APPLICATION FOR CHANGE IN EXISTING COURSE: MAJOR & MINOR

1. Submitted by College of Arts and Sciences Date August 19, 2002
Department/Division offering course Mathematics

2. Changes proposed:
   (a) Present prefix & number MA 515 Proposed prefix & number MA 515
   (b) Present Title Mathematical Programming and Extensions
       New Title Linear and Combinatorial Optimization
   (c) If course title is changed and exceeds 24 characters (Including spaces), include a sensible title (not to exceed 24 characters) for use on transcripts:
       Lin & Comb Optimization
   (d) Present credits: 3 Proposed credits: 3
   (e) Current lecture: laboratory ratio No laboratory Proposed: No laboratory
   (f) Effective Date of Change: (Semester & Year) Fall 2002

3. To be Cross-listed as: STA 515

4. Proposed change in Bulletin description:
   (a) Present description (including prerequisite(s): See attached
   (b) New description: See attached
   (c) Prerequisite(s) for course as changed: A course in linear algebra or consent of instructor.

5. What has prompted this proposal?
   A proposed change in emphasis of the prelim sequence from optimization to discrete mathematics.

6. If there are to be significant changes in the content or teaching objectives of this course, indicate changes:
   See attached.

7. What other departments could be affected by the proposed change?
   Statistics since the course is cross-listed.

8. Will changing this course change the degree requirements in one or more programs?* □ Yes ☑ No
   If yes, please attach an explanation of the change.*

9. Is this course currently included in the University Studies Program?
   If yes, please attach correspondence indicating concurrence of the University Studies Committee.
   □ Yes ☑ No

10. If the course is a 100-200 level course, please submit evidence (e.g., correspondence) that the Community College System has been consulted.

*NOTE: Approval of this change will constitute approval of the program change unless other program modifications are proposed.
11. Is this a minor change?  
   (NOTE: See the description on this form of what constitutes a minor change. Minor changes are sent directly from the Dean of the College to the Chair of the Senate Council. If the latter deems the change not to be minor, it will be sent to the appropriate Council for normal processing.)  
   □ Yes  ✔ No

12. Within the Department, who should be consulted for further information on the proposed course change?
   Name: Francois Margot  
   Phone Extension: 257-4802

Signatures of Approval:

[Signature]  
Department Chair  
[Signature]  
Dean of the College

[Signature]  
Undergraduate Council  
Date: 10/14/2002  
Date of Notice to the Faculty: DEC 13 2002

[Signature]  
Graduate Council  
Date

[Signature]  
Academic Council for the Medical Center  
Date

[Signature]  
Senate Council  
Date of Notice to University Senate

**If applicable, as provided by the Rules of the University Senate.

ACTION OTHER THAN APPROVAL

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The Minor Change route for courses is provided as a mechanism to make changes in existing courses and is limited to one or more of the following:

a. change in number within the same hundred series;

b. editorial change in description which does not imply change in content or emphasis;

c. editorial change in title which does not imply change in content or emphasis;

d. change in prerequisite which does not imply change in content or emphasis;

e. cross-listing of courses under conditions set forth in item 3.0;

f. correction of typographical errors. [University Senate Rules, Section III - 3.1]

Rev 11/98
3. Max-flow/min cut; Edmonds-Karp specialization of the Ford-Fulkerson algorithm; Menger’s Theorem.
5. Matroids; Greedy algorithm; Matroid polytope; Maximum cardinality matroid intersection.

Nature of Assignments and Suggested Grading Criteria

Homework (30%), midterm (30%) and final exam (40%) will be used to assign grades.

Suggested gradelines: Graduate students: A above 90%, B, 80%-90%, C, 70%-80%.
Undergraduate students: A above 88%, B 78%-88%, C 68%-78%, D 58%-68%.
The instructor may use his or her discretion to adjust gradelines based on their evaluation of the nature and difficulty of the course assignments and exams.

Additional References:

INVESTIGATOR REPORT

INVESTIGATING BODY: Area A, Steven Yates (Area, Area Chair)

DATE FOR COUNCIL REVIEW: 12/13/02

CATEGORY: NEW

INSTRUCTIONS: This completed form will accompany the course application to the Graduate/Undergraduate Council(s) in order to avoid needless repetition of investigation. The following questions are included as an outline only. Be as specific and as brief as possible. If the investigation was routine, please indicate this. The term "course" is used to indicate one course, a series of courses or a program, whichever is in order. Return the form to the Associate Dean, 231 Patterson Office Tower for forwarding to the other Council(s). ATTACH SUPPLEMENT IF NEEDED.

1. List any modifications made in the course proposal as submitted originally and why.
   
   **NONE**

2. If no modifications were made, review considerations that arose during the investigation and the resolutions.
   
   **NONE**

3. List contacts with program units on the proposal and the considerations discussed therein.
   
   **NONE**

4. Additional information as needed.
   
   **NONE**

5. A&S Area A, Natural & Mathematical Sciences Curriculum Committee Recommendation:
   
   **APPROVE**, **APPROVE WITH RESERVATION**, OR **DISAPPROVE**

6. A&S Council Recommendation:
   
   **APPROVE**, **APPROVE WITH RESERVATION**, OR **DISAPPROVE**

7. A&S Council Investigator, Dr. Steven Yates
   
   Date: 12/13/02

File: InvestigatorRpt