

	NEW/CHANGE PROGRAM REQUEST Graduate Programs		UGPC Approval _____ UFS Approval _____ Banner _____ Catalog _____
	Department <u>Physics</u> College <u>Science</u>		
Program Name Ph.D. in Physics		☐ New Program* ☒ Change Program*	Effective Date (TERM & YEAR) Fall 2025
Please explain the requested change(s) and offer rationale below or on an attachment. The department proposes to change its admissions requirements to include a recent GRE subject exam. The modified catalog entry also makes two minor grammatical corrections.			
*All new programs and changes to existing programs must be accompanied by a catalog entry showing the new or proposed changes.			
Faculty Contact/Email/Phone Chris Beetle; 7-4612		Consult and list departments that may be affected by the change(s) and attach documentation None.	
Approved by Department Chair <u>Luc T. Wille</u> College Curriculum Chair <u>[Signature]</u> College Dean <u>[Signature]</u> UGPC Chair _____ UGC Chair _____ Graduate College Dean _____ UFS President _____ Provost _____		Date <u>2/26/2025</u> <u>3/10/2025</u> <u>3/10/2025</u> _____ _____ _____ _____	

Email this form and attachments to UGPC@fau.edu 10 days before the UGPC meeting.

PHYSICS

DOCTOR OF PHILOSOPHY (PH.D.)

(Minimum of 72 credits required)

The Department of Physics offers graduate study leading to a Doctor of Philosophy (Ph.D.) degree. The department is active in research in experimental, theoretical and computational physics as well as astronomy. The Ph.D. will be conferred only for work of distinction in which the student displays original scholarship, achievement and ability.

Admission Requirements

In addition to meeting all ~~of the~~ University and College admission requirements for graduate study, applicants for the Ph.D. in Physics must meet ~~all of~~ the following the departmental requirements:

1. Hold a B.S. degree, or equivalent, in Physics or a closely related field;
2. Earn a GPA of 3.0 or higher, or equivalent, in the last 60 credits of undergraduate work;
- ~~2-3.~~ Provide a score from a GRE Physics subject exam taken within the past five years;
- ~~3-4.~~ Be approved by the Department of Physics; and
- ~~4-5.~~ Pass a recent TOEFL exam with a minimum score of 550 (PBT), 213 (CBT) or 79 (IBT). This requirement is waived for students from countries whose official languages include English.

In addition, the Department strongly encourages applicants to secure two or more letters of support from faculty familiar with their past work ~~and to provide a report of a recent score on the GRE Physics subject exam. Although not required, these items will be considered in the admissions process if available.~~

Degree Requirements (minimum of 72 credits)

1. Students in the Physics Ph.D. program must satisfy the following course requirements.

Graduate Core Courses - 12 credits required

Mechanics	PHY 6247
Electromagnetism	PHY 6346
Statistical Mechanics	PHY 6536
Quantum Mechanics 1	PHY 6645

Mathematical Physics Course - 3 credits required

Mathematical Physics 1	PHZ 5115
Mathematical Physics 2	PHZ 5116

Computational Physics Course - 3 credits required

Computational Physics

PHZ 5156

Ph.D. Elective and Research Courses - 54 credits required

Approved Electives *, **

Dissertation**

PHY 7980

2.

* All electives must be approved by the department's graduate advisor. At most, 6 elective credits may be earned in Directed Independent Study (AST/PHY/RAT 6907) courses offered the department faculty.

** Up to 6 credits of other graduate-level research courses offered by the department may be counted toward the dissertation requirement.

3. The department may apply up to 24 transfer credits from another institution toward this degree. Approval of transfer credits is at the discretion of the department faculty. However, all students in the Ph.D. program must complete the Ph.D. core courses listed above at FAU.

Admission to Candidacy

To be admitted to candidacy, students must satisfy the following requirements within five semesters (excluding summers) of beginning the Ph.D. program:

1. Complete the four Graduate Core Courses listed above with a grade of "B" or higher in each.
2. Complete at least 36 credits of graduate-level courses (including the Graduate Core Courses and approved transfer credits from other institutions, but excluding research or dissertation credits) with a cumulative GPA of at least 3.0.
3. Form a Supervisory Committee:
 - a. Identify a member of the department faculty who agrees to serve as Ph.D. supervisor and chair (or co-chair) of the Supervisory Committee overseeing a dissertation project on a specific topic selected by the student in consultation with the supervisor.
 - b. Identify at least three additional members of the FAU graduate faculty who agree to serve as members of the Supervisory Committee. At least one member of the Supervisory Committee must be from outside the FAU Department of Physics, but a (simple) majority of Committee members must be graduate faculty from within the department.
 - c. Submit all required paperwork to FAU's Graduate College to form the Supervisory Committee and finalize the student's Plan of Study.
 - d. Membership of the Supervisory Committee and the revised Plan of Study (if any) must be approved by the department's graduate advisor.
4. Present a general outline of the proposed dissertation project at a Physics Colloquium.

5. Pass a Comprehensive Oral Exam administered by the Supervisory Committee. The exam will cover topics from graduate-level coursework that the Committee considers relevant to the student's proposed research.

Doctoral Research

Ph.D. candidates in Physics are expected to demonstrate consistent progress toward timely graduation, typically within six years of entering the Ph.D. program. Accordingly, candidates shall organize a meeting at least once per year with their Supervisory Committee. Candidates shall prepare a one-page, written report describing progress in their dissertation research project since the Supervisory Committee last met, which shall be sent to the Committee members and the department's graduate advisor at least one week prior to the Committee meeting.

Candidates must complete a significant program of original research, participate in advanced seminars in their area of specialization and defend completed dissertations in the Physics Department Colloquium Series. Each dissertation must be clearly written, complete and demonstrate an original contribution to the sum of existing knowledge. Each completed dissertation must be approved by the candidate's Supervisory Committee, the department chair and the deans of the Charles E. Schmidt College of Science and of the Graduate College.