361, 363, 461, 463
      (2) HRD 362, PSY 311
      (3) HRD 310, HRD 369, HRD 390
      (4) HRD 364, HRD 467, HRD 469, SOC 455
      (5) HI 464, HRD 420, HRD 421
      (6) RHT 335 or equivalent
   b. An elective chosen from categories 1-5 above, or from the following to total 28 specialization credits.
      (7) HRD 366, HRD 368, HRD 469, PE 304
2. Cognate courses (24 credits)
   The cognate requirement may be satisfied by completion of the management minor and a computer literacy course; or by completion of
   a) One course in three of the following areas:
      (1) ED 345, PSY 331
      (2) HRD 401, ORG 330, ORG 331, ORG 434
      (3) ECN 200, ECN 201, ECN 338, ECN 468
      (4) HRD 402, PS 350
      (5) MGT 433, NCC 301, ORG 437, SOC 350, SOC 357

   plus:
   b) One course chosen from each of the following categories.
      (6) ECN 250/QMM 250, HRD 390, ORG 430, PSY 250, SOC 202, SOC 203
      (7) CIS 122, CIS 224/ED 294, CIS 325/ED 295

   and if necessary
   c) Electives chosen from any of the seven categories above to total 24 cognate credits
3. Internship: HRD 490 (8-12 credits)

MINOR IN HUMAN RESOURCES DEVELOPMENT

For students in other majors who wish to combine their major with an introduction to human interaction skills and knowledge and techniques in human resources development, the School of Human and Educational Services offers the minor in human resources development.

The requirement for a minor in human resources development is 24 credits in human interaction (HI) and human resources development (HRD) courses including a minimum of 8 credits of HI and 8 credits of HRD courses, subject to approval of an HRD adviser. To obtain the minor in HRD the student must complete the 24

credits required with an average grade of 2.50 or better and with not less than 2.0 in any course.

RELATED CONCENTRATIONS AND MINORS

The gerontology concentration, co-sponsored by the School of Human and Educational Services and the College of Arts and Sciences is recommended for HRD students planning careers of service to older people. See page 151 for a description of the gerontology concentration.

HRD students should also consider the following concentrations or minors which supplement the HRD major and further their educational/career goals.

Applied Statistics
Environmental Studies
Health Behavioral Sciences
Management Minor
Psychology Minor
Social Justice and Corrections
Social Services
Urban Studies
Women's Studies

EDUCATION COURSE OFFERINGS

ED 100 Tutoring Experience in Secondary Education (2)
Students work with teachers and secondary students in schools. Students commit 60 to 80 hours as tutors, teacher aides, and leaders of group discussions. To be taken in the freshman year, or for transfer students, during the first semester, upon entering the secondary social studies program.
Corequisite: ED 200.

SCS 105 Science for the Elementary Teacher (4)
See page 253.

ED 110 Public Education for the Future (4)
To help beginning elementary education students make career decisions. Students work at least four hours per week in educational institutions. An additional two hours per week of class time is spent examining school practices and evaluating students' professional capabilities. ED 110 is a prerequisite for all other education courses in the elementary education program.

ED 200 Micro-Teaching in Secondary Education (2)
Students identify areas of inquiry related to secondary schools and design personal learning plans which include personal goals for working effectively in a public school. Current educational literature is used to inquire into creativity, self-perception, critical thinking, educational philosophy, motivation, and learning theory.
Corequisite: ED 100.

ED 210 Social and Philosophical Issues in Elementary Education (4)
Introduction to the use of philosophical and social science skills in analyzing and resolving education problems.
Prerequisite: ED 110 and admission to the program.

ED 215 Educational Psychology for Elementary Teachers (4)
Incorporates and places into perspective learning theories, developmental theories, biological theories, and evaluation, with emphasis on the effects of varied qualities of experience during childhood.
Prerequisite: ED 110 and admission to the program.

ED 220 Early Childhood Development—Experiences with the Young Child (4)
Child development. Instruction, observation, and experience with focus on children and their developmental needs during infancy and early childhood, especially in the context of particular settings. Students must register concurrently for ED 221.

ED 221 Early Childhood Development Experience Block (1, 2, 3, or 4)
Experience in a setting with young children. One credit must be taken concurrently with ED 220 and 224. Students who take additional credits of ED 221 must be taking another early childhood course concurrently.

ED 223 Physical and Social Environment in Early Childhood Programs (4)
Various aspects of the social and physical environment for young children. Includes analysis of what makes a healthful, pleasant physical environment and how the roles and relationships of various staff members contribute to this environment.
Prerequisite: Admission to early childhood program taken with no more than one other early childhood course.

ED 224 Early Childhood Programming Activities for the Young Child (4)
Uses of various media and materials, supportive play activities, and specific art, music, science, language, and other educational activities for young children. Provides a basic repertoire of skills for the early childhood staff member.
Prerequisite: ED 220 or equivalent. Corequisite: ED 221.

ED 225 Health and Nutrition—Childhood (4)
Includes knowledge of basic health and safety requirements and basic nutritional and dietary needs for early childhood.
Prerequisite: Admission to early childhood program taken with no more than one other early childhood course.

SCS 305 Teaching Science to Children (4)
See page 253.

ED 320 Topics in Early Childhood Curriculum (2 or 4)
Selected curriculum topics relevant to early childhood teachers, with focus on specific curriculum areas identified by advanced early childhood students or special groups working in this field.
Prerequisite: Completion of at least two 200-level early childhood courses.

ED 322 Introduction to Early Childhood: Theory and Practice (4)
Introduction to the field of early childhood: growth and development of infants and young children, optimal learning environments for the young child, and methods and materials. For students who wish some background in early childhood but who are not HRD/ED majors. Students must register concurrently for ED 221.
Prerequisite: ED 210 and 215 or permission of instructor.

ED 324 Parent and Community Involvement in Early Childhood Programs (4)
In-depth study of home/school coordination and education. Development of skills and sensitivities in the areas of parent education, parent-teacher conferences, utilization of parents in the classroom, and working with parents in the home.
Prerequisite: At least two 200-level childhood courses, or permission of instructor.

ED 325 Learning Environment in Early Childhood (4)
In-depth study of the learning environment and curriculum in early childhood education, including theoretical and practical aspects. Analysis of curriculum areas as they relate to individual children's needs and to the total learning environment.
Prerequisite: At least two 200-level early childhood courses, to be taken with no more than one other early childhood course.

ED 326 Introduction to Early Childhood Program Operation (4)
Overview of types of program operation in early childhood. Designed to give teacher and child-care development majors the skills to direct programs which are in operation.
Prerequisite: At least two 200-level early childhood courses, to be taken with no more than one other early childhood course.

ED 331 Teaching of Reading (4)
Intensive preparation for the teaching of reading skills in the elementary grades. Identification of reading readiness, problems of program construction, and a variety of teaching methods are included. Must be taken with ED 333.
Prerequisite: ED 210 and 215 or ED 344 and 345.

ED 332 Literature for Children (4)
The ability to evaluate children's literature critically, to understand its history, to assess children's needs and developmental levels, and to be able to select and use quality literature effectively with children are major objectives of the course.
Prerequisite: LS 101 or equivalent.

ED 333 Teaching the Language Arts (4)
Preparation for teaching language arts in the elementary, middle, and early secondary schools. Topics include teaching composition, creative writing, oral language development, listening, spelling, reading, and the application of linguistic principles. Must be taken with ED 331.

ED 338 Teaching Reading in the Content Areas (4)
A basic course in reading for prospective secondary teachers. Content will deal with the nature of the reading process and methods and materials for teaching the reading of English, social studies other subjects to junior and senior high school students. Not open to elementary education majors.

ED 344 Social and Philosophical Issues in Secondary Education (4)
Study of secondary education in broad perspective, as both an interpersonal activity and a social institution. Topics include immediate and ultimate aims of secondary education, the social meaning of the schooling process, and the assumptions underlying school policy.

ED 345 Psychological and Field Studies in Education (4)
Psychological factors in learning and development are examined in lectures, class discussions, and observations. These may be observations of actual teaching in the schools, or of videotapes of teaching.
Identical with PSY 345.

ED 350a Educational Implications of Family Roles and Child Rearing Practices (2)
Educational implications of anthropological, sociological, and psychological analyses of child-rearing practices in different cultures.
Prerequisite: ED 210 and 215.

ED 350b History of Public Education in the U.S. (2)
Social, philosophical, and historical ideas and events which led to the origin and development of the U.S. public school.
Prerequisite: ED 210 and 215.

ED 350d The Formal Education of Women (2)
Effects of formal and informal structure of the school on the development of women in contemporary society.
Prerequisite: ED 210 and 215.

ED 350e Schooling and Social Stratification (2)
The role of public schooling in theory and in practice as it relates to patterns of social stratification in the U.S. and other nations.
Prerequisite: ED 210 and 215.

ED 350f Education and Moral Development (2)
Prepares the student to be competent in understanding and guiding the moral development of the child.
Prerequisite: ED 210 and 215.

ED 350h Independent Study (2)
An opportunity to pursue a problem of particular interest to students, using the skills of philosophical and sociological analysis. Students work in groups or individually under the guidance of a teacher or teachers.
Prerequisite: ED 210 and 215.

ED 355a Identifying and Diagnosing Learning and Behavior Problems in Children (2)
Topics include individual differences among normal school population; delivery of educational services to handicapped persons; various theoretical models of behavior; and various statutes that govern special education in Michigan.
Prerequisite: ED 210 and 215.

ED 355b Testing and Assessment for Teachers (2)
Prepares a teacher-in-training to make effective use of formal, informal, and teacher-created assessment techniques in the process of planning, implementing, and evaluating instruction.
Prerequisite: ED 210 and 215.

ED 370 Field Problems in Social Science (4)
To assist prospective social studies teachers in identifying and solving instructional problems. Students are placed in school to work with teachers and secondary students, operating through a written contract agreed upon by themselves, an appropriate secondary school official, and a representative of the social studies program. Transportation must be arranged by the student.
Prerequisite: ED 100 and 200.

ED 414 Reading Appraisal in the Elementary Classroom (4)
Involves direct classroom appraisal of reading abilities of children in elementary school classrooms. Formal and informal diagnostic instruments are used. Diagnostic data are used for prescriptive teaching. Specifically involves reading instruction with pupils and involvement with school personnel.
Prerequisite: ED 331. Corequisite: ED 455.

ED 420 Interaction Laboratory for Teacher Development (4)
Acquaints students with the importance of human relations skills in teaching and provides a clearer understanding of the flexible line separating personal and professional behavior. Laboratory activities involve the student in role-playing and action-oriented problem solving. A field experience is included.
Prerequisite: ED 110, 210, 215, 350, and 355.

ED 427 Methods for Teaching Secondary Students (2)
Focus is on the uniqueness of the secondary classroom and the secondary student. Special emphasis will be placed on the development of teaching strategies and human interaction techniques appropriate for teaching secondary students. Such topics as discipline, motivation, instructional technology, skill assessment, evaluation, and affective learning will form the learning "core" around which students will be expected to develop the interaction and process skills needed to teach secondary students.
Corequisite: ED 428.

ED 428 Teaching of the Major Field (2)
Content and methodology appropriate to the student's major field. Organization of programs and courses, bibliography of the field, and techniques of instruction receive special emphasis. Must be taken concurrently with ED 455, except when other provisions have been made by the major department.
Prerequisite: ED 344 and 345. (For social studies majors, the following are also required: ED 100, 200, 370, and SS 100.)

ED 450 Advanced Studies in Early Childhood (2 or 4)
Current issues affecting the field of early childhood, especially those related to current legislation, child advocacy, and the child welfare concern; research methodology appropriate for young children; and/or in-depth issues such as development of infants or exceptional children.
Prerequisite: Completion of all 200-level early childhood courses and at least two 300-level early childhood courses.

ED 454 Skill Development Laboratories for Teaching Social Studies (4)
Interns meet weekly with instructor and supervisors to identify and solve problems such as discipline, course planning, grading, motivation, and interpersonal relationships and to share effective strategies. Emphasis is on mutual problem solving. Must be taken concurrently with ED 455.

ED 455 Internship (12)
Approximately 15 weeks of supervised teaching in a public school classroom and other activities as directed by a supervising teacher. Seminars are held throughout the semester focusing on general and specific teaching concerns of the interns. The semester may be divided into two segments for a dual assignment, depending on program requirements or student needs. A student must complete the internship in his/her last semester (a last semester is one in which a student needs no more than 16 credits to satisfy all graduation requirements). A student must apply for internships one full semester in advance. Except for ED 427, 428. A secondary student may not take any other course work concurrently with ED 455.
Prerequisite: Elementary education majors must complete the core program, general education, and childhood curriculum studies requirements; secondary education majors must

complete ED 100, 200, 338, 344, 345, and secure permission of the major department and the School of Human and Educational Services. Concurrent registration in ED 428 is required unless other provisions have been made by the major department. Prospective student teachers must register at the Office of Field Services at the beginning (before September 15 or January 15) of the full semester before student teaching.

ED 456 Internship in Early Childhood (12)
Work in practicum settings with young children, parents, or caregivers. Students will gradually assume total responsibility for an intensive field experience. Consists of 301 hours of on-site practicum. Includes bi-weekly seminar. No other courses may be taken concurrently and it is strongly advised that the student not be employed.
Prerequisite: 24 credits in early childhood courses with a 2.50 grade point average.

SS 470 Teaching Social Studies in Elementary School (4)
See page 253.

ED 490 Independent Study and Research (2 or 4)
A program of directed individual reading and research.
Prerequisite: Permission of the Department of Teacher Education (granted only if a student presents written faculty consent to supervise his/her study).

SCS 490 Independent Problems in Science Education (2 or 4)
See page 253.

HUMAN INTERACTION COURSES

HI 261 Fundamentals of Human Interaction (4)
Introduction to key aspects of interpersonal relationships such as self disclosure, feedback, conflict, trust and nonverbal communication. Examines various theories of healthy relationships and personal maturity. Self-appraisal, role plays, simulations and group interaction are used.

HI 361 Techniques of the Helping Interview (4)
Emphasizes listening and responding skills, establishing mutual trust and acceptance, and providing support in a one-to-one relationship to help persons make decisions. Includes an introduction to the theory and research of the helping relationship. Techniques of instruction include role-playing, simulation and analysis of videotaped interviews.
Prerequisite: HI 261 or equivalent.

HI 363 Dynamics of Group Relationships (4)
Deals with relationships among workers, including peer and supervisory interaction, in settings such as community agencies, industry, and adult training. Covers such basic concepts and practices as teamwork, conflict resolution, consensus, group leadership, and support groups.

HI 461 Introduction to Counseling (4)
Theory and practice of guidance and counseling in brief. Covers professional, ethical and legal issues in helping others. Compares major counseling approaches in both theory and application.
Prerequisite: HI 361 and 363.

HI 463 Group Procedures in Helping Relationships (4)
Theory and practice of small group process in the helping relationship. Explores several approaches to group leadership and offers an opportunity to experience and/or lead small groups in order to prepare students to foster group interaction. Identical with ED 463.
Prerequisite: HI 363.

HI 464 Techniques of Consultation (4)
Includes study of processes of internal and external consultation, strategies for intervention in organization and consulting approaches in support of individual helping professionals, supervisors, and administrators.

HUMAN RESOURCES DEVELOPMENT COURSES

HRD 301 The Nature of Man (4)
The various ways in which human nature has been understood, with attention to the

behavioral, humanistic, Marxist, and Christian beliefs about man and their implications for policies and practices in the teaching and helping professions. Strives to develop tolerance for alternative views of man, and to appreciate the varieties of human behavior.

HRD 302 Ethics and Personal Crises (4)
Ethics as related to the personal crises of sexual behavior and lifestyles, abortion, suicide, euthanasia, parenthood, and criminal punishment. Focus is on helping others make a moral decision and handling value conflicts in counseling.

HRD 310 Training Design (2, 4)
Study of instructional design models for adult needs analysis, occupational task analysis, development of competencies and learning objectives, determination of appropriate training approach, organization of modules and lessons, and development or selection and evaluation of instructional materials and media for training programs in business and industry. Same as VTE 310.

HRD 331 Introduction to Community Mental Health (4)
Includes a critical examination of current mental health treatment programs in local institutions, community mental health centers, and family-care programs. Covers the role of social and cultural factors in the onset of mental illness. Introduces roles in the helping process as a member of a treatment team and provides experience in carrying out some facet of a treatment plan under supervision.

HRD 335 Problems of Drug Abuse and Alcoholism (4)
Comprehensive study of the modes of prevention and treatment programs for substance abuse. Readings and reports include basic information about various drugs and alcohol, with history, categories and definitions, misuse, abuse, legitimate use, laws, attitudes, and reasons people abuse drugs.

HRD 362 Assessment of Youth and Adults (4)
Overview of techniques used to assess youth and adults for deciding on and implementing educational, occupational, and personal-social goals. Students are introduced to measurement terminology as well as techniques of test administration and interpretation. Emphasis is on the synthesis of data in case studies and in case conferences.

HRD 364 Career Development and Community Resources (4)
Sources of occupation, education, and personal-social information, and techniques for using guidance information in the helping process. Establishes a repertoire of knowledge about community agencies and resources. Students gather firsthand information from site visitations as well as through audio-visual and printed media.

HRD 366 Techniques of Human Resources Development (4)
Basic preparation for public service work in human resources development. Emphasis is on cooperation among preprofessional and professional workers (such as interviewers, teachers, and community agency personnel) and on employability and developmental work to assist disadvantaged youth and adults from various cultural backgrounds.

HRD 368 Work and Training Development (4)
Emphasizes work with employers and educators to develop jobs and training courses for persons enrolled in related employability training programs and other agency applicants. Includes appraisal of the needs of employers for persons with certain performance skills, development of on-the-job training programs, and related education.
Prerequisite: 12 credits in HI or HRD courses.

HRD 369 Field Work in Human Resources Development (2, 4, 6, or 8)
Supervised experiences in a variety of helping relationships in work settings such as schools, employment offices, social services agencies, and industry. Includes an orientation to various local community cultural settings and lifestyles. Experiences emphasize helping young people and adults adjust to education or work experience.
Prerequisite: Permission of instructor.

HRD 390 Special Project in Human Resources Development (2, 4, 6, or 8)
Directed reading, research, and study in an aspect of human resources development work. May be elected for independent study or taught as a workshop based on selected topics and issues in the field. The course may be taken more than once, for a total of 8 credits.
Prerequisite: Permission of instructor.

HRD 401 Human Service Organization Analysis (4)
Study of the structure of organizations that provide human services and development and the process of effecting changes leading to improved individual client development. Concerns the assigned role of counselors, teachers, and other helpers within agencies and schools, which may interfere with their helping functions.
Prerequisite: Junior standing and two courses in ED, HI, or HRD.

HRD 402 Human Services Delivery and Evaluation (4)
Systems analysis and experimental design for program development and research in human services. Emphasizes skills in developing performance objectives and in organizing and writing proposals for program development. Provides an opportunity to participate in systems design for delivery of a proposed human service or educational program.
Prerequisite: Junior standing and two courses in ED, HI, or HRD.

HRD 420 Instructional Methods and Media Use (2, 4)
Methods of instructing adults in training programs with the use of instructional materials and media. Emphasis is on the application of adult learning theory in classroom settings and on the evaluation of student learning based upon competencies. Includes teacher-student interaction, laboratory experience, simulation, and use of audio-visual equipment. Same as VT 420.
Prerequisite: HRD 310.

HRD 421 Micro-Teaching in Human Resources Development (2, 4)
Students identify a training module and design learning plans for teaching particular lessons. The lessons are presented in simulated or supervised situations and are critiqued and evaluated. Same as VTE 421.
Corequisite: HRD 420.

HRD 431 Death and Dying (4)
Seminar of the philosophical, religious, cultural, and psychological issues in death and dying. Topics include: religious views of death and after-life; ethical issues in suicide and euthanasia; cultural attitudes toward death and funerals; psychological studies of counseling the dying and the bereaved; children and death; forming attitudes toward one's own death. Recommended for upper-level students only.
Prerequisite: Two HI/HRD courses or permission of instructor.

HRD 467 Workshop (2 or 4)
An opportunity for community agency personnel and students preparing for applied human resources development work to develop various aspects of human services programs and practices. Sections are offered as needed for areas of emphasis which meet the current objectives and/or requests of agency or business and industry employers and directors of training programs for personnel skilled in human resources development. May be taken more than once for a total of 8 credits.
Prerequisite: Course work or experience in the workshop topic.

HRD 469 Seminar (2 or 4)
Scope is predefined and based on a broad topic in the human resources development field. Class members select research areas and contribute their findings to the group. Visiting consultants and the instructor provide direction and content. May be taken more than once for a total of 8 credits.
Prerequisite: Course work or experience in the seminar topic.

HRD 490 Internship in Human Resources Development (4, 8, or 12)
A culminating experience where students apply their learning in a supervised experience to human resources development work with youth or adults as an intern in a community agency program.
Prerequisite: Senior standing, completion of 24 or more credits in HI or HRD courses with grade point average of at least 2.50, and permission of instructor.

VOCATIONAL AND TECHNICAL EDUCATION COURSES

VTE 310 Vocational Curriculum Planning (2, 4)
Study of instructional design models for vocational education, needs analysis, occupational task analysis, development of competencies and learning objectives, determination of appropriate instruction approach, organization of modules and lessons, and development or selection

and evaluation of instructional materials and media for secondary-school level vocational programs. Same as HRD 310.
Prerequisite: ED 345 or teaching experience.

VTE 420 Methods of Vocational Instruction and Media Use (2, 4)
Methods of instruction in vocational education programs with the use of instructional materials and media. Emphasis is on the application of learning theory in classroom settings and on the evaluation of student learning based upon competencies. Includes teacher-student interaction, laboratory experience, simulation, and use of audio-visual equipment. Same as HRD 420.
Prerequisite: VTE 310 or HRD 310.

VTE 421 Micro-Teaching in Vocational Education (2)
Students identify a vocational education instruction module and design learning plans for teaching particular lessons. The lessons are presented in simulated or supervised situations and are critiqued and evaluated. Same as HRD 421.
Corequisite: VTE 420 or HRD 420.

HEALTH-PHYSICAL EDUCATION COURSES

PE 163 Movement Education, Low Organized Games, and Leadup Activities to Movement Skills (2)
Perceptual-motor development and sensory-motor development activities and their relevance to movement in low organized games, leadup activities, and games for basic sports skills.
Prerequisite: Sophomore standing.

PE 202 Introduction, History, and Orientation to Health-Physical Education and Allied Fields (2)
To provide knowledge, interpretation, and understanding of health education, physical education, dance, intramural sports, extramural sports, sports clubs, school and community recreation, and interscholastic competitive athletics for boys and girls.

PE 207 American Red Cross Advanced First Aid and Prevention and Care of Activity-Oriented Injuries (4)
To provide knowledge, interpretation, understanding, and practice in immediate and temporary care for victims of accident or sudden illness until a physician arrives. To aid in approaches and procedures of "safety-proofing" facilities, equipment, supplies, and participants in athletic activities.

PE 211 American Red Cross Senior Lifesaving and Water Safety Instructor Course (4)
Principles and procedures for swimming, lifesaving, and water safety with participation, including physical skills examination and written examination. ARC certification upon successful completion of course.

PE 215 Muscular Relaxation (2)
Theory, instruction, and practice of skills necessary for muscular relaxation, as well as facts on muscle physiology. Students will use bio-feedback laboratory equipment.

PE 304 Exercise Physiology (4)
Effects of exercise and physical training on the physiological systems of the body, with emphasis on cardio-respiratory systems. Includes muscle contraction mechanisms, circulatory and respiratory adjustment during exercise, and nutrition for athletes. Laboratory experiences are provided for insight into the dynamics of human performance.
Prerequisite: BIO 104.

PE 363 Teaching Physical Education and Play Activities for Children Preschool through Grade 3 (2)
Philosophy, theory, and practice in activities compatible with the needs, growth, and development patterns; possible interests at various levels for classroom, multi-purpose room, gymnasium, and playground.
Prerequisite: Sophomore standing.

PE 364 Teaching Physical Education and Recreation Activities for Children Grades 4, 5, and 6 (2)
Philosophy, theory, and practice in activities, compatible with the needs, growth, and develop-

ment patterns; possible interests with emphasis on low organized games and leadup activities for team games.
Prerequisite: Sophomore standing.

PE 391 Practicum in Physical Education and/or Dance with Preschool and Primary School Children (2 or 4)
Experience in teaching and leadership in physical education and/or dance with preschool or primary elementary school children. Includes weekly group discussion of these experiences.
Prerequisite: PE 211, 271, 363, or 364.

PE 392 Practicum in Physical Education and/or Dance with Upper Elementary and Middle School Children (2 or 4)
Experience in teaching and leadership in physical education and/or dance with children, grades 4 through 7. One period per week involves group discussion of teaching and leadership experiences.
Prerequisite: PE 211, 271, or 364.

PE 393 Practicum in Physical Education and/or Dance with Atypical Children (2 or 4)
Experience in teaching and leadership in physical education and/or dance with handicapped children. One period per week involves group discussion of teaching and leadership experiences.
Prerequisite: PE 211, 271, 363, or 364.

PE 493 Cooperative-Independent Study in Physical Education, Dance, Recreation, or Competitive Athletics (4)
Cooperative-independent study with student recognizing a concern, outlining same and possible steps to a solution, building a bibliography and reading, building an observation schedule and observing, building an interview schedule and interviewing, consulting regularly with instructor, and completing written summation.

PE 495 Practicum-Seminar in Physical Education and Allied Areas (4)
Individual students delve into philosophy, theory, and practice in areas of concern with observation and possible participation, and sharing of the experience regularly with the group.

SCIENCE STUDIES COURSES

SCS 105 Science for the Elementary Teacher (4)
Science concepts and processes based on recent elementary school science education curricula. For education majors only.

SCS 305 Teaching Science to Children (4)
Students develop philosophies of the nature of elementary school science; why teach science and how children learn science. Knowledge and skills in planning instruction, using instructional models, integrating the curriculum, using current science materials, and evaluation. Field work is included.
Prerequisite: SCS 105, ED 110, 210, 215, and junior standing.

SCS 490 Independent Problems in Science Education (2 or 4)
Individual work in science methods and materials. Credits may be applied to a teaching major or teaching minor in science/mathematics. May include a field placement as well as development of specific teaching materials.
Prerequisite: SCS 305 and permission of instructor.

SOCIAL STUDIES COURSES

SS 100 Introduction to Social Studies (4)
This introduction to an interdisciplinary social science program provides an overview of the philosophical and historical development of individual social science disciplines (psychology, sociology, anthropology, political science, history, economics, and geography). Required of all social studies majors and minors.

SS 470 Teaching Social Studies in Elementary School (4)
An opportunity to examine sources of instructional objectives and strategies, curriculum materials, and evaluative procedures for social studies education. Students completing the

course should be able to develop, defend, and implement an elementary social studies program. A field experience is included.
Prerequisite: ED 110, 210, 215, 355, and junior standing.

For a description of the social studies program leading to secondary teacher certification refer to the appropriate section in the College of Arts and Sciences.

SCHOOL OF NURSING

OFFICE OF THE DEAN
Andrea R. Lindell, Dean
Barbara Biallas, Assistant to the Dean
Sue Lindberg, Program Planning Adviser

PROFESSOR: *Andrea R. Lindell*

ASSOCIATE PROFESSOR: *Nadia Boulos*

ASSISTANT PROFESSORS: *Janet Barnfather, Pamela Clarke, Faithy Justin, Sandra Lowery, Carol Milewski, Gary Moore, Elizabeth Pinkstaff, Trinidad Pit-og, Terrill Stumpf, Diane Wilson*

INSTRUCTORS: *Penny Cass, Frances Jackson*

SPECIAL INSTRUCTORS: *Joan Finn, Ramune Mikaila*

VISITING INSTRUCTORS: *Laura Artemenko, Debra Gorney, Patricia Johnson*

LECTURERS: *Mary Ann Babcock, Joan Bickes, Ellen Cary, Barbara Donahue, Cheryl Dotinga, Elizabeth Drogowski, Joyce Herula, Virginia Kaminski, Kathleen Larkin, Nancy Loeser, Stephanie Lusis, Letty Orotea, Rosemary Rojas, Cheryl Rorie, Patricia St. Louis*

APPLIED NURSING INSTRUCTORS: *Carol Benton, Susan Fortin, Virginia Hosbach, Ingrid Johnson*

ADJUNCT CLINICAL INSTRUCTORS: *Joanne Harry, Susan McEwan, Jean Mohan, Janet Nagy, Eileen O'Connell, Genevieve Soltau, Elaine Wasserman*

The Nursing Program

The course of study combines general education in the humanities and the behavioral, biological, and physical sciences with special education in the theory and practice of nursing. Graduates qualify for employment as nurse practitioners in a variety of settings such as homes, community health agencies, hospitals, extended care facilities, and federal nursing services. Graduates also have the educational background necessary for graduate study in nursing.

The major purposes of the program are:

1. To prepare practitioners capable of independent functioning and able to develop nursing regimens and to enter the health care system for the purpose of meeting the nursing needs of individuals, families, groups, and communities.
2. To inculcate the nature and operation of identity in conduct for an image of self that is consistent, believable, and sustainable.
3. To prepare individuals capable of self-directed inquiry who view learning as a lifelong process.

The Oakland University School of Nursing also offers a Bachelor of Science in Nursing (B.S.N.) degree completion program for registered nurses. Registered nurses must complete all credits and/or courses prescribed in the B.S.N. curriculum. This completion may be achieved in several ways:

1. CLEP (College Level Examination Program) academic credit for what a person knows regardless of where or how they acquired the knowledge. CLEP Board, Princeton, N.J. 08540.
2. Transfer of credits. If a student has completed course work at another accredited institution and the course is determined to be of equivalent content by the School of Nursing Admission Committee, the student will not need to repeat the course at Oakland University.

3. Credit by examination at Oakland University. All sophomore and junior level nursing courses (33 credits) may be challenged.
4. Required course enrollment. If course requirements are not fulfilled by any method stated above the student must enroll and successfully complete the course. Students are required to enroll in the senior year nursing courses (24 credits).

This program as designed allows a student to proceed at his/her own pace.

The Prenursing Year

Students wishing to enter the prenursing year should have completed two years of high school mathematics (including algebra), one year of biology, and one year of chemistry (a grade of B or better is desirable). Overall, a grade of B or better is required.

For diagnostic purposes, all students before or during orientation take the Multi-Stage Math Placement Test, chemistry placement test, and the Writing Proficiency Test.

Prenursing students are not nursing students. During the freshman (prenursing) year students will complete a minimum of 28 credits (or the equivalent) of general education college work consisting of introductory courses in the physical and behavioral sciences and the humanities. These courses serve to introduce the student to the knowledge and principles embodied in the academic disciplines which he/she will need to incorporate into nursing practice. The School of Nursing will decide whether to accept a student into the professional part of the program after the student completes the prenursing requirements at Oakland University or equivalent courses at another institution. Successful completion of the freshman requirements is evidence of the probability of succeeding in the nursing program. The School of Nursing encourages and actively seeks applicants among males and minority students.

Admission to the School of Nursing

Application for admission to the nursing major occurs during the spring session of the prenursing year. Students wishing to be considered for admission are required to meet with the Program Planning Adviser to develop application materials. The School of Nursing has an enrollment quota which is filled with preference to applicants judged to be best qualified to undertake the program. Grades are therefore important, as they serve a natural, logical, and defensible function in evaluating and reporting.

Minimum Criteria for Admission to the Nursing Program

Admission of students is restrictive and selective and may occur either by progression of freshmen students currently enrolled at Oakland University or by transfer from other institutions. Consideration of students for the nursing program (sophomore year) will be based on the following:

1. Applicant's admissibility to and retention in the university.
2. A cumulative grade point average of 3.00 or above in prenursing courses taken at Oakland University and/or other institutions is required for consideration for entrance into the professional portion of the program. A minimum grade point of 2.0 is required in all prenursing courses.
3. Additional specifics to be met at the student's expense before beginning the sophomore year:
   a. Health history and physical examination to include inoculation for tetanus, skin testing for tuberculosis (and possible chest x-ray), rubella, and correction of any physical defects.
   b. Malpractice insurance ($1,000,000 coverage).

4. Submission of all required information to the School of Nursing by specified deadlines.

Requirements for the Bachelor of Science Degree in Nursing

In order to graduate with the B.S.N. degree a student must:

1. Have demonstrated writing proficiency by meeting the university standard in writing proficiency.
2. Have been admitted to candidacy for the B.S.N. by the university and the School of Nursing.
3. Have completed all credits and courses prescribed in the B.S.N. curriculum:
   a. 57 credits in the nursing component as prescribed by the School of Nursing.
   b. 50 credits in the humanities and the physical, biological, social, and behavioral sciences as corequisites to the nursing component and as prescribed by the School of Nursing.
   c. A minimum of 8 credits in mathematics.
   d. A minimum of 8 credits in electives.
4. Have a cumulative grade point average of 2.50 in all nursing courses.
5. Have completed a minimum of 128 credits.
6. Have completed at least 32 credits in courses at the 300 level or above.
7. Be in substantial agreement with all legal curricular requirements.
8. Be in compliance with all legal regulations of the School of Nursing.

Plan of Study

Prior to registration for the first nursing course each student will complete a Plan of Study in the Student Program Planning Office in the School of Nursing. The Plan of Study is a timetable of courses to be taken, and assures orderly progress toward satisfying degree requirements. The plan is completed by the student in consultation with the program planning adviser. Following is a model scheule:

Prenursing		Sophomore		Junior		Senior	
			FALL				
CHM 104	4	NRS 223	5	*NRS 322	2	*NRS 420	10
RHT 100	4	BIO 205	4	*NRS 323	4	NRS 422	2
MTH 103/104	4	BIO 206	1	*NRS 324	4	*Elective	4
AN 102 or		PSY 271	4	*NRS 325	1		
SOC 100	4	CHM 201	4	STA 225	4		
		*NRS 205	1				
			WINTER				
PSY 130 or		NRS 234	5	*NRS 332	2	*NRS 430	10
PSY 100	4	BIO 207	4	*NRS 333	4	NRS 432	2
RHT 101	4	BIO 208	1	*NRS 334	4		
BIO 200	4	BIO 307	4	*NRS 335	1		
PHY 141	4	PSY 331	4	PHL 318	4		
		*NRS 205	1	*Elective	4		

*Course may be taken either in the fall or winter semester.

Nursing students also completing the Honors College requirements need not take AN 102, SOC 100, PSY 100, and 300- and 400-level psychology electives.

Grade Point Policy

The following policy applies to all nursing course grades, clinical and theory.

Cumulative Grade Point: Students must maintain a cumulative GPA of 2.5 in all nursing courses.

PROBATIONARY STATUS/NON-CONTINUATION IN PROGRAM: A student earning a grade, clinical or theory, between 2.0 and 2.4 is placed on probation. A student earning a grade below 2.0 cannot continue in the nursing program.

For a student to remove the probationary status it is required that:

1) the grade in the next nursing course, clinical and theory, must be a 2.5 or above, and
2) within two nursing courses beyond that which placed the student on probation, the cumulative GPA in nursing courses must be a 2.5.

Any student failing to remove the probationary status will have their program reviewed by faculty to determine the student's remediation or termination in the academic program.

RECOMMENDATION FOR GRADUATION: Students must have a cumulative GPA of 2.5 to be recommended for graduation.

If a nursing student in the senior year earns a clinical or nursing course grade between 2.0 and 2.4 in the final semester, their eligibility for graduation will be determined by the cumulative GPA.

A minimum grade of 2.0 is required in all non-nursing courses except electives.

Clinical Placements

Students are placed in hospitals and other clinical agencies each semester. The clinical laboratory provides students with experiences in real life situations where there are opportunities to apply theory to practice in working with individuals, families, or groups. Cooperating agencies are located throughout the metropolitan area.

National Student Nurses Association

Prenursing students and nursing students are eligible and are encouraged to join and remain members of the National Student Nurse Association. NSNA is the mechanism through which students participate in planning and formulating policies related to the school.

National League for Nursing Accreditation

The Oakland University School of Nursing has accreditation by the National League for Nursing and approval from the Michigan State Board of Nursing.

Qualification for Licensure

Licensure is obtained through satisfactory performance on the licensing examination prescribed by the state of Michigan. Upon registration of the license, the nurse is known as a registered nurse (R.N.). Licensure in one state entitles a qualified holder to licensure by endorsement in other states.

COURSE OFFERINGS*

All nursing courses involve student learning experiences in the following settings: classroom, autotutorial laboratory, and clinical agencies in the community.

NRS 205 Independent Study in Physical Assessment and History Taking (1)
This course is designed to provide students with a basic framework of parameters for their assessment within the context of a total physical examination. Demonstration of physical examination skills, interpretation of normal findings in the adult and elderly clients and adequate recording of findings are the expected outcomes.

NRS 223 Introduction to Nursing I (6)
Two units have been designed to provide the basic format for the study of nursing in the sophomore year. They are entitled: "Introduction to the Conceptual Framework: Adaptation" and "The Professional Nurse: an Agent of Adaptation."

In NRS 223, both units are introduced with content such as the history of nursing, accountability in nursing, and principles of therapeutic communication presented. The nursing process, the method through which nurses practice, is explained and students are taught the first step in process, that of data collection, via a health history. Students are also encouraged to see the relationships between environmental and sociologic factors and the provision of good nursing care. The health/illness continuum, growth and development and transcultural variability underlie and help unify each content area.

NRS 234 Introduction to Nursing II (6)
In NRS 234 Units I and II are completed. The student is encouraged to look at psychologic and physiologic adaptation concepts as they apply to commonly occurring stress situations in health and illness. Topics involving immobility, the surgical experience, loss, grief, death and dying are covered as well as nursing interventions which foster maintenance of comfort, nutrition, elimination, oxygenation and the like. Once again variables associated with age and cultural background are interwoven throughout and nursing process is emphasized as a practice vehicle.

NRS 322 Pathophysiology (2)
This course examines how physiological functions are modified by disease processes.

NRS 323 Nursing of Children in Pediatric Settings (4)
Implications of increasingly complex variables related to health and illness in children. Emphasis is on the interaction of biological responses to stressors from birth through adolescence. Study provides the base for expanding competence in nursing skills centering on care function, and more sophisticated application of nursing process with clients in various clinical settings.

NRS 324 Nursing of Adults in Medical/Surgical Nursing (4)
Exploration of the effect of increasingly complex variables related to health and illness in the adult. Emphasis is on the interaction of biological responses to stressors in the adult life cycle. Study provides the base for expanding competence in nursing skills centering on care functions and more sophisticated application of nursing process with clients in acute care clinical settings.

NRS 325 Nursing Skills Lab: Medical/Surgical—Pediatrics (1)
On-campus practicum in the development of specific nursing care skills of a relatively complex nature.

NRS 332 Topics in Family Development (2)
This course examines the development and functioning of family systems and the impact of those systems on the development and function of the individual and parent.

NRS 333 Nursing of Children and Adults in Psychiatric/Mental Health Settings (4)
Study focuses on the care of children and adults in acute psychiatric settings. Includes exploration of variables affecting the development of psychopathology and emphasizes the development of nursing skills to provide care for patients experiencing acute psychiatric problems.

NRS 334 Nursing of Children and Adults in Maternity Settings (4)
Experience in the care of families throughout the maternity cycle. Emphasis is on the care of mothers and infants in the labor room, delivery and post partum settings. Focus is on variables contributing to a healthy pregnancy, normal delivery, and positive transition to parenthood.

NRS 335 Nursing Skills Lab: Obstetrics—Psychiatric (1)
On-campus practicum related to the development of nursing care skills relevant to the specialty area.

NRS 420 Community Health Nursing (10)
Exploration of the functions of the community health nurse with the individual, the family, and the community. Emphasis is on analysis of client adaptation to environmental stressors, nursing actions directed toward prevention of illness, restoration, maintenance, and promotion of public health, and collaboration with others in the community to achieve mutual goals.

NRS 422 NRS Research (2)
A broad overview of the research process in nursing. Includes content related to nursing theory, research design, data analysis strategies and computers in health care. Major emphasis is on the use of research concepts for the purpose of evaluating relevant research for use in nursing practice.

NRS 430 Advanced Nursing (10)
Examination of components and processes related to nurse leaders as agents of change. Emphasis is on theories and principles of administration, management and organization of health care agencies, and roles, responsibilities, and characteristics of nurse leaders within such organizations. Laboratory activities enable the student to use theories and principles and test hypotheses. Seminars provide opportunity to explore and discuss issues significant to nursing practice, identify relevant variables, and postulate outcomes.

NRS 432 Professional Nursing Topics Seminar (2)
This course is designed to provide the student knowledge about nursing as a profession. It will focus on helping the student identify and analyze major issues confronting the profession and their impact on nursing practice and the delivery of quality health care services.

NRS 490 Independent Study (Credit varies up to 12)
Options include the opportunity for selected students to participate in faculty research or preceptorships in areas of special interest.

*Nursing course content is presently being reviewed and may be modified. The number of credits required for the B.S.N. will remain constant.

CENTER FOR HEALTH SCIENCES

ASSOCIATE PROVOST AND DIRECTOR: *Moon J. Pak*

ASSISTANT TO THE DIRECTOR: *Arthur J. Griggs*

PROFESSORS: *Philip Singer, Carl R .Vann*

ASSOCIATE PROFESSOR: *Uwe Reischl*

ASSISTANT PROFESSORS: *Michael Chopp, Richard J. Rozek, Lynne Williams*

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CLINICAL PROFESSORS: *Seymour Gordon, Gerald C. Timmis*

CLINICAL ASSOCIATE PROFESSORS: *George R. Gerber, Murray B. Levin, John R. Pfeifer, Renato G. Ramos, Alexander Ullmann*

CLINICAL ASSISTANT PROFESSORS: *Joseph A. Arends, Arnold M. Berman, Nitin C. Doshi, Creagh E. Milford, Rajendra Prasad, Thomas E. Schomaker*

CLINICAL INSTRUCTOR: *Robert C. Nestor*

PROGRAMS

The Center for Health Sciences is an academic and administrative unit offering degree and nondegree programs in health and medically related fields. Presently, programs leading to the Bachelor of Science degree include industrial health and safety (IHS), medical physics (MP), medical technology (MT), and physical therapy (PT). Other programs offered through the center include the concentration in health behavioral sciences and the medical review program.

HEALTH SCIENCE CORE CURRICULUM

Students entering Oakland University and interested in pursuing the baccalaureate programs in either medical technology or physical therapy will initially be enrolled as preprofessional majors and will be required to follow the health science core curriculum. Other students who wish to pursue an educational program leading to a career in the health sciences, but undecided as to which program to follow, will also be advised to pursue the health science core curriculum. This is the recommended program for such students, since it provides not only flexibility but also exposure to basic science courses necessary for any degree-requiring health program.

Admission to major standing in medical technology or physical therapy is both selective and competitive. Completion of the health science core curriculum is one prerequisite for admission.

Students pursuing either the baccalaureate program in industrial health and safety or medical physics are not required to follow the core curriculum. The specific course requirements are outlined under the program descriptions. Many of these course requirements are identical to the courses listed in the core curriculum. A

student beginning with the core curriculum and who later wishes to enter either of these two programs will have little difficulty in making the transition.

THE CORE CURRICULUM COURSES ARE:

BIO 190, 195, 200, 321 (or 207†)
CHM 144-145, 149, 203-204* (or 234-235*)
MTH 103, 104 (or MTH 154)
STA 221
PHY 101-102 (or 151-152), 158**
PSY 100 (or 130)**, 331**
HS 101
24 credits of general education
8 credits of free electives
*not required for PT major standing
**not required for MT major standing
†option for MT major standing only.

General Education Requirement

Students pursuing programs in medical physics, medical technology, and physical therapy are required to meet the general education requirement of the Center for Health Sciences as follows:

1. Complete 24 credits in general education courses. Up to 8 credits in English composition courses may be part of the 24 credits, but they do not apply to any designated field group. The designated field groups include: arts; history, philosophy, area studies; language and thought; literature; and social sciences.
2. Complete 4 credits of general education in at least two of the five designated field groups.
3. Complete at least 8 credits in a third designated field group.
4. Complete no more than 12 credits in any one designated field group.

Descriptions of the designated field groups appear in the College of Arts and Sciences section of this catalog. In addition to the courses listed there, the following courses also may be taken to meet the general education requirement: PHL 318 Ethics and the Health Sciences (history, philosophy, area studies field group); SCN 114-115 Introduction to American Sign Language (language and thought field group); HBS 200 Health Care Dimensions (social science field group).

The general education requirement may also be met by completing the general education program of the Honors College of arts and sciences.

Students pursuing the program in industrial health and safety must follow the general education requirements specified for that program.

GENERAL HEALTH SCIENCE COURSE OFFERINGS

HS 101 Careers in the Health-Related Professions (0)
Seminar/survey of professional opportunities in the various health fields such as nursing, medical technology, histotechnology, cytotechnology, industrial health and safety, medical physics, physical therapy, occupational therapy, respiratory therapy, and pharmacy.

HS 301 Introductory Pathology (4)
Basic principles of human pathology appropriate for students pursuing curriculums in the health related disciplines. Diseases of the major systems of the body are studied.
Prerequisites: BIO 200, 321.

HS 405 Special Topics (2, 3, or 4)
Prerequisite: Permission of instructor.

HS 480 Biochemical Pharmacology (2)
Classification of drugs and an introduction to their use, abuse, and side effects. Structure-

activity relationship and biochemical basis of drug action on biological systems will be emphasized.
Prerequisite: CHM 203, BIO 321, 325 or equivalent.

PROGRAM IN INDUSTRIAL HEALTH AND SAFETY

PROGRAM DIRECTOR: *Uwe Reischl*

ASSISTANT PROFESSOR: *Richard J. Rozek*

CLINICAL ASSISTANT PROFESSORS: *Joseph P. Chu, Daniel Fink, May Chiu Ng*

CLINICAL INSTRUCTOR: *Richard J. Walcott*

The Bachelor of Science degree program in industrial health and safety (IHS) addresses the interests and aspirations of persons seeking responsible involvement in the field of occupational health and safety. State-of-the-art concepts in industrial hygiene and occupational safety are presented with relevant exposure to the basic physical, chemical, biological, and behavioral science disciplines. The program is multidisciplinary in nature and provides advanced specialized perspectives in the form of three course groupings: A, the physical/life science perspective; B, the social/behavioral science perspective; and C, the work organization perspective.

The curriculum is designed as a four-year baccalaureate program. However, students can obtain a certificate after completing the industrial health and safety "core" sequence of courses. This normally involves the successful completion of the first four semesters of course work.

A one-semester internship is required for both the certificate and the Bachelor of Science degree. This internship provides first-hand field experience in the practice of industrial hygiene and occupational safety. Internship placements will be the responsibility of the program and will include labor, industry, and government organizations.

Graduates of the program in industrial health and safety will find employment opportunities within industry, labor, and local, state and federal health agencies. Many courses in this program are scheduled in the evening to accommodate part-time students.

Requirements for the Degree of Bachelor of Science in Industrial Health and Safety

1. Completion of the general university undergraduate degree requirements.
2. Completion of 136 credits, as set forth in paragraphs 3 to 5 below.
3. Completion of a major program consisting of: IHS 100, 101, 110, 111, 202, 212, 303, 304, 330, 420, 440; BIO 200, 207; CHM 104, 201; MTH 104, 105; STA 225; PHY 101, 102, 158.
4. Completion of 16 credits in either perspective option A, B, or C (see description of perspectives).
5. Completion of 24 credits of general education. Specific requirements depend on program perspective pursued (see description of general education).

General Education Requirements

Depending on the IHS program perspective selected (option A, B, or C), the following general education requirements apply:
Option A

1. Completion of HST 302 History of the American Worker.
2. Completion of 8 credits in the social science field group. See list of course options under College of Arts and Sciences section of this catalog. Within the social science field group, the course HBS 200, Health Care Dimensions, also

qualifies as a general education elective.
3. Completion of 4 credits in each of three of the remaining four field groups: arts; language and thought; literature; and area studies/philosophy. See list of course options under College of Arts and Sciences section of this catalog.

Option B or C
1. Completion of HST 302 History of the American Worker.
2. Completion of 4 credits in each of the following field groups: arts; language and thought; literature; area studies/philosophy as described in the College of Arts and Sciences section of this catalog.
3. Completion of 4 additional credits in one of the field groups listed in the paragraph above.

IHS Program Perspectives

Sixteen credits are required in one of three perspectives; 8 or more of the 16 credits in courses at the 300 level or above. This, along with the 24 credits of 300-level or above courses in the curriculum, will satisfy the university requirement of 32 credits at 300 level or above.

The following clusters of option courses are designed to be flexible. There will be a continuous revision of this list, with close consultation of the involved departments. It is also hoped that the introductory courses (100-level courses) listed in options B and C can be waived for at least some of the students in the program who have demonstrated preparation for upper-level courses.

Students will receive close counseling and guidance in the selection of a perspective, as well as in the planning of courses for the selected option.

Option A: Physical/Life Science Perspective

BIO 205	(4)	Anatomy
BIO 321	(4)	Physiology
BIO 325	(4)	Introductory Biochemistry
BIO 319	(4)	General Microbiology
BIO 341	(4)	Genetics
PE 304	(4)	Exercise Physiology
CHM 225	(4)	Analytical Chemistry
CHM 339	(4)	Separations and Applied Spectroscopy
CHM 428	(2)	Analog Electronics for Chemistry
ENV 308	(4)	Introduction to Environmental Studies
ENV 312	(4)	Energy and the Environment
ENV 355	(3)	Environmental Health Practice
ENV 372	(3)	Air Chemistry
ENV 373	(3)	Water Resources
ENV 390	(1-6)	Directed Studies
ENV 461	(3)	Environmental Law and Policies
ENV 484	(3)	Environmental Toxicology
ENV 486	(3)	Toxic Substance Control
PHY 241	(2)	Introductory Electronics for Scientists I
PHY 242	(2)	Introductory Electronics for Scientists II
PHY 243	)2)	Introductory Electronics for Scientists III
CIS 120-121	(4)	Computer Programming

Option B: Social/Behavioral Sciences Perspective

HBS 200	(4)	Health Care Dimensions
HBS 400	(4)	Field Practicum in Health Behavioral Sciences
AN 333	(4)	Medical Anthropology
AN 392	(4)	Current Problems in Anthropology
AN 420	(4)	Ethnopsychiatry

PSY 100	(4)	Introduction to Psychology
PSY 350	(4)	Motivation
PSY 351	(4)	Learning, Memory, Thinking
PT 324	(3)	Physical Therapist/Patient Milieu
CIS 120-121	(4)	Computer Programming
SOC 100	(4)	Introduction to Sociology
SOC 357	(4)	Industrial Sociology
SOC 445	(4)	Urban Sociology

Option C: Work Organization Perspective

ECN 150	(4)	Basic Economics
ECN 309	(4)	Urban Economic Problems
ECN 310	(4)	Economics of the Environment
ECN 326	(4)	Economic Development
ECN 328	(4)	American Economic Development
ECN 338	(4)	Economics of Human Resources
ECN 347	(4)	Problems in Health Economics
ORG 330	(4)	Organizational Behavior
PS 350	(4)	Public Administration
IHS 431	(4)	Regulatory Aspects of Safety
CIS 120-121	(4)	Computer Programming

Requirements for the Certificate Option or Minor in Industrial Health and Safety

A certificate in industrial health and safety can be issued to students who complete the "core" sequence of IHS and basic science courses. A total of 68 credits must be completed including the following courses: IHS 100, 101, 110, 111, 202, 212, 240, 304; MTH 104, 105; CHM 104, 201; PHY 101, 102, 158; RHT 100, 101.

Students in the Bachelor of General Studies (B.G.S.) degree program who complete the requirements for the certificate option in IHS will be able to receive a *minor* in industrial health and safety. Bachelor of General Studies students should apply for this minor on forms available from the B.G.S. office.

COURSE OFFERINGS

IHS 100 Industrial Hygiene I (4)
Introduction to current concepts and issues in industrial hygiene and occupational health. Principles of recognition, evaluation, and control of hazards in the work environment. Environmental standards, environmental and biological monitoring, OSHA, worker productivity, threshold limit values.

IHS 101 Industrial Hygiene Health II (4)
Methods of environmental testing. Evaluation of occupational stresses found in selected work environments. Noise, heat, ventilation, microwave radiation, ionizing radiation, illumination. The role of labor and management in controlling environmental quality.
Prerequisites: IHS 100, CHM 104.

IHS 110 Industrial Safety I (4)
Introduction to current concepts in safety engineering. OSHA standards, human factors, accident investigation techniques, fault-tree analysis, legal aspects of safety.

IHS 111 Industrial Safety II (4)
Safety assessment for occupational environments. Analytical techniques, structural analysis, strength of materials, electrical safety, fire life-safety, medical management of injuries, personal protective clothing.
Prerequisite: IHS 110.

IHS 202 Industrial Hygiene III (4)
Advanced methods of environmental testing. Focus on air contaminants in the work environment. Analysis of toxic fumes and gases, dusts, and fibers. Analytical techniques for laboratory and field applications.
Prerequisites: IHS 100, CHM 104, MTH 105.

IHS 212 Industrial Safety III (4)
Introduction to concepts in security and protection of property, disaster response planning, hazardous materials handling during transport. Safety planning and management. Report preparation, writing, and oral presentations.
Prerequisite: IHS 110.

IHS 240 Industrial Health and Safety Internship (4)
Practical training and field exposure to industrial work settings. Intended only for students seeking the certificate in IHS.
Prerequisite: Departmental permission.

IHS 303 Industrial Toxicology (4)
Introduction to the basic concepts and techniques of toxicology with special attention given to industrial work environments. Evaluation of the effects of toxic substances on the human body. Focus on responses of various systems within the body to selected toxic agents.
Prerequisites: IHS 202, CHM 201, BIO 207.

IHS 304 Introduction to Epidemiology (4)
An introduction to the uses of epidemiology in public health practice, using selected diseases to illustrate the development of knowledge on disease causation and the application of such knowledge to disease control.
Prerequisite: IHS 202.

IHS 313 Fire Prevention and Protection (4)
Fundamentals of flame generation and propagation; fire behavior in open and confined spaces; theory of fire fighting methods; methods and devices for fire detection and suppression.
Prerequisites: IHS 202, IHS 212.

IHS 330 Environmental Standards (4)
Examines ambient and work place air, noise, radiation, water and pesticide standards. Topics will be analyzed in terms of standard development, enforcement at state and federal levels, and the validity of the standard's ability to protect health.
Prerequisites: IHS 202, IHS 212, PHY 102, PHY 158.

IHS 405 Special Topics (2, 3, or 4)
Prerequisite: Permission of instructor.

IHS 420 Public Health Engineering (4)
Planning, design, and survey of factors related to the physical aspects of environmental health with particular reference to industrial pollution control for water and air, waste, and life-safety in buildings.
Prerequisites: IHS 202, CHM 104, MTH 105.

IHS 431 Regulatory Aspects of Safety (4)
Survey of regulatory basis of accident prevention requirements; federal laws, codes, standards, court judgments, and procedures; case studies; worker influences.
Prerequisites: IHS 212, IHS 330.

IHS 440 Advanced Industrial Health and Safety Internship (4)
Field training in industrial safety and health in close collaboration with professional industrial hygiene and safety personnel. Exposure to health and safety program planning and evaluation. Graded S/N.
Prerequisite: Departmental permission.

IHS 450 Robotic Safety (4)
Information and issues related to worker safety in industrial environments where robots are used will be presented. The state-of-the-art of advanced automation will be surveyed with emphasis on system safety and injury prevention features required to assure an adequate worker/robot interface.
Prerequisite: Departmental permission.

IHS 451 Industrial Ventilation (4)
Design and control applications for reducing worker exposure to airborne contaminants. Concepts and principles of dilution and local exhaust ventilation will be presented. Methods for assessment of industrial ventilation systems required to prevent the accumulation of flammable or explosive concentrations of gases, vapors, or dusts.
Prerequisite: Departmental permission.

IHS 452 Industrial Noise Control (4)
Concepts in engineering controls required in the management of noise overexposure in industrial environments. Analysis of engineering design options and mechanical modifications effective in controlling worker exposure to undesirable industrial noise will be presented.
Prerequisite: Departmental permission.

IHS 453 Radiation Safety (4)
Safety aspects of occupational hazards associated with the use of ionizing radiation in industry will be presented. Methods for the identification, evaluation, and control of potential worker overexposure conditions will be reviewed. Biological effects of acute and chronic worker exposure will also be reviewed.

IHS 490 Independent Study (1-4)
Student initiated and problem-oriented independent study focusing on occupational health and safety issues. Graded S/N.
Prerequisite: Permission of instructor.

PROGRAM IN MEDICAL PHYSICS

DIRECTOR: *Abraham R. Liboff (Physics)*

ASSISTANT DIRECTOR: *Michael Chopp (Physics and Health Sciences)*

CLINICAL PROFESSORS: *Howard J. Dworkin, Harold D. Portnoy*

CLINICAL ASSISTANT PROFESSOR: *Ronald A. Rocchio*

Medical physics, a developing health-related professional field, is concerned with the use of physical techniques to diagnose and treat disease. In the past the subject played a vital part in the development of radiation therapy. Today medical physics also includes the physical aspects of X-ray diagnosis, nuclear medicine, radiation safety, ultrasonics, lasers, thermography, image intensification, EKG, and EEG. It is also involved in related areas such as patient monitoring and general medical instrumentation. In addition to clinical duties surrounding these techniques, medical physicists engage in research and development, consultation and service, and teaching of residents, hospital personnel, and undergraduates. Much of the progress made in the last decade in both diagnosing and treating cancer can be traced directly to the increasing use of physics in medicine.

The medical physics program is based on a group of physics courses, with relevant biology, chemistry, and mathematics courses added.

In their senior year, students take physics of diagnostic radiology and physics of nuclear medicine. In addition, students are placed in hospitals as medical physics interns. During this internship, they assist the resident medical physicist in providing clinical medical physics support and thereby gain direct experience in the clinical environment.

Interested students must consult with the assistant director for specific information and counseling.

Requirements for the Degree of Bachelor of Science in Medical Physics

1. Completion of the general university undergraduate degree requirements.
2. Completion of 128 credits, as set forth in paragraphs 3 to 7 below.
3. Completion of 24 credits of general education as described under the health science core curriculum.

4. PHY 151, 152, 158 or 159, 341, 347, 372, 318, 351, 371, 317, 361, 381, 441, 443, 442, 444.
5. MTH 154, 155, 254; STA 226; APM 257.
6. CHM 144, 145, 149, plus 4 additional credits at a level not below CHM 144. CHM 201 may be taken for credit.
7. BIO 200, 205, 207.

PROGRAM IN MEDICAL TECHNOLOGY

PROGRAM DIRECTOR: *Lynne Williams*

SPECIAL INSTRUCTOR: *Mary L. Sherman*

CLINICAL PROFESSORS: *Jay Bernstein, Richard H. Walker*

CLINICAL ASSOCIATE PROFESSORS: *James J. Humes, Donald J. Jarzynski, John H. Libcke, Kenneth R. Meyer, James W. Mitchener, Boris K. Silberberg*

CLINICAL ASSISTANT PROFESSORS: *A. Al Saadi, David W. Eckert, Evelyn R. Hansen, A.J. Levine*

CLINICAL INSTRUCTORS: *Dorothy Cummings, Susan Dingler, Geraldine Y. James, Sheralyn J. Johnson, Deanna Dupree Klosinski, Margaret M. Kluka, Ross R. Lavoie, Connie Probert, Carolyn A. Shalhoub, John T. Waugh, Robert Weimer*

The program prepares students for professional health career opportunities in either hospital clinical pathology or anatomical pathology laboratories. Medical technologists work under the supervision of a pathologist and are primarily responsible for operation of the clinical pathology laboratory, performing a wide variety of tests on which physicians base their diagnosis of a disease and formulate therapeutic plans. The medical technology program offers two specializations that prepare students for employment opportunities in the anatomical pathology departments of hospitals. Histotechnologists and cytotechnologists work under the supervision of a pathologist, aiding in the diagnosis of diseases based on tissue alterations.

Admission to the professional part of the programs is restrictive and selective and occurs in the winter semester of the sophomore year, either by progression of students currently enrolled at Oakland, or by transfer from other institutions. Whether the medical technology program will accept a student into the professional part of the programs is contingent on satisfactory completion of the health science core curriculum. The medical technology programs have enrollment quotas filled with preference to applicants judged to be best qualified to complete the programs. Admissions are based on grades, personal interviews, and, where appropriate, letters of recommendations.

Requirements for the Degree of Bachelor of Science in Medical Technology

1. Completion of the general undergraduate degree requirements.
2. Completion of 136 credits, as set forth in paragraphs 3 and 4 below.
3. Completion of the health science core curriculum.
4. Completion of the major course work for clinical medical technology, histotechnology, or cytotechnology.

Clinical Medical Technology

Medical technologists perform a wide range of diagnostic procedures, including procedures in hematology, clinical chemistry, microbiology, serology, urinalysis, and immunohematology (blood banking).

Students are accepted into the medical technology program after completion of the health science core curriculum. The junior year consists of the prescribed

academic program at Oakland, and the senior year consists of a 12-month affiliation at an approved hospital school of medical technology. Upon completion of the internship, the student must pass a national certification examination to become a registered medical technologist.

Currently, the following hospitals are affiliated with Oakland University: Flint Osteopathic Hospital, Flint; Harper Hospital, Detroit; McLaren Hospital, Flint; Oakwood Hospital, Dearborn; Pontiac General Hospital, Pontiac; Port Huron Hospital, Port Huron; Providence Hospital, Southfield; St. John Hospital, Detroit; St. Joseph Hospital, Flint, St. Joseph Mercy Hospital, Pontiac; William Beaumont Hospital, Royal Oak.

Clinical Medical Technology Course Requirements

Students accepted for clinical medical technology major standing must complete the following courses: BIO 365, 421, 422, 423, 325 and 408 (or CHM 453, 454, 457); MT 201, 315, 316, 326, 327, 328; 28 credits in clinical courses: MT 415, 416, 418, 421, 423, 428.

Specializations in Anatomic Medical Technology

Histotechnology

DIRECTOR: *A. Al Saadi*

CLINICAL INSTRUCTORS: *Dorothy Cummings, Connie Probert, Robert Weimer*

Histotechnologists perform a variety of diagnostic and research procedures in the anatomic sciences. Basic histologic techniques involve the processing and staining of tissue specimens which have been removed by biopsy, autopsy, or from laboratory animals. Advanced techniques involve the use of the electron microscope, immunofluorescence microscopy, autoradiography, cytogenetics and medical photography.

Students are accepted into the histotechnology program after completion of the health science core curriculum. The junior year consists of the prescribed academic program at Oakland University. The senior year consists of a 12-month affiliation at William Beaumont Hospital, School of Histotechnology.

Histotechnology Course Requirements

Students accepted for histotechnology major standing must complete the following courses: BIO 205, 305, 306, 325, 429, 445, 341 (or 427), 423; MT 201, 312; 28 credits in clinical courses: HT 401, 402, 403, 404.

Cytotechnology

DIRECTORS: *E.G. Bernacki, (William Beaumont Hospital), Richard J. Pollard (Harper Hospital)*

ASSOCIATE DIRECTOR: *A.J. Levine*

CLINICAL INSTRUCTORS: *Susan Dingler, Ross L. Lavoie*

A cytotechnologist is a trained medical laboratory technologist who detects cell disease by light microscopic examination of cell samples from all areas of the human body. Students are accepted into the cytotechnology program after completion of the health science core curriculum.

The junior year consists of the prescribed academic program at Oakland, and the senior year consists of a 12-month internship at William Beaumont Hospital, School of Cytotechnology or Harper Hospital, School of Cytotechnology. The training program includes an integrated presentation of didactic material, micro-

scopic study, specimen preparation, clinical observation, cytogenetics, laboratory management, a research project, and a two-week rotation at a satellite hospital.

Cytotechnology Course Requirements

Students accepted for cytotechnology major standing must complete the following courses: BIO 205, 305, 306, 325, 341 (or 427), 393, 421, 423; MT 201, 312; 28 credits in clinical courses: CT 401, 402.

MEDICAL TECHNOLOGY COURSE OFFERINGS

MT 201 Careers in Medical Technology (0)
An introductory seminar in medical technology, including career opportunities in clinical medicine (medical technology, histotechnology, cytotechnology, industrial sales and/or research and development, basic medical research, and education. Graded S/N.

MT 312 Hematology/Cellular Pathophysiology (3)
Topics include current concepts of hematopoiesis, including selected topics in red blood cell, white blood cell, and platelet morphogenesis, physiology and pathophysiology; an introduction to the basic principles involved in cellular disease mechanisms.
Prerequisite: BIO 207 or 321; Permission of instructor.

MT 315 Medical Hematology I (3 or 4)
Theory and techniques in clinical microscopy, including urinalysis and body fluid analysis. Theory and techniques in blood coagulation and immunohematology, including normal functioning and pathological alterations. Class may be taken without lab for 3 credits.
Prerequisite: BIO 207 or 321; Permission of instructor.

MT 316 Medical Hematology II (3 or 4)
Theory and techniques in hematology, including red blood cell, white blood cell, and platelet morphogenesis, physiology, and pathophysiology. Class may be taken without lab for 3 credits.
Prerequisite: BIO 207 or 321; Permission of instructor.

MT 326 Instrumentation Lecture and Laboratory (1)
An introduction to the theoretical and practical aspects of clinical instrumental analysis. Includes practical experience in the calibration, operation, and preventive maintenance of laboratory instruments.

MT 327 Clinical Chemistry (3)
A theoretical introduction to the fundamentals of clinical chemistry with emphasis on pathophysiology and clinical correlations.

MT 328 Clinical Chemistry Laboratory (1)
Provides practical experience in the application of clinical instrumentation and current clinical methodologies to the performance of clinical chemistry assays.

MT 405 Special Topics (1, 2, 3, or 4)
Prerequisite: Permission of instructor.

MT 415 Clinical Practicum—Urinalysis/Coagulation (3)
Didactic and practicum experience at an affiliated hospital school of medical technology, in the fields of urinalysis and coagulation.
Prerequisite: Permission of instructor.

MT 416 Clinical Practicum—Hematology (5)
Didactic and practicum experience at an affiliated hospital school of medical technology, in the area of hematology.
Prerequisite: Permission of instructor.

MT 418 Clinical Practicum—Immunohematology (4)
Didactic and practicum experience at an affiliated hospital school of medical technology, in the field of immunohematology.
Prerequisite: Permission of instructor.

MT 421 Clinical Practicum—Microbiology (7)
Didactic and practicum experience at an affiliated hospital school of medical technology, in the field of medical microbiology, including parasitology and mycology.

Prerequisite: Permission of instructor.

MT 423 Clinical Practicum—Serology (2)
Didactic and practicum experience at an affiliated hospital school of medical technology, in the field of serology.
Prerequisite: Permission of instructor.

MT 428 Clinical Practicum—Chemistry (7)
Didactic and practicum experience at an affiliated hospital school of medical technology, in the field of clinical chemistry.
Prerequisite: Permission of instructor.

MT 451 Clinical Education (6)
Prerequisite: Permission of instructor.

MT 490 Individual Laboratory Work (2-4)
Prerequisite: Permission of instructor.

MT 497 Apprentice College Teaching (2)
Directed teaching of selected undergraduate courses. May be repeated for credit. Graded S/N.
Prerequisite: Permission of instructor.

HISTOTECHNOLOGY COURSE OFFERINGS

HT 401 Basic Histotechnique and Histochemical Staining Methods (12)
Didactic and practicum experience in preparing histologic sections for light microscopy, including the study of over 50 different histologic and histochemical staining methods and their specific applications.

HT 402 Basic Electron Microscopy (8)
Didactic and practicum experience in basic biological electron microscopy. Electron microscopic histochemistry and special techniques are also covered. Emphasis is on the electron microscope as a medical diagnostic tool.

HT 403 Immunohisto-cytochemistry (4)
A course designed to teach basic and advanced procedures of fluorescent and enzyme-labeled antibody techniques. The course includes the preparation of tissues, staining with labeled antibodies and the use of the fluorescence microscopy in clinical medicine and research.

HT 404 Cytogenetics (4)
An intensive course in human cytogenetics. Human chromosome methodology, chromosome identification and chromosomal abnormalities and their application in clinical medicine.

CYTOTECHNOLOGY COURSE OFFERINGS

CT 401 Clinical Internship (14)
Tissue preparation and staining techniques; microscopic study of cellular alterations indicative of cancer and precancerous conditions, bacterial, viral, and parasitic infections, and hormonal abnormalities; cytogenetics; and a research project.
Prerequisite: Permission of instructor.

CT 402 Clinical Internship (14)
Continuation of CT 401.

PROGRAM IN PHYSICAL THERAPY

INTERIM PROGRAM DIRECTOR: *Alfred W. Stransky*

SPECIAL INSTRUCTOR: *Christine Pillow*

VISITING INSTRUCTOR: *Patricia W. Custer*

CLINICAL PROFESSOR: *Charles Dorando*

CLINICAL INSTRUCTORS: *Kristie S. Kava, James C. Pipp*

The physical therapy program has a three-fold purpose. The first is to provide an educational program which prepares students for the Bachelor of Science degree and a professional career in physical therapy. The second is to provide opportunities

for the advancement of knowledge in physical therapy through research. The third is to provide service to the public. This is done, in part, through continuing education courses and lectures, and by providing a resource of physical therapy expertise. With this three-fold purpose, the physical therapy program is an integral part of the university, providing students the opportunity to develop personal skills for productive citizenship along with the professional skills of physical therapy.

Physical therapy is an integral part of the health care system. The physical therapist is concerned with the prevention and treatment of acute and chronic conditions which cause disorders of movement. In order to provide appropriate treatment, a thorough knowledge of the neuromusculoskeletel and cardiopulmonary systems is paramount so that each person can be evaluated and problems identified. From this evaluation, a therapy program is developed to resolve each problem. Working in concert with the referring physician, the physical therapist and physician continually maintain contact regarding each patient's progress.

Evaluation, prevention, and treatment of movement disorders requires specific knowledge of basic and applied medical science. Such knowledge and understanding is built upon a foundation of the basic sciences of biology, chemistry, physics, anatomy, physiology, kinesiology and pathology. Of equal importance is a background in the behavioral sciences, for this provides basic knowledge in the understanding and developing of interpersonal relationships with patients, families, and other health professionals

Physical therapy students follow a four and one half year academic program at Oakland University based on the educational guidelines of the American Physical Therapy Association. The first two years are fulfilled by the health science core curriculum, while the remaining two and one half years can be completed only by students accepted as physical therapy majors. Acceptance into the professional phase of the program is competitive and selective and based on academic performance, letters of recommendation, exposure to the profession, and personal interviews. Application for major standing typically occurs in the winter semester of the sophomore year and may be initiated by students currently enrolled at Oakland or by transfers from other institutions. Physical therapy majors begin classes in the spring. Upon receipt of the degree, a student must pass a state board examination in order to become licensed to practice.

Requirements for the Bachelor of Science Degree in Physical Therapy

1. Completion of the general university undergraduate degree requirements.
2. Completion of 136 credits, as set forth in paragraphs 3 and 4 below.
3. Completion of the health science core curriculum.
4. Completion of a major program consisting of: BIO 381, 405; HS 301; PE 304, 320; PT 322, 323, 324, 331, 341, 342, 343, 351, 425, 432, 444, 445, 446, 452, 453, and either 402/405, 404/405, 406/407, or 408/409.

PHYSICAL THERAPY COURSE OFFERINGS

PT 322 Physical Therapy and the Human Life Cycle (3)
Study of various aspects of the stages of life and the relationship to patient conditions commonly seen in physical therapy. Emphasis is on the developmental foundation for therapeutic techniques.

PT 323 Clinical Medicine and Physical Therapy (3)
Lecture series covering the etiology, signs and symptoms, course, treatment, and implications for physical therapy, of conditions managed by various medical specialties.

PT 324 Physical Therapist/Patient Milieu (3)
Survey of the various factors impinging upon the patient, the family, and ultimately the

patient-therapist relationship and what the therapist needs to consider when interacting with the patient or family.

PT 331 Evaluation Procedures (3)
Basic principles and techniques of manual muscle testing, goniometry, sensory and reflex testing, and neurodevelopmental assessment.

PT 341 Introduction to Physical Therapy (3)
Theory and practice of basic therapeutic techniques utilized in physical therapy. Includes medical emergencies, massage, mobility training, and basic communication skills.

PT 342 Therapeutic Procedures I (3)
Principles and use of superficial and deep heat, cold, infrared and ultraviolet radiation, hydrotherapy, and low voltage currents in therapeutic evaluation and treatment. Includes laboratory.

PT 343 Therapeutic Procedures II (3)
Theory and techniques of basic and traditional therapeutic exercises including general and localized strengthening, relaxation, mobility, coordination, and posture.

PT 351 Clinical Education I (1)
Orientation to clinical education including the practice of basic evaluation and treatment skills through supervised experience in the clinical environment.

PT 402 Cardiac Rehabilitation and Physical Therapy (4)
Principles and techniques of implementing the physical therapy portion of a cardiac rehabilitation program. Includes certification in advanced cardiac life support.

PT 403 Specialized Physical Therapy Techniques (4)
Theory and techniques of advanced manual therapy.

PT 404 Specialized Physical Therapy Techniques Practicum (4)
A directed study dealing with the clinical application of selected physical therapy techniques.

PT 405 Special Topics (1, 2, 3, or 4)
Prerequisite: Departmental permission.

PT 406 Physical Therapy and Advanced Pediatrics (4)
Advanced theory and principles of physical therapy care of pediatric patients.

PT 407 Physical Therapy and Clinical Pediatrics (4)
A directed study dealing with the clinical application of advanced physical therapy techniques for the pediatric patient.

PT 408 Physical Therapy and Aging (4)
Theoretical and research perspectives of aging with emphasis on implications for physical therapy health care provision.

PT 409 Physical Therapy and Clinical Gerontology (4)
A directed study dealing with the clinical considerations of physical therapists working with a geriatric population.

PT 425 Physical Therapy Administration and Health Care Delivery (3)
Discussion and group experiences dealing with various aspects related to the administration of a physical therapy service including: patient care audit, policies and procedures, problem oriented medical record systems, and quality assurance.

PT 432 Research in Physical Therapy (2)
Theory and application of the principles of problem solving and the scientific method, with emphasis on current research in physical therapy, towards the completion of a small scale project.

PT 444 Therapeutic Procedures III (3)
Theory, principles, and application of neurophysiologic approaches to therapeutic exercise for specialized problems.

PT 445 Rehabilitation Procedures (3)
Therapeutic program planning for the severely handicapped patient for activities of daily living, recreation, home evaluation, family involvement and mobility. Includes principles and techniques regarding prosthetics and orthotics.

PT 446 Advanced Procedures (2)
A lecture and laboratory series of medical and surgical conditions seen by physical therapists, with emphasis on orthopedic, pulmonary, and athletic conditions.

PT 452 Clinical Education II (1)
Continuation of PT 351.

PT 453 Clinical Education III (2)
Continuation of PT 452.

CONCENTRATION IN HEALTH BEHAVIORAL SCIENCES

DIRECTOR: *Carl R. Vann*

PROFESSORS: *Philip Singer, Carl R. Vann*

Courses in health behavioral sciences are recommended as electives for students pursuing health careers in the programs offered by the Center for Health Sciences. The concentration in health behavioral sciences is planned to be taken in conjunction with a regular departmental major or independent major. Its purpose is to offer a multidisciplinary perspective of the behavioral sciences on the many and varied aspects of the health disciplines, problems, and concerns. It provides a cross-cultural as well as an American perspective. It is especially relevant to students seeking careers in health-related fields and also offers significant insights and opportunities for study to students pursuing programs of general education, administration, and law.

Requirements for the concentration in the health behavioral sciences are 20 credits to be chosen from: HBS 200, 250, 251, 300, 400, 499; AN 333, 420; ECN 467; PS 359; PA 568, 569.

Students interested in a program in health services administration should consult the Department of Political Science in order to combine courses in health behavioral sciences with their program in administration.

Students in the premedical program and majors in any of the natural sciences, with an adviser's approval, may count 4 credits of their major course work toward this concentration.

COURSE OFFERINGS

HBS 200 Health Care Dimensions (4)
Development, present status, and dynamics of the American health care system emphasizing structure of the various health professions and the problems, opportunities, and constraints of health care delivery, and professionalism. Other topics are relationships between the health care cultures and personality and professional roles of health care practitioners, and issues involving hospitals and health care.

HBS 250-251 Health Behavioral Sciences (4 each)
Human behavior, institutions, and professions in the health-medical fields. Emphasis on concepts of health and illness, death and dying, the sick role, doctor-patient relationships, organization and delivery of health care.

HBS 300 Independent Study in the Health Behavioral Sciences (4, 8, 12, or 16)
A semester of off-campus independent study and applied research. Projects are developed with and supervised by faculty within the framework of methodology and explanation in the behavioral sciences.

HBS 400 Field Practicum in Health Behavioral Sciences (4, 8, 12, or 16)
Primarily for students seeking careers in health-related fields, this course is a supervised field placement combined with academic content and individually guided research. Students are placed with hospitals, government and voluntary health agencies, comprehensive medical service organizations, etc.

HBS 499 Senior Seminar in Health Behavioral Sciences (4)

MEDICAL REVIEW PROGRAM

DIRECTOR: *Moon J. Pak (Health Sciences)*

ASSISTANT PROGRAM DIRECTOR: *Arthur J. Griggs (Health Sciences)*

CLINICAL ASSOCIATE PROFESSORS: *Michael Garcia, Nasirul Haque, Alexander Ullmann*

CLINICAL ASSISTANT PROFESSORS: *Jaime V. Aragones, Arnold L. Brown, E. Patrick Juras, Satish C. Khaneja, Moufid Mitri, Ahmad M. Samhouri*

The Medical Review Program is a graduate level, nondegree, short course for physicians preparing for examinations for medical licensure or graduate medical education opportunities. The examinations for which this program prepares physicians include the Educational Commission for Foreign Medical Graduates Examination (ECFMG) and the Federation Licensing Examination (FLEX). This program, which is strictly didactic in nature, is offered on an annual or biannual basis. The duration of the program is three months. During this time, approximately 350 hours of lecture are presented on the fundamentals underlying the basic and clinical science subjects associated with medical education programs in the United States. To be eligible for this program, applicants must be graduates, or senior year students, of medical education programs recognized by the World Health Organization.

THE DIVISION OF CONTINUING EDUCATION

OFFICE OF THE DEAN

Lowell R. Eklund, Dean

The division is responsible for university credit courses at extension sites and for noncredit course department programming, which includes cooperating with business and industry, governmental units, and other organizations to conduct university-level programs to meet their needs. The multifaceted programs of the division are designed to help individuals perform more effectively on the job and in their daily lives. Noncredit offerings are revised continuously to meet the expressed needs of nontraditional adult learners and of the community.

BACHELOR OF GENERAL STUDIES DEGREE (B.G.S.)

DIRECTOR OF GENERAL STUDIES: *Elaine Chapman-Moore*

B.G.S. COUNSELORS: *Marilyn Broderick, Carole Crum*

FACULTY COUNCIL FOR GENERAL STUDIES: *Hoda Abdel-Aty Zohdy, Assistant Professor, Engineering; Osmun Altan, Assistant Professor, Engineering; Jean Braun, Professor, Psychology; John Cowlishaw, Associate Professor, Biological Sciences; William Cramer, Associate Professor, Library; Leo Gerulaitis, Associate Professor, History; Barbara Hamilton, Special Instructor, Rhetoric; Gerald Heberle, Associate Professor, History; Patrick Johnson, Associate Professor, School of Human and Educational Services; Sandra Lowery, Assistant Professor, Nursing; Ann Pogany, Assistant Professor, Library; Luellen Ramey, Assistant Professor, Human and Educational Services; Howard Schwartz, Assistant Professor, School of Economics and Management; Richard Stamps, Associate Professor, Anthropology; Laura Stern, Instructor, Economics and Management; Carl Vann, Professor, Political Science/Behavioral Science.*

The Bachelor of General Studies degree (B.G.S.) is a university-wide baccalaureate program that offers maximum flexibility and opportunity for student decision-making about courses of study at Oakland University. The B.G.S. is primarily for students interested in obtaining a broad liberal arts education without majoring in a particular discipline. Students entering the B.G.S. program design a program of study utilizing courses from the university to prepare them for a particular job or career choice. B.G.S. degree students may select courses from any field of study offered by any academic department, subject to prerequisites and policies set by the individual departments. The B.G.S. program offers students the opportunity to plan a unique and challenging academic program in cooperation with a B.G.S. faculty adviser.

Some program enrollees have academic credits from other colleges and were encouraged by their employers to pursue a baccalaureate degree. The B.G.S. degree has flexible policies for the transfer of credits from other institutions, and it provides a personalized program to meet the educational needs of individuals and employers. Pre-enrollment counseling is available for those who wish to consider the B.G.S. degree.

Two-Plus-Two Program for Associate Degree Holders

The Bachelor of General Studies degree allows a student to combine broad liberal arts and professional courses with an associate's degree program from a Michigan community college. The two-plus-two program provides for transfer of up to 62 semester credits from accredited two-year institutions in Michigan. Courses accepted through the two-plus-two agreement must have been awarded a grade of C or above.

The B.G.S. degree program accepts all associate degrees as the first two years of the program, except for nursing associate degrees. Nursing associate degree recipients are subject to a course-by-course evaluation into the B.G.S. and other academic programs. Associate degree programs accepted under two-plus-two must include at least 12 semester credits of liberal arts courses, and contain all course work taken at accredited institutions.

Requirements for the Bachelor of General Studies Degree

Students eligible for the Bachelor of General Studies degree must:

1. Complete 124 credits.
2. Complete 32 of those credits at the 300 or 400 level.
3. Complete 32 credits at Oakland University and successfully complete the last 4 credits at Oakland University.
5. Demonstrate writing proficiency by meeting the university standards in English composition.
6. Successfully complete at least the last 24 credits as an admitted candidate to the B.G.S. program. Candidacy is authorized by the university and the Faculty Council for General Studies when the student has approval of his/her plan-of-work and rationale for the Bachelor of General Studies degree from the Bachelor of General Studies Advising Committee.
7. Have been admitted to candidacy for the B.G.S. degree by the university and the Faculty Council for General Studies.
8. Be in substantial agreement with legal curricular requirements of the state of Michigan.

Concentrations or Minors for B.G.S. Majors

Bachelor of General Studies students may wish to develop programs which include concentrations or minors offered by other academic schools or departments within the university. Approximately 50 minors or concentrations are available to B.G.S. students; a complete listing may be obtained from the general studies office. The student should consult the B.G.S. counselor for policies and procedures for seeking a minor or concentration.

Advising

Because the Bachelor of General Studies program is individualized by design, faculty advising is central to the program. Each B.G.S. student should follow a specific advising procedure, including:

1. Initial appointment with B.G.S. counselor. The counselor will explore with the student the appropriateness of the B.G.S. program to the student's needs and, if appropriate, assign a faculty adviser.
2. Assignment of faculty advisers. When a student elects a B.G.S. program through an admission application or a Change of Major Form, the counselor will give the student a list of faculty advisers and their special areas of interest. The student will either select a faculty adviser or will be assigned one.
3. Initial advising session. The prospective B.G.S. student and the faculty adviser will have an initial advising session to discuss the student's goals and courses

which may assist the student in achieving those goals. The student will complete a plan-of-work and write a rationale for the course selection.

4. Plan-of-Work and rationale. Within five weeks after the student sees the B.G.S. counselor, the plan-of-work and rationale are due in the general studies office.
5. Advising Committee Approval. When the faculty adviser approves the plan-of-work and rationale, these documents will be sent to the general studies office for approval by the B.G.S. advising committee which meets monthly to approve student programs.
6. Substitutions to plan-of-work. Courses taken other than those listed on the original plan-of-work must be approved by the student's faculty adviser on the Plan-of-Work Substitution Form. This form may be obtained from the general studies office or from the faculty adviser. When completed, the substitution form is submitted to the general studies office.

Conciliar Honors

Conciliar honors are granted to Bachelor of General Studies students by the B.G.S. faculty council. There are two ways in which a person gains conciliar honors:

1. If the student's cumulative grade point average is 3.60 or better, the student is automatically nominated for conciliar honors.
2. If the student's cumulative grade point average is between 3.30 and 3.59, the individual may self-nominate by submitting a letter of rationale. Application should be made on the basis of excellence in scholarship, appropriate community and university experience, and/or achievement of academic distinction while overcoming extreme adversity. The letter of self-nomination should be accompanied by faculty recommendations. Nominations will be considered by the advising committee and forwarded to the faculty council for final approval.

EXTENSION PROGRAM: UNDERGRADUATE

DIRECTOR OF COMMUNITY EDUCATION: *Harry B. Van Hook, Jr.*

The university offers undergraduate courses at various sites in southeast Michigan including: Shrine and Dondero High Schools, Royal Oak; Seaholm High School, Birmingham; Carleton Junior High School, Sterling Heights; Jewish Community Center, West Bloomfield; the Oakland County Service Center, Pontiac; and schools in Romeo and Clarkston.

Extension courses are also offered to business, government agencies, private agencies, and civic groups to provide special instruction to the clientele of such organizations. Most courses can be taught at the organization's facility, and the course content is structured to address specific needs or goals identified by the organization.

Nonmatriculating Admission

Potential evening students who have never attended Oakland University and were unable to secure regular admission to the university because of time may register for classes on a nonmatriculating basis at extension sites.

A nonmatriculating admission is valid for one semester only. An application fee is charged nonmatriculating students. During the first semester of nonmatriculation the student must secure regular admission to the university. To be considered for regular admission a student need only: submit a second application for admission to the director of admissions with the required application fee; forward transcripts from past colleges, universities, or high schools attended; and receive a letter of admission. Nonmatriculating students will receive full academic credit for courses in which they are enrolled.

POST-BACCALAUREATE ADMISSION

Potential evening students who presently hold a baccalaureate degree or higher (e.g., master's degree) and are unable to secure regular post-baccalaureate admission to the university because of time required for processing may register for undergraduate classes on a post-baccalaureate basis at extension sites.

For the post-baccalaureate status, students must complete the undergraduate admissions application and pay the application fee at the time of off-campus registration. A duplicated copy of a baccalaureate diploma or a duplicated copy of a transcript stating the degree must be presented at registration. Under post-baccalaureate status, students are admitted as special non-Oakland University degree candiates. Previous academic work is not evaluated by the registrar's office.

Extension Class Cancellation

The university reserves the right to cancel any extension course that does not have sufficient enrollment. All tuition and fees applicable to the canceled section are refunded automatically when a class is canceled.

ADDITIONAL LEARNING EXPERIENCES

The Division of Continuing Education course department offers primarily evening noncredit diploma programs and courses in professional, paraprofessional, and vocational subjects and provides important update for business, industry, and governmental units on campus or on site.

Diploma programs, a series of courses related to individual objectives, are offered in plastics technology and as preparation for becoming a legal assistant and an accounting assistant.

The Plastics Technology Diploma Program, co-sponsored with the Society of Plastics Engineers, is designed to update those in technically oriented positions and to provide basic knowledge for individuals who wish to enter the plastics industry.

The Legal Assistant Diploma Program, approved by the American Bar Association, is an 18-month evening program that trains paraprofessionals to perform law-related duties for attorneys in a variety of workplaces. Certain legal assistant courses have been approved for one hour of political science undergraduate credit each. Eight credits of these courses can be applied toward the political science major. For more information on the credit portion, see the political science listings or contact the legal assistant program director in the Division of Continuing Education.

The Accounting Assistant Diploma Program is a 12-month program developed in conjunction with business firms to instruct skills to paraprofessionals who provide vital support for accountants.

The CPA programs conducted on campus provide review for candidates planning to sit for the national examination. Qualifying hours for CPA annual relicensing are offered by special programs during the evening, on Saturdays, and on weekends periodically throughout the year. A review program for the Certified Internal Auditor examination also is conducted.

The course department also offers courses and workshops that provide technical update, e.g., statistical process (quality) control, hands-on computer courses, video production, as well as courses of current importance, such as personal financial planning and investment.

All programs and courses carry the nationally recognized Continuing Education Unit (CEU). Similar to credits which provide a means to carry degree work from one school to another, CEUs make it possible to document noncredit work and provide a means to build a permanent record of achievement valuable for evidence of increased capabilities and for job advancement. One CEU equals ten contact

hours of participation in an organized CE experience.

Test Preparation Workshops for the Scholastic Aptitude Tests (SAT), American College Testing (ACT), and Management Admissions Test (GMAT) are offered year-round as an assistance to college-bound high school students or persons who decide to enter a college program following an interruption of the traditional high school to college progression.

Conferences

Conferences on topical subjects are offered on a limited basis by the course department. Included among the offerings is the long-established writer's conference.

CABLE TV OFFICE

The Cable TV Office represents the university in the community and coordinates planning for the development of public service and instructional programming on area cable communications systems as they become operational. The office also is the coordinating and scheduling unit for the programming of the Educational Telecommunications Consortium (ETC), a group of primarily postsecondary educational institutions serving diverse audiences. Independent study and internship experiences for Oakland University students are available in this office. Students who wish to volunteer to help in the production of university programming for cablecast should contact the Cable TV Office.

LABOR EDUCATION SERVICE

The Labor Education Service provides daytime/evening courses for union members in both on- and off-campus locations and occasional residential conferences. A special leadership training program for union minorities and women, supported by a state grant, is open to the general public as well as union members.

UNIVERSITY FACULTY

This list reflects faculty appointments effective June 1, 1983, as they were available on the publication date.

Officers of Instruction

JOSEPH E. CHAMPAGNE, President of Oakland University and Professor of Management; Ph.D., Purdue University

KEITH R. KLECKNER, Senior Vice President for University Affairs and Provost and Professor of Engineering; Ph.D., Cornell University

The Faculty

HODA ABDEL-ATY-ZOHDY, Assistant Professor of Engineering; Ph.D., University of Waterloo

CHARLES W. AKERS, Professor of History; Ph.D., Boston University

RAYNOLD L. ALLVIN, Associate Professor of Music; D.M.A., Stanford University

ABDUL A. AL SAADI, Clinical Assistant Professor of Health Sciences; Ph.D., University of Michigan

OSMAN D. ALTAN, Assistant Professor of Engineering; Ph.D., University of California (Berkeley)

HERBERT APPLEMAN, Associate Professor of English; M.A., Columbia University

SHELDON L. APPLETON, Professor of Political Science and Associate Dean for Advising; Ph.D., University of Minnesota

JAIME V. ARAGONES, Clinical Assistant Professor of Health Sciences; M.D., University of Santo Tomas (Philippines)

JOSEPH A. ARENDS, Clinical Assistant Professor of Health Sciences; M.D., Wayne State University

HARVEY J. ARNOLD, Professor of Mathematical Sciences; Ph.D., Princeton University

ZEWDINEH ASSEFA, Assistant Professor of Management; Ph.D., University of Illinois

JOSEPH ASSENZO, Adjunct Professor of Mathematical Sciences; Ph.D., Oklahoma University

THOMAS A. ASTON, Adjunct Assistant Professor of Theatre and Director of Student Enterprises; Wayne State University

KIMBERLY S. ATER, Assistant Professor of Dance; M.A., University of Houston (Clear Lake City)

JOHN W. ATLAS, Assistant Professor of Education; Ed.D., Wayne State University

EDWARD A. BANTEL, Professor of Education and Psychology; Ed.D., Columbia University

ROBERT BARAN, Adjunct Instructor in Biological Sciences; B.S., Wayne State University

LIZABETH A. BARCLAY, Assistant Professor of Management; Ph.D., Wayne State University

JOHN BARNARD, Professor of History and Chairperson, Department of History; Ph.D., University of Chicago

CARL F. BARNES, JR., Professor of Art History and Archaeology; Ph.D., Columbia University

JANET S. BARNFATHER, Assistant Professor of Nursing; M.S.N., R.N., Wayne State University

BETH A. BARRON, Assistant Professor of Mathematical Sciences; Ph.D., Michigan State University

RICHARD F. BARRON, Associate Professor of Education; Ph.D., Syracuse University

JOHN W. BARTHEL, Associate Professor of German and Linguistics; Ph.D., University of Illinois

PAUL G. BATOR, Assistant Professor of Rhetoric; D.A., University of Michigan

JOHN L. BEARDMAN, Associate Professor of Art; M.F.A., Southern Illinois University

DAVID C. BEARDSLEE, Professor of Psychology and Director, Office of Institutional Research; Ph.D., University of Michigan

RONALD R. BECK, Adjunct Associate Professor of Engineering; Ph.D., University of Iowa

KAREN L. BECKWITH, Assistant Professor of Political Science; Ph.D., Syracuse University

BEVERLY K. BERGER, Assistant Professor of Physics; Ph.D., University of Maryland

ARNOLD M. BERMAN, Clinical Assistant Professor of Health Sciences; M.D., Boston University

EDWARD G. BERNACKI, Clinical Assistant Professor of Health Sciences; M.D., Wayne State University

JAY BERNSTEIN, Clinical Professor of Health Sciences; M.D., State University of New York

PETER J. BERTOCCI, Associate Professor of Anthropology and Chairperson, Department of Sociology and Anthropology; Ph.D., Michigan State University

WILLIAM E. BEZDEK, Associate Professor of Sociology; Ph.D., University of Chicago

BHUSHAN BHATT, Assistant Professor of Engineering; Ph.D., Oakland University

JANE M. BINGHAM, Professor of Education; Ph.D., Michigan State University

PETER J. BINKERT, Associate Professor of Linguistics and Classics; Ph.D., University of Michigan

VIRGINIA R. BLANKENSHIP, Assistant Professor of Psychology; Ph.D., University of Michigan

GLORIA T. BLATT, Associate Professor of Education; Ph.D., Michigan State University

FRANK W. BLISS, Adjunct Assistant Professor of Engineering; Ph.D., Case Western Reserve University

DUANE L. BLOCK, Consulting Professor of Health Sciences; M.D., University of Wisconsin

DAVID E. BODDY, Associate Professor of Engineering; Ph.D., Purdue University

SETH BONDER, Adjunct Professor of Mathematical Sciences; Ph.D., Ohio State University
SHARON T. BOSTICK, Visiting Assistant Professor, University Library; A.M.L.S., University of Michigan
ELEFTHERIOS N. BOTSAS, Professor of Economics and Management; Ph.D., Wayne State University
NADIA BOULOS, Associate Professor of Nursing; Ph.D., R.N., University of Michigan
LOUIS R. BRAGG, Professor of Mathematical Sciences; Ph.D., University of Wisconsin
JEAN S. BRAUN, Professor of Psychology; Ph.D., Wayne State University
DANIEL N. BRAUNSTEIN, Professor of Management and Psychology; Ph.D., Purdue University
DAVID C. BRICKER, Associate Professor of Education; Ph.D., Johns Hopkins University
GOTTFRIED BRIEGER, Professor of Chemistry; Ph.D., University of Wisconsin
JANE BRIGGS-BUNTING, Assistant Professor of Journalism; J.D., University of Detroit
MAX BRILL, Associate Professor of Psychology; Ph.D., University of Cincinnati
MARC E. BRIOD, Associate Professor of Education; Ph.D., Northwestern University
RICHARD W. BROOKS, Associate Professor of Philosophy; Ph.D., University of Minnesota
ARNOLD L. BROWN, Clinical Assistant Professor of Health Sciences; M.D., University of Texas
JUDITH K. BROWN, Professor of Anthropology; Ed.D., Harvard University
MAURICE F. BROWN, Professor of English; Ph.D., Harvard University
ROBERT W. BROWN, Associate Professor of Education; Ph.D., Wayne State University
WILLIAM C. BRYANT, Associate Professor of Spanish; Ph.D., University of California (Berkeley)
GEORGE W. BUCKLEY, Adjunct Professor of Engineering; Ph.D., Southampton University
DOLORES M. BURDICK, Associate Professor of French; Ph.D., University of California (Berkeley)
HARVEY BURDICK, Professor of Psychology; Ph.D., University of Minnesota
RICHARD J. BURKE, Professor of Philosophy and Chairperson, Department of Philosophy; Ph.D., University of Chicago
FRANCIS M. BUTTERWORTH, Professor of Biological Sciences; Ph.D., Northwestern University
HAROLD C. CAFONE, Professor of Education; Ed.D., University of Arizona
BARUCH CAHLON, Associate Professor of Mathematical Sciences; Ph.D., Tel Aviv University
DENIS M. CALLEWAERT, Associate Professor of Chemistry; Ph.D., Wayne State University
JOHN B. CAMERON, Professor of Art History and Chairperson, Department of Art and Art History; Ph.D., Yale University
FRANK P. CARDIMEN, Visiting Instructor in Management; M.B.A., Ohio University
LARRY S. CARR, Assistant Professor of Education; Ph.D., Brigham Young University
PENNY S. CASS, Instructor in Nursing; M.S., R.N., University of Michigan
THOMAS W. CASSTEVENS, Professor of Political Science; Ph.D., Michigan State University
BANDANA CHATTERJEE, Assistant Professor of Chemistry; Ph.D., University of Nebraska
CHARLES CHING-AN CHENG, Associate Professor of Mathematical Sciences; Ph.D., Rutgers University
J. CURTIS CHIPMAN, Associate Professor of Mathematical Sciences; Ph.D., Dartmouth College
MICHAEL CHOPP, Assistant Professor of Physics; Ph.D., New York University
ROBERT J. CHRISTINA, Associate Professor of Education; Ph.D., Syracuse University
JOSEPH P. CHU, Clinical Assistant Professor of Health Sciences; Ph.D., Purdue University
PAMELA C. CLARKE, Assistant Professor of Nursing; M.P.H., R.N., University of Michigan
F. JAMES CLATWORTHY, Associate Professor of Education; Ph.D., University of Michigan
WILLIAM W. CONNELLAN, Adjunct Assistant Professor of Journalism and Assistant Provost; Ph.D., University of Michigan
GEORGE E. COON, Professor of Education; Ed.D., Wayne State University
ROSE MARIE COOPER-CLARK, Special Instructor in Rhetoric; M.A.T., Oakland University
BRIAN P. COPENHAVER, Professor of History and Dean, College of Arts and Sciences; Ph.D., University of Kansas
CARLO COPPOLA, Professor of Hindi-Urdu and Linguistics and Chairperson, Area Studies Program; Ph.D., University of Chicago
JOHN D. COWLISHAW, Associate Professor of Biological Sciences; Ph.D., Pennsylvania State University
RONALD L. CRAMER, Professor of Education; Ph.D., University of Delaware
WILLIAM S. CRAMER, Assistant Professor, University Library; M.S.L.S., Case Western Reserve University
HARRIETT L. CRONIN, Clinical Instructor in Medical Technology; M.S., Wayne State University
DOROTHY CUMMINGS, Clinical Instructor in Medical Technology; B.S., Wayne State University
PATRICIA W. CUSTER, Visiting Instructor in Physical Therapy; M.A., University of Michigan
JOHN P. CUTTS, Professor of English; Ph.D., University of Birmingham
JERRY L. DAHLMANN, Adjunct Associate Professor of Theatre and Assistant to the President for University Relations; B.S., Central Michigan University
DAVID W. DANIELS, Associate Professor of Music and Chairperson, Department of Music; Ph.D., University of Iowa
INDRA M. DAVID, Associate Professor and Acting Dean, University Library; M.S.L.S., Syracuse University
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RONALD DeROO, Visiting Instructor in Music; M.M., Oakland University
JOHN W. DETTMAN, Professor of Mathematical Sciences; Ph.D., Carnegie Institute of Technology
DAVID DiCHIERA, Adjunct Professor of Music; Ph.D., University of California (Los Angeles)
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ROBERT H. EDGERTON, Professor of Engineering; Ph.D., Cornell University
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ISAAC ELIEZER, Professor of Chemistry and Associate Dean, College of Arts and Sciences; Ph.D., Hebrew University (Jerusalem)
ALICE ENGRAM, Special Instructor in Music; M.M., University of Colorado
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DAVID H. EVANS, Professor of Engineering; Ph.D., Brown University
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ROBERT I. FACKO, Associate Professor of Music; Ed.D., Columbia University
DONALD R. FALKENBURG, Professor of Engineering; Ph.D., Case Western Reserve University
ANNE FEDERLEIN, Assistant Professor of Education; Ph.D., University of Michigan
GEORGE F. FEEMAN, Vice Provost, Dean of the Graduate School, and Professor of Mathematical Sciences; Ph.D., Lehigh University
MARCIA FEINGOLD, Instructor in Mathematical Sciences, A.M., University of Michigan
DANIEL FINK, Clinical Assistant Professor of Health Sciences; M.D., University of Michigan
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GERALD G. FREEMAN, Professor of Education; Ph.D., University of Michigan
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DANIEL H. FULLMER, Associate Professor of Linguistics and English; Ph.D., University of Michigan
KON K. FUNG, Assistant Professor of Mathematical Sciences; M.Sc., Carnegie-Mellon University
GEORGE J. GAMBOA, Assistant Professor of Biological Sciences; Ph.D., University of Kansas
MICHAEL GARCIA, Clinical Associate Professor of Health Sciences; M.D., University of Michigan
WILMA GARCIA, Special Instructor in Rhetoric; M.A., Oakland University
GEORGE L. GARDINER, Professor, University Library; C.A.S., University of Chicago
SUSANNE M. GATCHELL, Adjunct Assistant Professor of Engineering; Ph.D., University of Michigan
ROBERT G. GAYLOR, Associate Professor, University Library; M.L.S., University of Oklahoma
JULIEN GENDELL, Associate Professor of Chemistry; Ph.D., Cornell University
GEORGE R. GERBER, Clinical Associate Professor of Health Sciences, M.D., Wayne State University
LEONARDAS V. GERULAITIS, Associate Professor of History; Ph.D., University of Michigan
RENATE GERULAITIS, Associate Professor of German; Ph.D., University of Michigan
MOHAMMED S. GHAUSI, John F. Dodge Professor of Engineering and Dean of the School of Engineering and Computer Science; Ph.D., University of California (Berkeley)
FRANK J. GIBLIN, Assistant Professor of Biomedical Sciences; Ph.D., State University of New York
HARRY GOLD, Associate Professor of Sociology; Ph.D., University of Michigan

ROBERT J. GOLDSTEIN, Associate Professor of Political Science; Ph.D., University of Chicago
ALICE C. GORLIN, Associate Professor of Economics; Ph.D., University of Michigan
ESTHER M. GOUDSMIT, Associate Professor of Biological Sciences; Ph.D., University of Michigan
SIDNEY W. GRABER, Professor of Education; Ed.D., Wayne State University
JAMES D. GRAHAM, Associate Professor of History; Ph.D., Northwestern University
KARL D. GREGORY, Professor of Economics and Management; Ph.D., University of Michigan
JERROLD W. GROSSMAN, Associate Professor of Mathematical Sciences; Ph.D., Massachusetts Institute of Technology
HARRY T. HAHN, Professor of Education; Ed.D., Temple University
CAROL E. HALSTED, Special Instructor in Dance; Ed.D., Wayne State University
BARBARA R. HAMILTON, Special Instructor in Rhetoric; M.A., Michigan State University
WILLIAM G. HAMMERLE, Professor of Engineering; Ph.D., Princeton University
W. DORSEY HAMMOND, Professor of Education; Ph.D., University of Delaware
NIGEL HAMPTON, Associate Professor of English; Ph.D., University of Connecticut
RANALD D. HANSEN, Associate Professor of Psychology; Ph.D., University of Connecticut
NASIR U. HAQUE, Clinical Associate Professor of Health Sciences; M.D., Dacca Medical College (India)
CLIFFORD V. HARDING, Adjunct Professor of Biological Sciences; Ph.D., University of Pennsylvania
KENNETH M. HARMON, Professor of Chemistry; Ph.D., University of Washington
ALGEA O. HARRISON, Associate Professor of Psychology; Ph.D., University of Michigan
DANIEL F. HARRISON, Visiting Assistant Professor, University Library; A.M.L.S., University of Michigan
JOANN HARRY, Adjunct Clinical Instructor in Nursing; B.S.N., R.N., Indiana University
LUCINDA HART-GONZALEZ, Assistant Professor of Linguistics, Sociology, and Anthropology; Ph.D., Georgetown University
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Oakland University is a legally autonomous state institution of higher learning. Legislation creating Oakland University as an independent institution, separate from Michigan State University, was established under Act No. 35, Public Acts of 1970. The university is governed by an eight-member board of trustees appointed by the governor with the advice and consent of the state senate. The president of the university is appointed by the board of trustees and is an ex officio member without vote. The board also appoints a secretary and treasurer.

Ken Morris, Chairperson
Alex C. Mair, Vice Chairperson
David Handleman
Patricia B. Hartmann
Richard H. Headlee
Wallace D. Riley
Arthur Saltzman
Howard F. Sims

Joseph E. Champagne, President
John H. De Carlo, Secretary
Robert J. McGarry, Treasurer

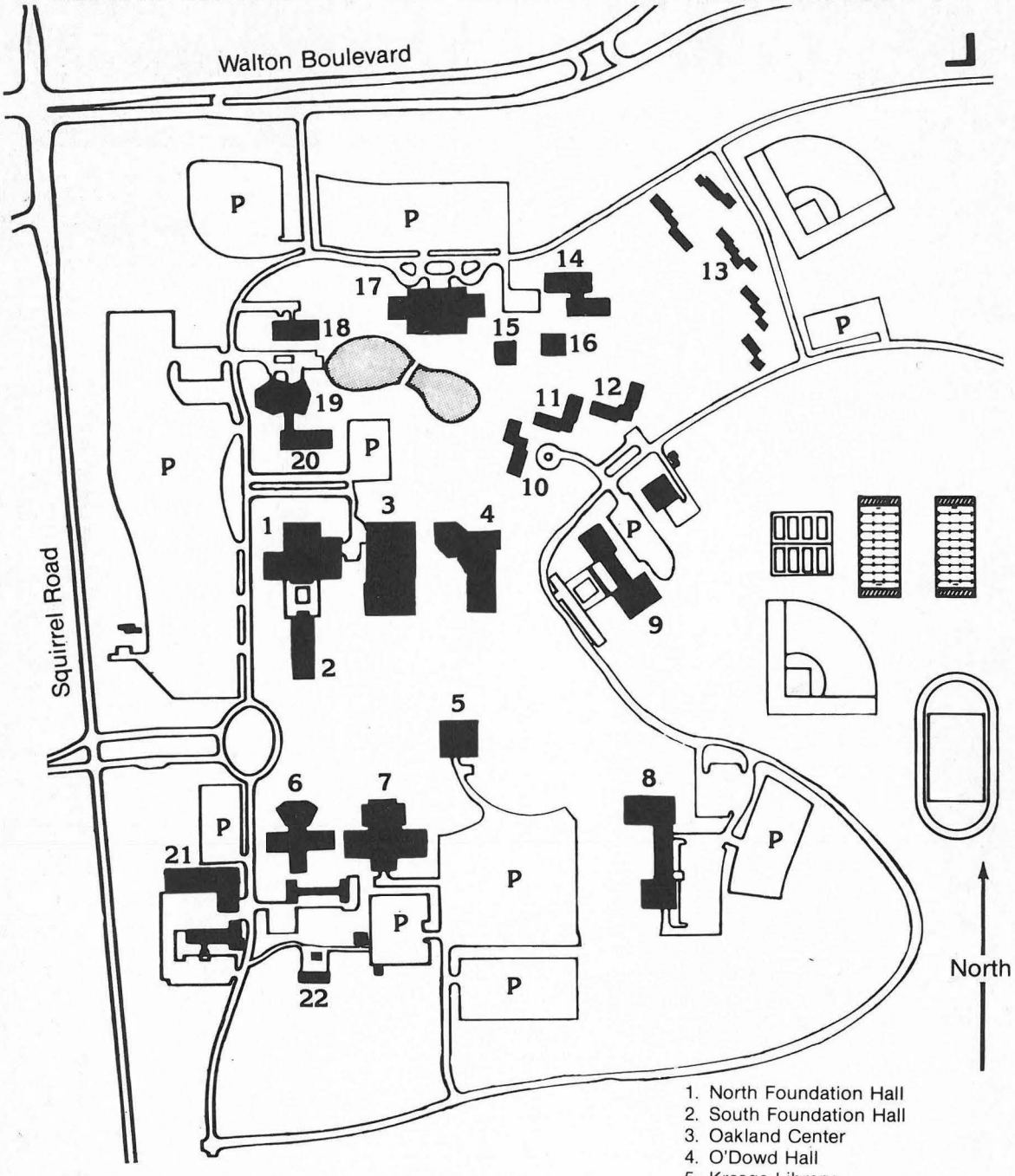
OAKLAND UNIVERSITY FOUNDATION

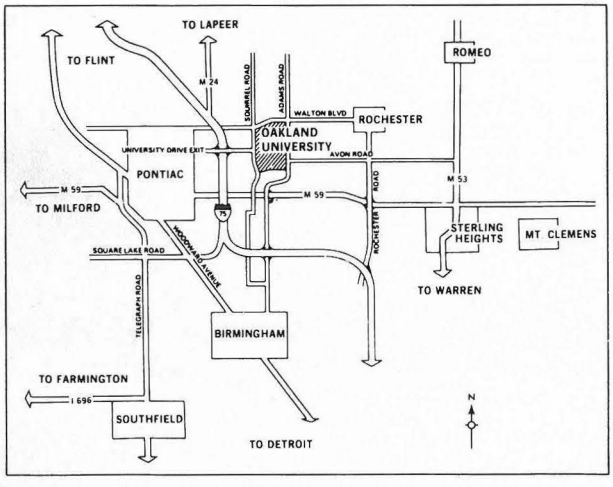
Executive Trustees

Norman B. Weston, President
Mrs. Richard A. Vining, Vice President and Secretary
Robert J. McGarry, Treasurer
Robert W. Swanson, ex officio and Executive Vice President

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Harold G. Warner, Vice President
Harold A. Fitzgerald, President Emeritus
Dr. Joseph E. Champagne, ex officio
James L. Howlett, ex officio

MAIN CAMPUS OF OAKLAND UNIVERSITY





1. North Foundation Hall
2. South Foundation Hall
3. Oakland Center
4. O'Dowd Hall
5. Kresge Library
6. Hannah Hall of Science
7. Dodge Hall of Engineering
8. Varner Hall
9. Lepley Sports Building
10. Fitzgerald House
11. Anibal House
12. Pryale House
13. University Apartments
14. Hamlin Hall
15. Hill House
16. Van Wagoner House
17. Vandenberg Hall
18. Graham Health Center
19. Meadow Brook Theatre and Art Gallery
20. Wilson Hall
21. Public Safety and Services Building
22. Barn Theatre

OAKLAND UNIVERSITY
LIBRARY

Rochester,
Michigan



Rochester, Michigan