

## Doctor of Philosophy (Ph.D.) Physics

### Degree Program

#### **Coursework:**

A minimum of 78 credit hours (48 if entering with MS degree).

Program of study must include

1. Core courses (18 hours) in Theoretical Mechanics, Electrodynamics, Quantum Mechanics, and Statistical Mechanics
2. Six hours of elective Physics and/or Math 5000-6000 level lecture courses
3. Minimum of 24 hours of Research.

#### **Qualifying Examination:**

1. A written examination of advanced undergraduate and beginning graduate level physics knowledge is taken at the first opportunity after MS degree.
2. Within a semester of passing the Qualifying Examination, students form a committee of five faculty members and submit a proposed schedule of study.

**Comprehensive Examination:** Following completion of all required coursework, the candidate's committee designs and grades a comprehensive exam.

**Dissertation:** Students submit a written dissertation research plan with extensive reference citations. A dissertation embodying the results of original research must be accepted by the faculty and the Graduate School. The Final Examination is the student's oral defense of dissertation.

### Program Website

<http://umsl.edu/go/Physics-PhD>

### Application Requirements

1. Application <http://umsl.edu/go/Apply-Now>
2. Two letters of recommendation
  - a. From individuals who can attest to the applicant's likely success in graduate work. Three letters are needed when applying for an assistantship.
3. Official transcripts from all universities attended
  - a. Applicants must have at least a baccalaureate degree at the time they begin the program.
4. Entrance examinations
  - a. Acceptable scores on Graduate Record Examination (<http://www.gre.org/ttindex.html>), including at least 148 (600) on the Quantitative exam and 3.0 on the Analytical Writing exam.
  - b. International students are required to document English proficiency by providing scores from an internationally accepted standardized examination before a decision is made on admission.
5. Grade Point Average
  - a. Minimum of 3.0 on 4.0 scale (3.5 Master GPA).

### Application Deadline:

**Fall Semester admission:** Feb 15 for domestic students or May 1 for international students.

**Winter/Spring Semester admission:** September 15 for domestic students and October 1 for international students.

**Please apply early if seeking an assistantship.**

### Application Fee

\$50 for domestic applicants; \$40 for international applicants

### Assistantships

Assistantships are currently funded at \$14,500 (teaching) or \$16,000 (research) for an academic year. The Graduate School awards educational fee scholarships to graduate assistants. Summer employment as a teaching or research assistant is usually provided. Please apply for an assistantship to the Graduate Program Director.

### Graduate Program Director

Dr. Bruce Wilking

Phone: (314) 516-5023

Email: [bwilking@umsl.edu](mailto:bwilking@umsl.edu)