FLORIDA ATLANTIC UNIVERSITY

NEW/CHANGE PROGRAM REQUEST
Graduate Programs

UGPC Approval _____
UFS Approval _____
Banner _____
Catalog _____

Department Mathematical Sciences

College Science

Program Name
Ph.D. in Mathematics

☐ **New Program***

☑ **Change Program***

Effective Date
(TERM & YEAR)
Fall 2024

Please explain the requested change(s) and offer rationale below or on an attachment.

Reduce the minimum number of credits from 80 to 72, as this is in-line with new PhD programs in the College of Science.

Remove the GRE admission requirement, as this is a trend at FAU and many other universities which will help increase the number of applicants and reduce the cost for applicants.

Explicitly state that a statement of personal objectives is required.

*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
Hongwei Long, hlong@fau.edu, 561-297-0810

Consult and list departments that may be affected by the change(s) and attach documentation
NA

Approved by	***Date***
Department Chair	10/17/2023
College Curriculum Chair	10/23/2023
College Dean	10/23/2023
UGPC Chair	
UGC Chair	
Graduate College Dean	
UFS President	
Provost	

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

DOCTORAL PROGRAM

MATHEMATICS
DOCTOR OF PHILOSOPHY (PH.D.)

The degree of Doctor of Philosophy (Ph.D.) is conferred upon those candidates who have demonstrated the ability to make original and independent contributions in mathematics. This quality is evaluated through a dissertation that the candidate must submit to a supervisory committee and defend in an open presentation.

Admission to Doctoral Study

Although each candidate will be considered individually, the admission requirements include:

~~1. A baccalaureate in Mathematics or a related field completed with an average of "B" or better;~~
~~2. A minimum GRE score of at least 157 on the quantitative reasoning section;~~
~~3. A TOEFL score, if applicable;~~
~~4. Three letters of recommendation; and~~
~~5. Approval of the FAU Mathematical Sciences Department graduate committee.~~

1. A baccalaureate in Mathematics or a related field completed with an average of "B" or better;
2. A TOEFL score, if applicable;
3. Three letters of recommendation and a statement of personal objectives; and
4. Approval of the FAU Mathematical Sciences Department graduate committee.

Requirements to be admitted to candidacy

1. The student must complete the following courses: Introductory Analysis 1 and 2 (MAA 5228 and 5229), Introductory Abstract Algebra 1 and 2 (MAS 5311 and 5312), Linear Algebra (MAS 5145) and Multivariable Analysis (MAA 5105).
2. Satisfy one of the following:

   Option A. Pass two of the three exams (Algebra, Analysis, Probability and Statistics) within five semesters (not counting the summer terms) of admission to doctoral study. Then form a supervisory committee as outlined in Item 3.

   Option B. Complete the following steps within six semesters (not counting the summer terms) of admission to doctoral study.
   a. Earn a pass on one exam and a constructive attempt on a different exam within four semesters (not counting the summer terms) of admission to doctoral study.
   b. Select a prospective research advisor, and complete two courses at the 6000 level, selected by the prospective research advisor and approved by the

departmental graduate committee. These courses will need to be passed with a combined GPA of at least 3.5. They will count toward Degree Requirement 1a below, but not 1b or 1c. The prospective research advisor may propose additional requirements.

c. Receive a positive recommendation by the prospective research advisor and the graduate committee. Then form a supervisory committee as outlined in Item 3 with the prospective research advisor serving as research advisor.

3. Form a supervisory committee of at least four members including the research advisor and at least two other members of the graduate faculty of the Department of Mathematical Sciences.

Degree Requirements

1. Credits and course requirements:
   a. Earn a minimum of ~~80~~ 72 credits;
   b. Complete 6000-level or higher courses with at least four of these prefixes: MAA, MAD, MAP, MAS, MHF, MTG and STA;
   c. For at least two of the prefixes in Item 1b, complete at least two 6000-level or higher courses.
2. Successful completion of a preliminary examination covering specific areas of study and set by the student's supervisory committee.
3. Presentation and oral defense of a dissertation.
4. Completion of all University requirements, including at least 18 credits at FAU beyond the master's level.

Core - 18 credits	
Multivariable Analysis	MAA 5105
Introductory Analysis 1	MAA 5228
Introductory Analysis 2	MAA 5229
Linear Algebra	MAS 5145
Introductory Abstract Algebra 1	MAS 5311
Introductory Abstract Algebra 2	MAS 5312
Electives - 18 credits	
Choose18 credits at the 6000 or 7000 level from the Mathematical Sciences Department	
Remaining Requirements - ~~43~~ 35 credits	
Choose ~~43~~ 35 credits at the 5000, 6000 or 7000 level from the Mathematical Sciences Department. Students may take MAT 7978, but not MAS 6318, MHF 6405 or MHF 6410.	
Dissertation - 1 credit (minimum)	
Dissertation	MAT 7980