



CATALOG YEAR 2015-2016

COLLEGE/SCHOOL/SECTION: \_\_\_\_\_

Course: Add: \_\_\_\_\_ Delete: \_\_\_\_\_  
(check all that apply) Change: Number \_\_\_\_\_ Title \_\_\_\_\_ SCH \_\_\_\_\_ Description x Prerequisite x

If new, provide Course Prefix, Number, Title, **Measurable** Student Learning Outcomes, SCH Value, Description, prerequisite, and lecture/lab hours if applicable. If in current online catalog, provide change and attach text with changes in red and provide a brief justification.

**MATH 4335**

*Advanced Calculus*

Three semester hours. (FL)

A course in real analysis. It will include topology, continuity, differentiation, integration, sequences, series and power series. Prerequisite: MATH ~~2415~~ MATH 2414 and MATH 3365.

Justification:

- According to student learning outcomes the course is “for functions of one variable.” Therefore, multivariable calculus (Calculus III, MATH 2415) need not be a prerequisite.
- On the other hand, students must “use definitions and theorems to provide proofs.” Therefore, MATH 3365, whose course description includes “logic,” “mathematical induction,” and “set[s], relations and functions,” should be a prerequisite for this course.
- The MATH 4335 course description includes “sequences, series and power series,” which are topics of Calculus II (MATH 2414) but not of Calculus I. For students to appreciate and better comprehend the abstract mathematical perspective on these topics offered in MATH 4335, they should see these topics from a more elementary perspective in MATH 2414.

Approvals:

Signature

Date

Chair  
Department Curriculum Committee

Qingwen Ni

Digitally signed by Qingwen Ni  
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Chair  
Department

Rohitha Goonatilake, Ph.D.

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Date: 2014.10.09 21:47:32 -05'00'

October 9, 2014

Chair  
College Curriculum Committee

Oct. 15/14

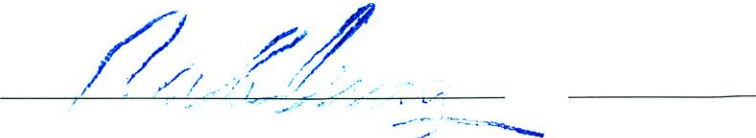
Dean

Frances Bernat

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Provost

06/2014

A handwritten signature in blue ink is written over a horizontal line. The signature is cursive and appears to read "R. Kelly".