

## Ph.D. - Medical Physics

The College of Arts and Sciences offers a biomedical science doctoral program with a specialization in medical physics which is centered in the Department of Physics.

Medical physicists are providing primary contributions to advances in diagnostic and therapeutic medicine. Laser surgery, ultrasonics, nuclear medicine, radiotherapy, magnetic source imaging, and nuclear magnetic resonance imaging are examples of medical modalities developed and implemented by medical physicists. The medical physics specialization of the biomedical sciences doctoral program is designed for students who plan careers in medical research in industrial, hospital and academic settings. The curriculum is designed to prepare the student to engage in research in areas of physics applied to medicine. Ph.D. candidates may elect to do their dissertation research either with one of a number of Oakland University faculty currently involved in biomedical research or with one of the scientists in area hospitals which collaborate closely with the university: Henry Ford Hospital, Detroit, and William Beaumont Hospital, Royal Oak. In addition to graduate assistantships, hospitals participating in this program may provide support for qualified students. Interested students should consult the program coordinator for details.

**Admissions:** Students will be considered for admission if they hold baccalaureates in biology, chemistry, mathematics, physics, engineering or other disciplines related to a program specialization. Admission is highly selective. The prospective student should submit a graduate application, official transcripts from all college and universities previously attended, letters of recommendation from three faculty members capable of evaluating scholarly achievements and potential for independent research, and results of the Graduate Record Examination including the subject test appropriate to the desired specialization.

**Credit requirement:** A minimum of 90 credits beyond the baccalaureate is required including at least 30 credits of dissertation research. Transfer credits must meet graduate level requirements and receive approval by the appropriate specialization committee and the Dean of Graduate Study.

**Additional information:** Please contact the Program Coordinator, Professor Norman Tepley, for any additional information regarding the Medical Physics Ph.D. program.

## The Master of Science in Physics

The program leading to the degree of Master of Science in physics consists of courses, research, seminar participation, and a final research report or critical essay. Students receiving the degree will be prepared to work toward the Doctor of Philosophy in physics, to teach at the junior college level or to work in industry.

The average candidate entering in the fall semester will usually require two academic years to complete the degree. A very well-prepared candidate should complete the required courses and research credits in three semesters. Each student's program will be adjusted to his/her interests and background.

**Admission:** An applicant for admission to the M.S. program should have a bachelor's degree from an accredited institution or proof of equivalent achievement. The applicant's background should be strong in physics and mathematics.

**Credit requirement:** The basic degree requirement is successful completion of 36 credits of graduate courses distributed as follows: 4 credits of PHY 673 (Quantum Mechanics); 1 credit of PHY 600 (Seminar); 23 credits of additional 400-, 500-, or 600-level courses approved by the department; 8 credits of research, including a final written report or critical essay.

**Additional information:** Please contact the Program Coordinator, Professor Gopalan Srinivasan, for any additional information regarding the Master of Science in Physics program.