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.

<table>
<thead>
<tr>
<th>College: Science, Engineering and Technology</th>
<th>Proposal #: 228</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department: Automotive and Manufacturing Engineering</td>
<td>Effective Date of Change:</td>
</tr>
<tr>
<td>Program: Automotive Engineering Technology</td>
<td>Academic Year: 07-08</td>
</tr>
<tr>
<td>Type of Change: COURSE PROPOSALS</td>
<td>(For Office Use Only)</td>
</tr>
<tr>
<td>Proposed: Change in Title, Description</td>
<td></td>
</tr>
<tr>
<td>Title Current: Automotive Research Methods and Design of Experiments</td>
<td></td>
</tr>
<tr>
<td>Title Proposed: Automotive Research Methods</td>
<td></td>
</tr>
<tr>
<td>24-Char. Abbrev:</td>
<td></td>
</tr>
</tbody>
</table>

Include a course or program description for the Bulletin (30-40 words maximum for courses, 100 for programs):

Automotive research techniques and equipment form the basis of this course. Environmental measurement, airflow testing, dynamometer testing, emissions measurement and fuel efficiency testing is covered. Emphasis is placed on research procedures, data acquisition, along with data reporting and interpretation. Fall & Spring Prerequisite: AET 364, AET 366 and Physics 212; Corequisite: Math 127

Rationale or Justification for change:

See attached

***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>Course is an elective.</td>
<td>Fall Semester</td>
</tr>
<tr>
<td>Course is required for program</td>
<td>Spring Semester</td>
</tr>
<tr>
<td>Pre- or Co-requisites:</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 (Category/ies________)

_ Not Recommended (Category/ies________)

Comments:

1/19/07

Department Chair

Date

College Curriculum Committee

✓ Recommended (Category/ies________)

_ Not Recommended (Category/ies________)

Comments:

1/27/08

Committee Chair

Date

College Dean

✓ Recommended (Category/ies________)

_ Not Recommended (Category/ies________)

Comments:

1/25/08

Dean

Date

General Education Subcommittee

_ Recommended (Category/ies________)

_ Not Recommended (Category/ies________)

Comments:

General Education Subcommittee Chair

Date

Undergraduate Curriculum and Academic Policy Committee

✓ Recommended (Category/ies________)

_ Not Recommended (Category/ies________)

Comments:

3/7/08

UCAP Faculty Chair

Date

Faculty Association Graduate Committee

_ Recommended

_ Not Recommended

Comments:

Faculty Association Graduate Chair

Date

Graduate Dean

_ Recommended

_ Not Recommended

Comments:

Graduate Dean

Date

Academic Affairs Council

✓ Recommended (Category/ies________)

_ Not Recommended (Category/ies________)

Comments:

Assistant Vice President

Date

Senior Vice President and Vice President for Academic Affairs

✓ Approved (Category/ies________)

_ Not Approved (Category/ies________)

Comments:

Sr. Vice President / Vice Pres. Academic Affairs

Date

Revised September 2002
### 2007 AET Program Changes Summary Sheet 11/11/07

<table>
<thead>
<tr>
<th>Proposal #</th>
<th>Course Number</th>
<th>Course Name</th>
<th>New Name</th>
<th>Current Pre-Requisites</th>
<th>Proposed Pre-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>868</td>
<td>AET 468 (4)</td>
<td>Automotive Research Methods and Design of Experiments</td>
<td>Automotive Research Methods</td>
<td>AET 364, AET 366</td>
<td>AET 364, AET 366, Physics 212; Co-requisite: Math 127</td>
</tr>
</tbody>
</table>

"Design of Experiments" was removed from the course title because it is not taught.

Physics 212 added as a pre-requisite and Math 127 added as a co-requisite to make sure they are completed before the last semester.

**OLD**

AET 468 (4) Automotive Research Methods and Design of Experiments
Automotive research techniques and equipment form the basis for this course. Environmental measurement, air flow testing, engine dynamometer testing, and vehicle performance measurement are covered. Emphasis is placed on research procedures, data acquisition and interpretation. Current research projects from the automotive industry are also examined.
Pre: AET 364, AET 366

**NEW**

Automotive research techniques and equipment form the basis of this course. Environmental measurement, air flow testing, dynamometer testing, emissions measurement and fuel efficiency testing is covered. Emphasis is placed on research procedures, data acquisition, along with data reporting and interpretation. Fall & Spring
Prerequisite: AET 364, AET 366 and Physics 212; Co-requisite: Math 127