



September 2008

## **MATH 202 Orientation to the Mathematics Major**

### 1. Catalog Description

#### **MATH 202 Orientation to the Mathematics Major (1) (CR/NC)**

Career opportunities in the field of mathematics, preparing a field of study, and a survey of departmental facilities and procedures related to research, study and graduation. Credit/No Credit grading only. 1 lecture. Corequisite: Sophomore standing or consent of instructor.

### 2. Required Background or Experience

The course is designed for students enrolled as math majors. However, the course is open to anyone with an interest in a career in mathematics.

### 3. Learning Objectives

Students will be better informed about career choices in mathematics and, with the help of their advisor, will be able to design a curriculum and plan a strategy to fit their career objectives. They will become familiar with faculty interests much earlier to facilitate selection of a senior project advisor. Students should graduate earlier and be better-prepared for employment because of informed decision-making.

### 4. Reference Material

- a) Devlin, Keith, Mathematics, the New Golden Age, Revised edition, Columbia University Press, 2001.
- b) Sterrett, Andrew (ed.), 101 Careers in Mathematics, 2nd ed., MAA, 2003.
- c) Lambert, Stephen and Ruth DeCotis, Great Jobs for Math Majors, 2nd ed., McGraw-Hill, 2005.

### 5. Minimum Student Materials

Paper, pencils, and notebook.

### 6. Minimum University Facilities

Classroom with ample chalkboard space for class use, and audiovisual facilities.

### 7. Content and Method

Lectures with emphasis on clarifying career opportunities, career objectives, and planning the student's upper division program. Other faculty and staff, as well as outside visitors, serve as guest lecturers and resource people in their fields of expertise.

Topics will include:

- a. Introduction to department resources, faculty, the advising process, Counseling and Career Services centers.
- b. The mathematics curriculum.

- c. The Cooperative Education Program, summer jobs and placement, scholarships and financial assistance.
- d. Extra-curricular activities, including Math Club, Math Honor Society, Open House, student government, Putnam Exam, Math Modeling Competition.
- e. Career paths and opportunities (teaching, research, scientific and commercial applications, the role of technology).
- f. The various branches of mathematics, history of mathematics, mathematics library and literature. Interesting problems, past and present.
- g. Undergraduate research opportunities and the senior project.
- h. Graduate school - why, when, where, who and how.
- i. Developing a career objective and planning an overall strategy to reach it.

### Method

Lectures, demonstrations, student presentations.

### 8. Methods of Assessment

Written assignments and projects.

### 9. Supplementary Teaching Responsibilities

- a. The assignment of teaching Math 202 is a two-year assignment. The course is taught in spring and fall quarters. Release time is given during these quarters.
- b. The instructor is also the department undergraduate advisor.
  - 1) The undergraduate advisor is automatically on the Curriculum Committee.
  - 2) Additional office hours are expected and required to advise any and all undergraduates with questions about mathematics courses, and the mathematics major or minor.
  - 3) The undergraduate advisor is expected to attempt to contact mathematics majors who appear to no longer be pursuing a mathematics degree, and also to attempt to contact students with grade point averages that put them at risk.\*
- c. A major part of this course is provided by invited guest speakers. Most are Cal Poly faculty or staff.
- d. Mandatory assignments include:
  - 1) A “4 year plan” of coursework which includes consideration of when mathematics courses are offered, and which tracks are appropriate for the student’s future.
  - 2) A practice resumé.

- 10. Attendance in this class is mandatory. There is no way to make up a missed guest lecture. An NC or I grade is appropriate for missing more than one class.

\* It is important to communicate with the Director of the COSAM Advising Center regarding these matters.