OBJECTS: The main object of this course is innovative uses of the personal computer in economic analysis and model building techniques. Students will acquaint themselves with the nature and properties of economic models by trial and error through individualized, computer generated exercises. The course contents may be divided into three parts: Part I Microcomputer spreadsheets and MS Excel; Part II Game Theory I; Part III Game Theory II. The exact content and emphasis of the course may differ from year to year depending on the availability of software packages. This course will be offered in spring semesters.

TEXTBOOKS: The mathematical background of the course is contained in:

PREREQUISITES: The prerequisite for this course is ECON 3808: *Introduction to Mathematical Economics*, which roughly covers the topics in the first 12 chapters of Chiang, A., *Fundamental Methods in Mathematical Economics*, McGraw-Hill, 3rd ed., OR MATH 1300: *Calculus*. Some relevant topics will be reviewed in the class as the needs arise.

Previous knowledge of microcomputers or software is not required. However, you should have enough time to practice and familiarize yourself with the computer and the software package within a short period of time. This takes constant effort and great determination.

FACILITIES: The computer we use is Zenith 586/133 with 16Mb of memory. The software programs are Microsoft Excel, version 7. In the previous semesters, we used Quattro Pro, version 3.01, by Borland International Corporation. Quattro Pro is fully compatible with Lotus 1-2-3 if Quattro Pro's Lotus menu is entered.

The class will be held in the Economics Building, Room 7. There are 14 Zenith 586/133 microcomputers in the room, each with a SVGA color graphic monitor. Available software programs are installed on the hard disk drive.

Excel (and Quattro Pro) is also installed in the microcomputers located in the Engineering Center. They are also available in Business, Room 104 and 107, Norlin Library Rooms 310 and M350. There are about 30 computing sites throughout the campus. The Excel program is installed on most of the sites. When they are not in use by classes, the facilities are available for individuals.

Reference books and periodicals on Excel and Quattro Pro, and other spreadsheet programs are available at the Math/Physics Library and the Business Library.
NOTES:

1. There are weekly homework assignments.
   - Homework - handed in on time: 10 points
   - late before grading: 7 points
   - late after grading: 5 points

2. Semester Grading: Semester grades consist of two parts: Exam scores (85% = 25% + 25% + 35%);
   Homework and Exercise scores (15%). Probable cutoff points are in the vicinity of 90% (A), 80% (B),
   70% (C), 60% (D). Some curving may be used.

GENERAL REMARKS:

1. Please attend the classes regularly. We expect every student to participate in all classes.
2. Test dates are firm. Please prepare for the tests long before the test dates.
3. If you are going to miss or have missed an exam, hand in an explanatory statement and documentation
   to the instructor or call the instructor for approval of excused absence within 24 hours after the test time.
   Otherwise, no make-up test and a zero grade will be given to unexcused absences for exams.
4. Please come to talk with (or call) the instructor about any problems related to the course.

SOME REFERENCES:

PART I. MICROCOMPUTERS AND LOTUS 1-2-3

Blum, L. "Computer Generated Graphic Tutorials in Economics," Collegiate Microcomputer 1(4),
November 1983.


_______, "A New CAI Approach to the Teaching of Calculus," Journal of Computers in
Mathematics and Science Teaching, (A quarterly Journal of Association of Computers in

_______, "Micros in Mathematics Education--Uses of Spreadsheets in CAL," International Journal
of Mathematical Education in Science and Technology 16(6), 1985, pp. 705-13.

_______, "The Electronic Gradebook--An Application of dBaseII Program for Academia,"

_______, "Gauss Quadrature Numerical Integration--A Comparison of the Programming Method
and the Spreadsheet Method," ACCESS, Jnl of Microcomputer Applications, 5(5), Sep/Oct

_______, "Implementation of the Gauss-Jordan Method of Matrix Inversion Using Spreadsheet

Hsiao, M.C.W., "Teaching Regression Analysis with Spreadsheets," The Journal of Computers in

_______, "A CAI Framework of Multiple Regression Analysis on Spreadsheets," Collegiate
Microcomputer 3(3), August 1985b, pp. 239-248.