MATH 413 Introduction to Analysis II

1. Catalog Description

MATH 413 Introduction to Analysis II **4 units**

Prerequisite: MATH 412.

A continuation of Introduction to Analysis I covering such topics as integration, infinite series, uniform convergence and functions of several variables. 4 lectures.

2. Required Background or Experience

Math 412.

3. Learning Objectives

Students should:

a. Re-emphasize and obtain a deeper understanding of the definition of function in the context of this course.
b. Obtain an understanding of the limiting processes basic to functions of a single and several variables. This understanding will make much of the literature of mathematics accessible and will provide a deeper insight into computational processes with which students are somewhat familiar.

4. Text and References

See course supervisor. Suggested texts include:

- Bartle, Rudin or Goldberg.

5. Minimum Student Materials

Paper, pencils, and notebook.

6. Minimum University Facilities

Classroom with ample chalkboard space for class use.

7. Content and Method

a. Integration on R^1
b. Sequences and series of functions
c. Uniform convergence
d. Improper integrals

8. Methods of Assessment

Comprehensive final exam, mid-term exams or quizzes, homework.