

Degree Requirements, Physics

Graduate handbook information is updated and maintained by each program. Graduate handbooks are available within each program's office and online at <https://utexas.box.com/v/UTAustinGraduateHandbooks>. Please contact the program with concerns or questions.

It is assumed that the student has an undergraduate background that includes upper-division classical mechanics, electricity and magnetism, statistical mechanics and thermodynamics, and quantum mechanics.

Master of Arts

The Master of Arts is not a part of the qualifying process for the doctoral degree. First-year students plan the first semester registration with the graduate advisor in physics. Students are encouraged to investigate all research groups in the department before selecting a professor to supervise a thesis project. The degree plan is then designed by the student, the supervising professor, and the graduate advisor. The time involved for completing a master's degree is related to the quality of the student's undergraduate background: the average time for completion by students with a good undergraduate background is one calendar year and one semester.

Doctor of Philosophy

To be admitted to candidacy for the doctoral degree, the student must (1) fulfill the core course requirement described below; (2) show evidence of exposure to modern methods of experimental physics—this exposure may be gained in an experimental senior thesis or internship completed by the student as an undergraduate and approved by the graduate advisor and the chair of the Graduate Studies Committee, by previous participation in an experimental program, or in Physics 380N; and (3) fulfill the oral examination requirement described below.

Core courses. During the first two years of graduate study, the student must take four from among the following core courses: Physics 385K, 385L, 387K or 387L, and 389K or 389L. The student must earn an official grade of at least *B-* in each course and a grade point average of at least 3.33 across the four courses. The student may ask for the grade they earn in Physics 380N to be substituted for the grade in one of the core courses when the average is computed. A well-prepared student may seek to fulfill the core course requirement by earning satisfactory grades on the final examinations for one or two of these courses rather than by registering for them; in this case, the student does not receive graduate credit for these courses, but the grade is counted toward the required core-course average for the purposes of qualifying.

The oral qualifying examination. After satisfying the first two requirements above, and within 27 months of entering the program, the student must take an oral qualifying examination. The examination consists of a presentation before a committee of four physics faculty members, one of whom is a member of the Graduate Studies Subcommittee (GSSC). The presentation is open to all interested parties. It is followed by a question period restricted to the student and the committee. The questions during this session are directed toward clarifying the presentation and helping the committee determine whether the student has a solid grasp of the basic material needed for research in their specialization. The student passes the examination by obtaining a positive vote from at least three of the four faculty members on the oral qualifying committee.

Each Program of Work for the doctoral degree must include at least four advanced courses in physics (with a letter grade of at least *B-*), at least one of which must be in a specialty other than that of the student's dissertation; a list of acceptable courses is maintained by the GSSC. In order to provide greater flexibility particularly for multidisciplinary degrees, one of the four advanced courses may be selected from courses outside of the department, such a course must be approved by the GSSC. A dissertation is required of every candidate, followed by a final oral examination covering the dissertation and the general field of the dissertation.