Financial Information Systems Major Proposal

Proposed Start Date: Fall 2002

Department of Accounting & Finance
School of Business Adaminstration
Oakland University

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Abstract

A Financial Information Systems (FIS) major will allow students to integrate information technology (IT) and financial information in the development of business information systems. The major is intended to provide financial services professionals with the knowledge they need to:

- Leverage the latest information technologies to support the use of financial information in management decision-making, external reporting, and
- Integrate financial information and internal controls into cross-functional business information systems.

This major will be offered by Department of Accounting & Finance faculty members (Appendix A) who have financial information systems teaching skills and research interests.

Table of Contents

III. Program Plan

a. Degree requirements
b. Admission criteria
c. New internal procedures to support the program
d. Sample curriculum
e. New courses
f. Redesigned courses
g. Support of other departments
h. Recruiting plans
i. Planned enrollment levels
j. The need for graduate assistants

IV. Needs and Costs of the Program

a. Additional resources for the program
b. Anticipated costs for the program

V. Implementation

Appendix A – Faculty Profiles

Appendix B – Comments

Appendix C – Publications and Presentations

Appendix D – Course Outlines

Appendix E – Sample Curriculum

Appendix F – Financial Information Systems Major Forecasted Budget

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I. Rationale

IT permeates just about every facet of the financial services profession. And given the dramatic IT changes in the financial services profession, there is a strong and growing national and regional demand for IT-savvy students. This proposed major intends to fulfill the regional demand especially.

There are several reasons to believe that the proposed major will serve the needs of students, employers, and the financial information systems profession. First, the major and its course conform to the standards espoused by the International Federation of Accountants' (IFAC) International Education Guideline No. 11, "Information Technology In The Accounting Curriculum." The American Institute of Certified Public Accountants endorse the IFAC

Guideline No. 11. Second, Appendix B contains comments from OU stakeholders about the major. These comments strongly support the proposed program. Lastly, the program was open to academic review in several publications and conferences (Appendix C). The comments from readers and attendees are very positive. Based on these three factors, the major should serve the needs of students, regional employers, and the profession.

a. Need for the program

As indicated above, there is a national and regional need for the major. Oakland University's location make it very appropriate place to offer the degree, since OU is in close proximity to high tech business initiatives such as Automation Alley. The Oakland Technology Park, Big 5" CPA firms, IT consulting firms, and the 170 *Fortune* 500 firms are also nearby. Competing academic institutions (section d. below) see this demand and are introducing IT-rich accounting offerings in response. OU needs an FIS program to keep students from enrolling at the other schools.

b. How the program will help promote the role and mission of the university.

This major is consistent with Strategy 1 and Strategy 6 of the Oakland University Strategic Plan :

Strategy 1: Oakland *views undergraduate education as central to its mission and will ensure an environment of learning excellence* in order to educate a diverse body of students to be *productive, contributing members of society.*

Strategy 6: Oakland will *develop and support areas of institutional excellence and distinction that contribute to national eminence* (FIS faculty members have received national and international recognition for their innovative research in FIS curriculum development)

This major is also consistent with Oakland University's *Creating the Future Final Report* (italics provided for emphasis):

A Goal of this Initiative: "To help the university become a comprehensive learner-centered, *technology-enriched* institution in the years to come."

Marketing Position and Visibility Task Force Strategy No. 8: "…*the university should continue to enhance its position as being on the front edge of technology*."

School of Business Administration Task Force Strategy No. 1 tactics: *"Understanding of technology and its use; technology orientation."*

In a February 2001 presentation (2010 Oakland University Profile), President Russi indicated that a goal of the University is to provide a "learner-focused, *technology-enriched education, integrating new information technologies in teaching*, research and service."

This major is also consistent with the Mission of the School of Business Administration:

The mission of the SBA is to advance knowledge and enhance students' abilities to manage in a global business environment. The mission is achieved through a synergistic combination of teaching, scholarship and professional service *with emphasis on the linkage of theory and practice, and the application and management of technology***.**

c. Goal of the program

The program is intended to produce information and systems specialists who can integrate financial information services and information technology in a business environment.

d. Comparison to similar programs, particularly programs within the state

There are programs at Eastern Michigan University, Central Michigan University, Northern Michigan University, University of Michigan - Dearborn and Bowling Green State University that serve the IT-related training needs of accounting professionals at the undergraduate level. These programs are:

- Eastern Michigan University offers a four-year bachelor's degree that culminates in an *Accounting Information Systems Major*.
- Central Michigan University also offers an *Accounting Information Systems Major*.
- Northern Michigan University has a joint *Accounting/Computer Information Systems* Program.
- University of Michigan Dearborn allows students to choose between two accounting tracks, *Accounting Information Systems* and *Financial Accounting and Reporting*.
- Bowling Green State University offers an *Information Systems Auditing and Control* specialization that blends accounting with MIS and computer science.

e. The source of students

The program should attract some students who would otherwise register for a similar program at one of the competing universities. Presumably, acceptance of the major should increase student enrollment at OU because the program as designed would better serve the educational needs of prospective students vis-�-vis the competition. In addition, the proposed major should be attractive to some SBA students, as well as other OU students.

II. Self-Study of the Academic Unit

a. How the goals of the unit are served

Adopting the major is consistent with the goals and objectives of the Accounting & Finance department. In particular, it addresses the following shared values:

- Student ability to successfully manage within a business environment
- Integration of contemporary technology into the learning environment

Adoption of the proposed major is consistent with the mission of the School of Business Administration (italics provided for emphasis):

The mission of the SBA is to advance knowledge and enhance students' abilities to manage in a global business environment. The mission is achieved through a synergistic combination of teaching, scholarship and professional service *with emphasis on the linkage of theory and practice, and the application and management of technology.*

The focus of the major is linking financial theory and practice through the application of IT. An innovative approach is used to teach FIS concepts by integrating topical areas using a "Model-Oriented Tool-Enhanced" (MOTE) framework. The model-based aspect (MO) uses systems engineering methods that permit high-level abstractions of real-world financial systems. Included are accounting process (activity), data, and interaction models. The tool aspect (TE) uses advanced software that converts these models into code that can be executed in many different technical environments. This combination of models and software permits the leveraging of modeling skills, independently from targeted technical environments. Thus, students can be taught practical system methods without selecting (and biasing them toward) any particular vendor's operating system, database, or programming language. This curricular approach is in dramatic contrast to traditional methods that either ignored technical environments (too abstract) or taught only specific technology (too ephemeral and trade-school-like) skills.

b. Staffing needs

The proposed major can be implemented with current full time Department of Accounting and Finance faculty. And, the department has hired a new assistant professor (specializing in managerial accounting) with a secondary interest in FIS. Limited use of adjunct faculty to cover other courses may be needed, and those amounts are reflected in the forecasted budget.

c. The faculty qualifications

Faculty with FIS skills are profiled in Appendix A.

d. Library holdings

After discussion with Kresge Library representatives, we believe modest additional holdings are needed. Those costs have been included in the forecasted budget. See the attached memorandum from Kresge Library.

e. Classroom, laboratory and/or studio space

There is no need for specialized classroom facilities beyond the existing Elliott Hall computer classroom. Access to a computer classroom is crucial to the major and the current facilities are adequate to support the projected enrollments. If enrollment exceeds projections, an additional computer classroom may be necessary.

f. Equipment and software

The new hardware/software needed for the program are:

- One dedicated server ($5,000)
- Software ($1,000 per year)
- Computerized financial databases ($1,000 per year)

III. Program Plan

a. Degree requirements

The specific degree requirements are outlined below. Students must be admitted to major standing in business administration to proceed with the FIS major.

Writing and General Education (8 crs covered in Precore) 32 crs

Precore (including ACC 200, ACC 210, MIS 200 or CSE 125) 36-38 crs.

Core (including MIS 300) 35crs.

total 103-105 crs.

Major Courses

A total of 18-19 credit hours are required, in the following two categories: Required Major Courses and Electives. Also included is the planned frequency of offerings for a typical academic year.

Required Major Courses	Credits	Current Frequency	Proposed Frequency
FIS 318/ACC 318 Intro to Financial Syst.& Databases	3	3	4
FIS 431 Analysis of Financial Systems	3	0	1
FIS 432 Design of Financial Systems	3	1	1
FIS 433 Information Systems Audit & Control	3	1	1
Two Electives from:			
FIS 435 Financial Systems Applications	3	Alternating yrs.	
Any ACC course at the 300 or 400 level (not already required)	3	No additional courses	

Any MIS course at the 400 level	3	No additional courses	
Any one ATiB course (for ATiB Students)	3	No additional courses	
Any FIN course at the 400 level	3	No additional courses	
POM 441 Manufacturing Planning & Control (or POM 448 Project Management Techniques)	3	No additional sections	
Project Management Techniques)	4		
	18-19		
Other **Electives:**	4-7		
Total Credit hours (minimum)	**128**		

See Appendix D for FIS course outlines.

b. Admission criteria

Students must comply with the requirements for admission to major standing in business administration, as specified in the undergraduate catalog.

c. New internal procedures required to support the program

The SBA Office of Undergraduate Academic Advising will manage processes for admission to SBA major standing, advising services, and graduation auditing.

d. Sample curriculum

Included in Appendix E

e. New courses

FIS 431 - Analysis of Financial Systems Part of old ACC 318/419
FIS 435 - Financial Systems Applications New

The incremental increase in new courses offered by the proposed major is 1 per academic year and 1 in alternating years. Especially given the slack in capacity for traditional accounting majors, the proposed major can be implemented with current full time Department of Accounting and Finance faculty, with the occasional use of adjunct faculty. Further, the department has hired a new assistant professor (specializing in managerial accounting) with a secondary interest in FIS. Redesigned Courses

f. Redesigned Courses

FIS 318/ACC 318 – Intro. to Financial Systems and Databases Redesigned ACC 318
FIS 432 - Design of Financial Systems Part of old ACC 419
FIS 433 - Information Systems Audit & Control Redesigned ACC 420

g. Support of other departments

Support from other SBA departments/programs (MIS, ATiB and POM) is required. However, given the wide selection of electives available, the current number of offerings should be sufficient to handle the modest increase in demand for the elective courses. Thus, no incremental support from these areas is anticipated.

h. Recruiting plans

The proposed major will be advertised through developed brochures distributed to OU students, corporate educational advisors, high school and community college business teachers and guidance counselors, local professional associations, and announcements in the SBA Newsletter. Presentations will be made at alumni gatherings, the Accounting & Finance Advisory Board meetings, and student organization meetings.

i. Planned enrollment levels

The program anticipates the admission of roughly 15 students in year one, with a modest increase in FTEs in subsequent years. We judge that a steady state of approximately 50 students per starting class within five years of starting the program.

j. The need for graduate assistants

No incremental costs.

IV. Needs and Costs of the Program

a. Additional resources for the program

No additional faculty/graduate assistant/staff positions are required; however adjunct faculty (1-2 sections per year) may be needed. There is need for modest added library holdings, as indicated in Appendix F. A new computer classroom is required only if demand exceeds expectations.

The required additional resources (see Appendix F) are:

- Equipment (one dedicated server @$5,000 initial cost)
- Software ($1,000 per year)
- Computerized databases ($1,000 per year)
- Marketing costs ($5,000)
- Library Holdings (vary)
- Adjunct faculty (vary)

b. Anticipated costs for the program

Please see Appendix F for Budget detail. The listed expenditures should adequately cover the costs of the new major.

V. Implementation

The program can be in place by the Fall 2002 semester pending timely approval.

Appendix A
Faculty Profiles

Joseph Callaghan, Associate Professor of Accounting, received his Ph.D. from University of Illinois at Urbana-Champaign and a J.D. from the University of Detroit. He specializes in Financial Information Systems (FIS), employing Systems Development Lifecycle (SDLC) toolsets, using a Model-Oriented Tool-Enhanced (MOTE) framework. His primary research areas include reengineering legacy information systems using SDLC and MOTE, evaluating risk and performance of publicly traded equities, and performing small business valuations. He has published numerous articles in journals such as the Journal of Financial Services Research, Advances in Accounting, the International Journal of Accounting, and the Multinational Business Review. He has served as a consultant for businesses in the areas of systems development, financial planning, and tax compliance.

Arline Savage, Assistant Professor of Accounting, received her Doctorate of Commerce from the University of Port Elizabeth in South Africa. She is also a Chartered Accountant (South Africa). Her primary research interests are in the utilization of software engineering tools and techniques for systems development, the use of generalized audit software tools for exploring, analyzing and reporting on business data, and the use of these tools in FIS courses. She has published in a number of journals in three countries and has appeared in the proceedings of numerous national and international conferences.

Anthony Cataldo, Assistant Professor of Accounting, received his Ph.D. from Virginia Polytechnic Institute and State University. He is a Certified Public Accountant (Arizona) and a Certified Management Accountant. He has been a reviewer for Management Accounting and Strategic Finance since January 1990. He specializes in Managerial/Cost Accounting, but has taught and published in a variety of other areas of accounting and business, including Accounting Information Systems. His publications have appeared in Research in Accounting Regulation, National Tax Journal, Journal of Accountancy, Strategic Finance, Management Accounting, and Accounting Historians Journal. He has also co-authored two research monographs for JAI Press/Elsevier Science. His professional experience includes public accounting, litigation support, division controller, and government performance auditing.

Appendix B
Comments

Past graduates:

Nicole Helgeson (MIS major; MBA):

Their curriculum is integrated and advanced and truly teaches today's accounting students useful skills for reaching success in their chosen profession. The acquired tools such as information engineering principles, data-modeling techniques, and systems life cycle development work greatly increased my knowledge and interest in modern information systems. I believe these courses supply accounting students with additional knowledge which distinguishes them from other graduates.

Jerel McPhearson (MBA):

I have a fairly extensive background in accounting systems and systems development, but I have yet to see another learning approach that has been as effective at merging conceptualization and actualization. Although technology is constantly changing, it is still extremely beneficial to gain experience using a tool of some sort in addition to teaching the concepts. This two-pronged method of instruction lays out a good foundation while reinforcing the theories with hands-on use.

Kelly Meier (CPA, MBA):

I have since been able to use the skills gained in this class to assist in current work related projects [at ITT Industries].

Cynthia Moss (MIS Major):

In my current position, I am creating a fixed asset relational database and have to gather information from people in accounting, finance and management. To help the accounting and financial people understand what is needed from them, I'm using the approach that I learned in my AIS [i.e., Accounting Information Systems] course. I've just started my career in MIS and have already used material from [my AIS class] and I'm sure that I will continue to in the future.

Thomas Shea (MBA, Director of Financial Planning & Reporting Systems at Meritor):

The process modeling and data modeling concepts taught in the Oakland University AIS curriculum transcend the accounting profession, and teach students how to be value-added business people in any disciplines.

Students completing this curriculum benefit from a challenging and practical AIS experience, and they also take with them a sound methodology for analyzing business processes and data stores. In simple terms, the MOTE framework provides accounting students with exceptional cross-functional systems analysis and design skills. The combination of financial and systems analysis skills is a highly sought after skill set in the current job market. As a consulting manager with BBO Seidman L.L.P., I had the opportunity to utilize the skills I gained from the Oakland

University program on almost a daily basis. The Oakland University AIS program definitely provided me with a skills-set that was superior to my peers in the accounting profession.

Industry

Bud Kulesza (President of the IMA, 1999-2000):

As a previous Senior Vice President of Finance of a large multinational corporation, I see a real need for people with the skills learned in this AIS curriculum. The fact that these skill sets are based on a framework, and not tied to any particular technology, makes for a more flexible employee. In a corporate environment where flexibility with respect to business change, technological change, and exposure to different cultures can make the competitive difference, such flexibility is extremely important. As an employer of several graduates and interns of this curriculum, I see a positive difference in their performances, particularly in their ability to consider a variety of approaches to problems. A professional with the ability to better abstract and model underlying business reality, is in a better position to offer workable solutions than those professionals with only narrowly-defined skills, wedded to particular technologies. I believe the AIS curriculum advanced here serves students and the profession well in this regard.

Academia

Shouhong Wang, PhD. (Associate Professor of Information Systems, University of Massachusetts at Dartmouth):

In my view, Professors Callaghan et al.'s framework is significantly different from traditional approaches. In the information technology age, accounting students are required to understand more than just how G/L files are processed within the computer, and how spreadsheet and database software can be used to replace manual, labor-intensive, and tedious work. They must be able to integrate their knowledge and skills to develop IT-enabled and reengineered business processes, and learn to make strategic use accounting information embedded in these processes.

In my view, the curriculum developed by Professors Callaghan et al. is important for business education in the sense that it provides business students with critical knowledge and skills in the new millennium, including the integration of AIS and business process modeling, and IT-enabled business process reengineering.

Appendix C
Publications and Presentations

Publications:

Callaghan, J.H., Peacock, E., & Savage, A. (2000). "Assessment of an Accounting Systems Curriculum: An Analysis of the International Federation of Accountants' Education Guideline No. 11", Review of Accounting Information Systems, 4(1).

Callaghan, J.H., T. W. Lauer and E. Peacock (1998). Developing a Comprehensive Curriculum for Accounting Information Systems: A Model-Oriented, Tool-Enhanced Approach," Review of Information Systems, 2(4).

Callaghan, J.H., T. W. Lauer and E. Peacock (1998). "□ New Approach to Teaching Accounting Information Systems," Changes in Accounting Education: Implementation in Specific Accounting Courses and Subject Areas, Federation of Schools of Accountancy, Ed. D. Fetyco.

Presentations:

Callaghan, J., Peacock, E., & Savage, A. (February 2001). Developing an AIS Curriculum: Professional Feedback on IFAC Recommendations. Fourth Annual AIS Teaching Symposium, Scottsdale, AZ.

Callaghan, J., & Savage, A. (August 2000). "The Accounting REA Model As An Information Engineering Interaction Model." Accounting Information Systems Educator Conference, Denver, CO.

Callaghan, J., Peacock, E., & Savage, A. (July 2000). "Assessment of an Accounting Systems Curriculum: An Analysis of the International Federation of Accountants' Education Guideline No. 11." Second Globalization Conference of the American Accounting Association and the British Accounting Association, Cambridge, United Kingdom (papers accepted for publication section).

Callaghan, J., & Savage, A. (October 1999). "Integrating REA and Activity Modeling: Semantics for Business Processes,"Second Fall Conference on Managing Information Technologies, Troy, MI.

Callaghan, J., & Savage, A. (August 1999). Augmenting Business Event Analysis with REA Modeling," Sterling Software University Program Conference, Dallas, TX.

Callaghan, J., Peacock, E., & Savage, A. (August 1999). "Assessment of an Accounting Systems Curriculum: An Analysis of the International Federation of Accountants' Education Guideline No. 11," AIS Educator Conference, Denver, CO.

Callaghan, J., Savage, A. & Peacock, E. (April 2001). "Teaching Accounting Information Systems at Oakland University. AAA Midwest Regional Meeting, St. Louis, MO.

Callaghan, J.H., T. W. Lauer and E. Peacock. (August 1996)."Developing an Accounting/MIS Curriculum Using CASE Methodology", Professional Education Development Seminar, American Accounting Association National Meeting, Chicago, IL. A variation of this seminar was conducted at the AAA Midwest Regional Meeting (April 1996).

Other:

Callaghan, J., Peacock, E., Lauer, T., & Savage, A. (1999, 2000). Nominees for the American Accounting Association Innovation in Accounting Education Award.

Appendix D
Course Outlines

COURSE RUBRIC: FIS 318/ACC 318 - Introduction to Financial Systems and Databases

COURSE DESCRIPTION: This course focuses on information systems project management, data modeling, database design, querying a database, and using commercial financial databases.

PREREQUISITES: ACC 210, MIS 300

MAJOR TOPICS:

Criticisms of traditional accounting information system architectures
The event-driven relational database model as an information technology solution
The Input-Process-Storage-Output framework for business process modeling
Managing business and information processes in an IT environment
The Systems Development Life Cycle framework
The Information Engineering approach to systems development
Project planning and management
Data modeling
Database design
Querying a database
Using financial databases

COURSE INCLUDES:

Information Technology: The students will (1) use an interactive Internet learning tool to identify relationships between entity types in data modeling; (2) learn how to query a relational database; (3) use commercial financial databases to complete projects.

Oral Communication: All students are required to participate in class discussions in each class. For each class session, a class participation sheet is completed on which each student records his or her "best" verbal comment or contribution made during class. This is handed to the instructor at the end of class for grading. Students also present their project findings to the class.

Writing Skills: Students complete weekly assignments, which contain written components.

Critical Thinking: Students are required the extract data from databases that is important for solving assignment and project questions.

Problem Solving: Students use the information they believe is relevant to make decisions about projects and other assignments. Students are required to justify their solutions.

Team Building: Students work in groups of two or three on a semester-long case project.

COURSE RUBRIC: FIS 431 - Analysis of Financial Systems

COURSE DESCRIPTION: Students should be capable of using the knowledge acquired in this course to analyze modern, technologically relevant financial information systems. The Systems Development Life Cycle (SDLC) is used as the course's logical framework, while the Information Engineering set of methodologies is used to analyze real-world business systems, using an integrated systems SDLC toolset.

PREREQUISITES: FIS 318 or ACC318

MAJOR TOPICS:

The Model-Oriented Tool-Enhanced (MOTE) approach to financial information systems
The Information Engineering approach to systems development
Interaction Analysis
Using a SDLC toolset for the Organization Hierarchy Diagram
Using a SDLC toolset for Activity Modeling
Using a SDLC toolset for Data Modeling
Using a SDLC toolset to create Process Action Diagrams

COURSE INCLUDES:

Information Technology: The students make use of information technology throughout this course, which is conducted in a computer laboratory. Each student has a computer. Students use an integrated software development toolset to plan and analyze business systems.

Oral Communication: All students are required to participate in class discussions in each class. This is an essential component of learning with cases. For each class session, a class participation sheet is completed on which each student records his or her "best" verbal comment or contribution made during class. This is handed to the instructor at the end of class for grading. Students also present their case findings to the class.

Writing Skills: Students complete weekly assignments, which contain written components.

Critical Thinking: The case-based approach builds critical thinking skills. Each week, students sift through a lot of information. They are required the extract the information that is important for solving the case questions.

Problem Solving: Students use the information they believe is relevant to make decisions about cases and other assignments. Students are required to justify their solutions.

Team Building: After doing individual case preparation at home, students are assigned to small groups to discuss the individual analyses and reach small group solutions. Also, students work in groups of two or three on a semester-long case project.

COURSE RUBRIC: FIS 432 - Design of Financial Systems

COURSE DESCRIPTION: This state-of-the art course involves the design and construction of computer information systems, using information engineering (IE) methodology and a Model-Oriented-Tool-Enhanced (MOTE) approach to FIS development. Designs will be implemented using COOL:Gen® , Microsoft C++® and Oracle® . A large portion of this course will be project-based. The purpose of the project is to allow students to actively participate in the full systems development life cycle.

PREREQUISITES: FIS 431 or MIS 316

MAJOR TOPICS:

Design Overview
Dialog Design
Graphic User Interface Design
Layout Design
Process Logic Analysis
Process Synthesis
Dialogue Flow Diagrams
Action Diagramming
Construction - Generating Applications
Construction - Testing

COURSE INCLUDES:

Information Technology: The students make use of information technology throughout this course, which is conducted in a computer laboratory. Each student has a computer. Students use an integrated software development toolset to design and construct business systems.

Oral Communication: All students are required to participate in class discussions in each class. This is an essential component of learning with cases. Students also present their case findings to the class.

Writing Skills: Students complete weekly assignments, which sometimes contain written components.

Critical Thinking: The case-based approach builds critical thinking skills. Each week, students sift through a lot of information. They are required the extract the information that is important for solving the case questions.

Problem Solving: Students use the information they believe is relevant to make decisions about cases and other assignments. Students are required to justify their solutions.

Team Building: Students work in groups of two or three on a semester-long case project.

COURSE RUBRIC: FIS 433 - Information Systems Audit and Control

COURSE DESCRIPTION: This course deals with audit and control aspects of information systems. Students will study the risks, controls, and audit techniques related to key information systems areas. In addition, they will study computer fraud detection techniques. Students will use specially developed software to perform audit tests and fraud prevention and detection procedures.

PREREQUISITES: FIS 318 or ACC 318 or MIS 304

MAJOR TOPICS:

Risks of Insecure Systems
Risk Management
Controls in Data Management Systems
Controls in Electronic Commerce Systems
Computer Fraud
Computer Assisted Audit Tools and Techniques (CAATTs)
Using Software for Data Extraction and Analysis (including Fraud Detection)

COURSE INCLUDES:

Information Technology: Students use ACL, a leading audit software package, to query, analyze and report on data stored by a computer system.

Oral Communication: All students are required to participate in class discussions in each class. During each class session, a class participation sheet is completed on which each student records his or her two "best" verbal comments or contributions during class. This is handed to the instructor at the end of class for grading purposes. Students also present projects to the class during the semester. Topics covered include: Basic Personal Computer Security; Operating Systems Reviews; Network Security; Firewall Audit; Encryption; Application of Biometrics; Internet Payment Systems; AICPA WebTrust and SysTrust Programs; Digital Analysis as an Auditing Tool; Advanced Tools to Tackle Fraud and Collusion; Extensible Business Report Language (XBRL).

Writing Skills: Weekly written assignments are collected and graded.

Critical Thinking: Students are required access data from a computer files and to comment on anomalies or unusual trends, thus simulating a real-life assessment environment.

Problem Solving: Students test, analyze and report on the data that they extract from a computer system, and make audit and control decisions. Students are required to justify each decision.

Team Building: After doing individual assignment preparation at home, students are assigned to small groups (approximately two to four per group, with different groups each week) to discuss individual solutions and to reach a small group solution. Also, students work in groups of two or three on a semester-long group project.

COURSE RUBRIC: ACC 435 Financial Systems Applications

COURSE DESCRIPTION: The content of this course will vary to keep pace with changing business needs and information technologies. Topics to be covered will include XML-XBRL, electronic commerce, executive decision support systems, and new technologies that emerge. This course will be project-based.

PREREQUISITES: FIS 411 or instructor permission

Appendix E
Sample Curriculum

First semester (16 crs)	**Second semester (16 crs)**
RHT 150 Composition 1 (4)	RHT 160 Composition II (4)
MTH 121 Linear Programming (4)	MTH 122 Calculus for Social Sciences (4)
MIS 200 Information Technology (4)	COM 201 Public Speaking (4)
General Education Course (4)	General Education Course (4)
Third semester (16 crs)	**Fourth semester (18 crs)**
ACC 200 Financial Accounting (4)	ACC 210 Managerial & Cost Accounting (4)
ECN 200 Macroeconomics (4)	ECN 201 Microeconomics (4)
General Education Course (4)	QMM 250 Statistical Methods (6)
General Education Course (4)	General Education Course (4)
Fifth semester (16 crs)	**Sixth semester (17 crs)**
ORG 330 Organizational Behavior (3)	POM 343 Operations Management (4)
FIN 322 Managerial Finance I (4)	ORG 331 Mgt. Of Human Resources (3)
MIS 300 Mgt. Information Systems (3)	FIS 431 FIS Analysis (3)
FIS 318 Intro. To FIS and Databases (3)	ACC 311 Intermed. Financial II
ACC 310 Intermed. Financial I	(Major Elective) (3)
(Major Elective) (3)	General Education Course (4)
Seventh semester (16 crs)	**Eighth semester (14 crs)**
ECN 303 Managerial Economics (3)	MGT 435 Mgt. Strategy & Policies (4)
ENG 382 Business Writing (4)	FIS 433 Information Systems Audit & Control (3)

MGT 350 Legal Env. Of Business (3)	FIS 435 FIS Applications (Free Elective) (3)
FIS 432 FIS Design (3)	MKT 302 Marketing (4)
ACC 320 Managerial & Cost II (Free Elective) (3)	

129 credits

Appendix F

Financial Information Systems Major Forecasted Budget

	Year 1	Year 2	Year 3	Year 4	Year 5
Number of Students	15	20	25	40	50
Tuition Revenue	$12,096	$16,128	$20,160	$32,256	$40,320
Computer Fee Revenue	1,080	1,080	1,080	1,080	1,080
Total Revenue	$13,176	$17,208	$21,240	$33,336	$41,400
Marketing Expenses	$ 5,000		1,000		1,000
Equipment - Server	5,000				
Library	1,500	2,000	1,150	1,250	1,350
Computerized databases	1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Software	1,000	1,000	1,000	1,000	1,000
Adjunct Instruction	-0-	3,000	6,000	6,000	6,000
Total Expenditures	$13,500	$ 7,000	$10,150	$9,250	$10,350
Net Revenue	$ (324)	$10,208	$11,090	$24,086	$31,050

Notes:

1. Given expected demand for FIS graduates by the business community, the forecasted number of FIS majors is expected to be realized. As noted in the text, some of these may be transfers from other Oakland University majors, and others are expected to choose Oakland University over other schools because of the FIS major. The relative proportions are unknown at this time.

2. Tuition at $403.20 per course per student

3.Computer fee at $36 per 3 credit hour course

4. Two FIS courses per student per year

5.OU policy is to ignore inflation

Memorandum

To: Professor Joseph H. Callaghan
Professor Gadis J. Dillon
School of Business Administration

From: Shawn V. Lombardo
Librarian Liaison to the School of Business Administration
and
Mildred H. Merz
Coordinator for Collection Development--Library

Subject: Library Collection Evaluation for Proposed Major in Financial Information Systems

Date: November 5, 2001

In preparing this report to assess the Library's ability to support the proposed undergraduate major in Financial Information Systems (FIS), we gathered information from a number of sources. We consulted the proposal you provided dated September 17, 2001, met with you, reviewed recent book acquisitions at Eastern Michigan University, Central Michigan University and the University of Michigan-Dearborn (institutions with similar programs), and checked periodical and book vendor indexes.

Collection Strengths

Our review of the program proposal suggests two things: one, that the library research requirements of students enrolled in the FIS program will not be heavy; and two, that these students will benefit from many of the library resources purchased to support other academic programs, specifically the Master's in Information Technology Management and the MIS major from the SBA and the Master's in Information Sciences Engineering from the School of

Engineering and Computer Science. For example, the Library already subscribes to *Information Systems Management* and other MIS and information technology journals that may address some of the research needs of FIS students.

The Library also subscribes to important online business indexes, including *ABI/Inform* (which contains many full-text articles in accounting and information technology management) and *Wilson Business Abstracts*, and maintains a current print subscription to *Accounting and Tax Index*, one of the chief resources for identifying and locating relevant information in the accounting periodical literature. Business students also have access to *Lexis-Nexis Academic Universe*, which includes the full text version of the *AICPA Journal of Accountancy* since 1987, as well as other accounting, business, and economics journals and magazines. Additionally, the Library provides access to a number of computer and information technology databases and indexes, including *ACM Digital Library*, an e-journal collection of ACM periodicals, and *Internet and Personal Computing Abstracts*, available through FirstSearch. Finally, for access to the more technical literature, the Library subscribes to *Web of Science*, the online version of *Science Citation Index*. All of the online resources mentioned above are available to OU faculty, students and staff from on or off campus.

As with periodicals and indexes, the Library's book collection already provides many resources on topics such as on e-commerce; computer and information security; database design; programming languages like Java, JavaScript, XML, and C++; and other areas of interest to FIS students.

Collection Needs

Although the library needs of this program appear minimal, the Library does lack a few journals that have direct relevance to this program. In particular, as described in the Appendix to this memorandum, the Library should subscribe to the *International Journal of Accounting Information Systems*, *Journal of Information Systems* (published by the American Accounting Association), and *Review of Business Information Systems*. These journals are fairly reasonable in price and therefore we have allocated $650 for year one purchase of these titles, along with $1470 spread out over years one and two to purchase a three-year backfile for all three journals.

While the Library's book collection is adequate in many areas relevant to the FIS program, there is a gap in materials that relate directly to financial and accounting information systems. At least ten titles are published each year geared specifically to this area. Additionally, the Library will need to purchase guidebooks and other materials to support students' use of various technologies--Oracle, programming languages, etc.--as they complete class projects. Therefore, we recommend a small budget ($300, with annual increases to keep step with inflation) be allocated for the purchase of books to support the program; in this way, we will be able to keep up with technological changes and also provide supplementary materials to support students' coursework and research.

Conclusion

From our analysis, we have developed a five-year budget (see Appendix) that should be considered the minimum amount necessary for the Library to support a major in Financial Information Systems. Although the funding level is modest, it should serve to fill gaps in the Library's collection so that students will be able to find the information they need to complete the program's requirements.

cc: Elaine Didier, Dean of the Library
Prof. Jane Eberwein, Chair, UCUI

APPENDIX

Budgeted Library Materials Costs

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Serial Subscriptions*	$650	$715	$787	$866	$953
Books*	$300	$315	$330	$350	$370
Serial Backfiles	$540	$930	-0-	-0-	-0-
Total Annual Cost	$1490	$1960	$1117	$1216	$1323

*Presumes an approximate 10% increase in cost of serial (i.e., journal) subscriptions each year and a 5% increase in cost of books each year.

Recommended Journal Subscriptions --2001 Subscription Price

International Journal of Accounting Information Systems $267 (Publisher: Elsevier)

Journal of Information Systems $ 35 (Publisher: American Accounting Association)

Review of Business Information Systems $275 (Publisher: Western Academic Press)

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