FLORIDA ATLANTIC UNIVERSITY

# NEW/CHANGE PROGRAM REQUEST
## Graduate Programs

**Department** Mathematical Sciences

**College** Science

UGPC Approval _____
UFS Approval _____
Banner _____
Catalog _____

| **Program Name** | ☐ **New Program*** | **Effective Date** *(TERM & YEAR)* |
|---|---|---|
| Doctoral Program | ☑ **Change Program*** | Spring 2021 |

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

We request to add "A Statement of Personal Objectives" to the list of admission requirements for Admission to Doctoral Study in the University catalog.

Rationale: The Graduate College is cross checking admission requirements posted on the program sheets with the University catalog. It is noticed that the PhD in Mathematics did not have a statement of personal objectives listed in the University catalog, while it is listed on the Graduate College's program sheet. The requirement of a statement of personal objectives is also listed on the web-page of the Department of Mathematical Sciences.

Program Sheet: https://www.fau.edu/graduate/programs/docs/phd_mathematical_sciences.pdf

University catalog: http://www.fau.edu/academic/registrar/PREcatalog/science.php#mathd

Department of Mathematical Sciences: http://www.math.fau.edu/apply.php

The requested change will ensure the information we are presenting to students is consistent and accurate on all our sites.

*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** | **Consult and list departments that may be affected by the change(s) and attach documentation** |
|---|---|
| Hongwei Long/hlong@fau.edu /561-297-0810 | None |

| ***Approved by*** | | ***Date*** |
|---|---|---|
| Department Chair | | 09/30/2020 |
| College Curriculum Chair | Christopher Beetle 2020.10.21 16:52:23 -04'00' | |
| College Dean | William David Kalie | 10/21/2020 |
| UGPC Chair | Christopher Beetle | Nov 17, 2020 |
| UGC Chair | Paul R. Peluso (Nov 18, 2020 08:43 EST) | Nov 18, 2020 |
| Graduate College Dean | | Nov 18, 2020 |
| UFS President | | |
| Provost | | |

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

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# Memorandum

September 30, 2020

From: Hongwei Long
Professor and Graduate Director
Mathematical Sciences

## Re: Math PhD Program Change

The current Admission to Doctoral Study in the University catalog:

**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.

The proposed change (adding "A statement of personal objectives") on Admission to Doctoral Study in the University catalog:

**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;

5. A statement of personal objectives; and

6. Approval of the FAU Mathematical Sciences Department graduate committee.

## DOCTORAL PROGRAM

## Doctor of Philosophy with Major in Mathematics

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;

5. A statement of personal objectives; and

6~~5~~. 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 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 | 3 |
| Introductory Analysis 1 | MAA 5228 | 3 |
| Introductory Analysis 2 | MAA 5229 | 3 |
| Linear Algebra | MAS 5145 | 3 |
| Introductory Abstract Algebra 1 | MAS 5311 | 3 |
| Introductory Abstract Algebra 2 | MAS 5312 | 3 |
| **Electives - 18 credits** *Select 18 credits at the 6000 or 7000 level from the Mathematical Sciences Department* | | |
| **Remaining Requirements - 43 credits** *Select 43 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 | 1 |