

Part II. Description of Curriculum Change.

1. New syllabus of record - attached.
2. A summary of the proposed revision:

The current prerequisite for MA421 Advanced Calculus I is "MA 124 or 227, MA 271 with a C or better grade." The

prerequisite to "MA 124, and MA 272 with a C or better grade."

3. Justification/rationale for the revision:

The Mathematics Department is proposing a change in the core for all first

3 lecture hours
(3c-01-3sh)

Prerequisites: MA124 and MA 272 with a C or better grade.

Study of set theory, real number system, functions, topology of Cartesian space, sequences, convergence and uniform convergence, continuity, and uniform continuity.

II. Course Objectives:

1. Students will review the basics of set theory and the real line and metric

IV. Evaluation Methods

There is variation in the weights given to evaluation methods used, but typically 40% of the grade will be determined by hand-in assignments emphasizing the writing of proofs, and about 20% of the grade will be determined by a comprehensive final examination. Approximately 5% of the grade will be determined by class activity and

Mathematics Department
Indiana University of Pennsylvania

Course Number: MA 421/521
Course Title: Advanced Calculus I
Credits: 3 semester hours
Prerequisites: MA 124 or MA 227, and MA 271 with a grade of C or better
Textbook: Foundations of Analysis
David Belding - Kevin Mitchell
Prentice Hall

Revised: 9/94

Catalog Description:

Study of set theory, real number system, functions, topology,

of Cartesian space, sequences, convergence and uniform convergence, continuity, and uniform continuity.

Course Outline/Time Schedule:

- I. The Real Number System
 - A. Irrational Numbers
 - B. Constructing the Real Numbers

IV. Sequences and Series

- A. Infinite Sequences
- B. Monotone and Cauchy Sequences
- C. Infinite Series and Convergence Tests
- D. Absolute and Conditional Convergence