Minnesota State University, Mankato

Curriculum Proposal

Please type or select the requested information. Print completed forms, add appropriate paper attachments, and route through MSU's curricular process for recommendations and decisions.

| College: Science, Engineering and Technology | Proposal #: 256 |
| Department: Mathematics and Statistics | Effective Date of Change: |
| Program: | (For Office Use Only) |
| Type of Change: COURSE PROPOSALS | Course Designator: Math 471 |
| Proposed: Change in Course—Other | Number of Credits: 4 |
| Title Current: Numerical Analysis II | |
| Title Proposed: | |
| 24-Char. Abbrev: | (if applicable) |

Include a course or program description for the Bulletin (30-40 words maximum for courses, 100 for programs):
Pre: Math 470 and Math 223 with C or better or consent.

Rationale or Justification for change:
Prerequisite change to clarify the intent of the prerequisite.

***For General Education or Cultural Diversity Courses Only***

<table>
<thead>
<tr>
<th>GE Category #</th>
<th>GE Category Name (Maximum of 3 Categories)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

* For Writing Intensive Courses, attach a description of the kind and quantity of writing.
* For Upper Division Courses, include a description of the respects in which it is broad and general rather than narrow and specific, and so suitable as GE.

Attach paper copies of the following:
- a. Syllabus or course outline.
- b. Course's student learning outcomes associated with each GE competency or CD designation.
- c. List of strategies to be used to assess students' achievement of each GE competency or CD designation.

***For New Courses***

<table>
<thead>
<tr>
<th>Instructional Type: Lecture</th>
<th>Course will be offered:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grading Format: Grade P/N</td>
<td>Fall Semester</td>
</tr>
<tr>
<td>Pre- or Co-requisites:</td>
<td>Spring Semester</td>
</tr>
<tr>
<td>Other courses are being changed or eliminated. (Explain.)</td>
<td>Summer Session</td>
</tr>
</tbody>
</table>

- Course content or title is similar to courses in other departments. (Attach copy of letter of agreement with other program(s) contacted. Indicate the nature of the discussions and/or resolution of differences or potential conflicts.)

Attach paper copies of the following:
- a. Syllabus or course outline.
- b. Course's student learning outcomes.
- c. A list of resources required to offer and support this course.
- d. A description of how teaching this course will affect department staffing.
- e. If 400/500 level course, an explanation of added expectations of graduate students.

Revised September 2002
Minnesota State University, Mankato
Curriculum Proposal

***Signature Page***

**Department**
- Recommended
- Not Recommended
 Categories/ies

**College Curriculum Committee**
- Recommended
- Not Recommended
 Categories/ies

**College Dean**
- Recommended
- Not Recommended
 Categories/ies

**General Education Subcommittee**
- Recommended
- Not Recommended
 Categories/ies

**Undergraduate Curriculum and Academic Policy Committee**
- Recommended
- Not Recommended
 Categories/ies

**Faculty Association Graduate Committee**
- Recommended
- Not Recommended

**Graduate Dean**
- Recommended
- Not Recommended

**Academic Affairs Council**
- Recommended
- Not Recommended

**Senior Vice President and Vice President for Academic Affairs**
- Approved
- Not Approved

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Date: 11/2/06
Date: 3/12/07
Date: 3/13/07
Date: 10/18/06
Date: 3/16/06
Date: 3/16/06

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Revised September 2002
Mathematics and Statistics Department
Meeting Minutes
October 16, 2006


Minutes of the September 15, 2006 meeting were approved by consensus.

Mark Zuiker presented the proposal for the Broad Major in Statistics. (See attached)

Zuiker moved that Stat 492 Capstone Experience be approved and sent to the college curriculum committee. It was seconded by Wiest, a vote was taken and it was approved.

Zuiker moved that the Broad Statistics Major be accepted and sent to the college curriculum committee. Waters seconded the motion.
Motion passed.

Bill Lee moved and that the prerequisites for Stat 154 and Math 130 be changed to

Must achieve a score of 18 or better on the MNSCU Math readiness Test, or have achieved an ACT Math subscore of 19 or higher, or successful completion of Math 098

Boyd seconded the motion.
Motion passed.

Boyd moved that the catalog description on Math 181 delete the words "to the fields of business and economics" Namyong Lee seconded the motion. A vote was taken and the motion passed.

The curriculum committee was given the charge to review all prerequisites in the catalog. The committee was also charged with developing a calculus course that will meet the needs of students seeking middle school licensure.

Zuiker moved that the department support CS option to take Math 181 for their new major.
Wiest seconded the motion. A vote was taken and the motion passed.

Rahman presented a proposal for two MAX Scholar Seminars. (See attached)
Namyong Lee moved that the MAX Courses be accepted.
Zuiker seconded the motion.
Motion passed.

Zuiker reported on the status of Chaska High School students' concurrent enrollment in Math 112. After the first year requirements to enroll in the course will be the same as on campus, There will be 3 sight visits, tests will be monitored for content and students will take the same final as students on campus.

Rahman reminded the faculty that the department does not have a representative to the search committee for the new dean and asked for volunteers.
Math 471 – Prerequisite Change

Old Catalog Description

MATH 471 (4) Numerical Analysis II
This course is a continuation of MATH 470. Topics included are the algebraic
eigenvalue problem, leastsquares approximation, solutions of systems of nonlinear
equations, numerical solutions of ordinary differential equations.
Pre: MATH 470 and 223

New Catalog Description

MATH 471 (4) Numerical Analysis II
This course is a continuation of MATH 470. Topics included are the algebraic
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equations, numerical solutions of ordinary differential equations.
Pre: Math 470 and Math 223 with C or better or consent.