

OAKLANDUNIVERSITY
GRADUATE COUNCIL

27 March 2012

TO: Virinder Moudgil
Senior Vice President for Academic Affairs and Provost

FROM: Darlene Schott-Baer
Interim Vice Provost for Graduate Education

RE: **Doctor of Philosophy Degree in Applied and Computational Physics**

On behalf of the Graduate Council, I am pleased to forward a recommendation that Oakland University implement the proposed new Doctor of Philosophy in Applied and Computational Physics degree effective Fall 2012.

In recent years, the physical sciences were recognized as extremely important for the economic development of the United States. In the framework of the American Recovery and Reinvestment Act, the funding of fundamental scientific research has been significantly increased. The Department of Physics at Oakland University is amply prepared to take advantage of these new opportunities and proposes a 90 credit PhD program in Applied and Computational Physics. The consistent federal funding obtained by the non-medical physics members of the Department points to the high level of faculty research to support Ph.D. students. The program consists of core courses, research seminars, electives, qualifying exams, and the dissertation. An integral and major component of the program is the successful completion of original research utilizing state-of-the-art experimental methods or taking theoretical and/or computational approach to study a problem of current interest. The program will focus on broad interdisciplinary areas of materials, instrumentation and numerical modeling where Oakland University already has a base of distinguished faculty researchers in the Departments of Physics, Chemistry, Mathematical Sciences and Electrical and Mechanical Engineering and foster collaboration with industrial adjunct faculty. It is expected that, starting from the third year in the program, all students will be supported by research grants. It will be necessary, however, to have teaching assistantship support during the first two years.

Members of Graduate Council were concerned about the number of 400 level courses that could count toward the doctoral degree, especially for graduates of Oakland's undergraduate physics program. Therefore, they strongly suggest that no more than 12 credits of 400 level coursework be included in the Plan of Study for the PhD program.