



Minnesota State University, Mankato HOLD and CLEAR buttons only compatible with Acrobat V. 4 and 5
Curriculum Proposal

0649

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.

		(Check all that apply):	Proposal # <u>304</u>
College: <u>Science, Engineering and Technology</u>	<input checked="" type="checkbox"/> Undergraduate		Effective Date of Change:
Department: <u>Automotive and Manufacturing Engineering</u>	<input type="checkbox"/> Graduate		Academic Year <u>05-06</u>
Program: <u>AET BS</u>	CIP #		(For Office Use Only)
Type of Change: <u>PROGRAM PROPOSALS</u>		Course Designator and Number	Number of Credits
Proposed: <u>Change in Requirements-</u>			
Title Current:			
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):

no change

Rationale or Justification for change:

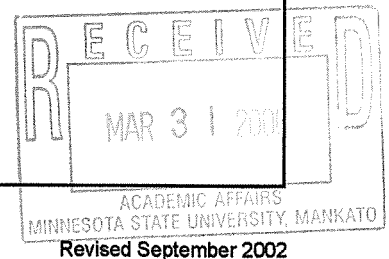
see attached.

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

General Education Course:		Cultural Diversity Course: (Please check one.)
GE Category #	GE Category Name (Maximum of 3 Categories)	
<u>N/A</u>		
<u>N/A</u>		
<u>N/A</u>		<input type="checkbox"/> Core (At least 75% devoted to topics of race, gender, sexual orientation, age, class, and disabilities as they occur in United States Society.)
? 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.		<input type="checkbox"/> Related (At least 25% devoted to the above topics or to a global perspective on topics related to African American, Asian, Hispanic, and Native American inhabitants of the United States.)
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*****

(Check all that apply):	Instructional Type: <u>Lecture</u>	Course will be offered:
<input type="checkbox"/> Course is an elective.	Grading Format: <input type="checkbox"/> Grade <input type="checkbox"/> P/N	<input type="checkbox"/> Fall Semester
<input type="checkbox"/> Course is required for program		<input type="checkbox"/> Spring Semester
<input type="checkbox"/> Pre- or Co-requisites:		<input type="checkbox"/> Summer Session
<input type="checkbox"/> Other courses are being changed or eliminated. (Explain.)		
<input type="checkbox"/> 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.		





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For Program Proposals

Attach paper copies of the following:

- a. Student learning outcomes for the program.
- b. Minutes from department and college curriculum meetings in which action was taken on this proposal.
- c. Program Assessment Plan. Forms are available on the Academic Affairs Web site:
http://www.mnsu.edu/acadaf/words/PRA_SampSLOAssessPlan.doc
- d. List of program requirements for **New** programs, or a list of **Current** and **Proposed** program requirements for **Redesigned** programs.
- e. A list of resources required to offer and support this program.
- f. A description of how offering this program will affect department staffing.
- g. A list of additional library holdings required for this program.

Please include rationale for any proposed changes in number of program credits:

For Programs Requiring MnSCU Approval

If any of the following changes are proposed, please fill out and attach MnSCU Program Approval Forms, which are available on the Academic Affairs Web site:

<http://www.mnsu.edu/acadaf/html/currformsprocesses.htm>

1. **Creation** of an entirely new program.
2. **Redesign** of existing programs, which takes any of the following forms:
 - ? Addition or deletion of a program option. Options are part of program design in which 30-50% of the courses are required as part of a common core for all students, and which offers curriculum alternatives greater than 30% of the total number of credits in the major. Options are appropriate to baccalaureate or masters programs.
 - ? Addition or deletion of a program emphasis. Emphases are part of program design in which more than 50% of the courses are required as part of a common core for all students, and which offers curriculum alternatives with a minimum of nine credits. Emphases are appropriate to associate and baccalaureate programs.
 - ? Change in program name.
 - ? Change in program CIP #.
 - ? Change in TOTAL program credits.
 - ? Change in degree award. For example, changing a B.A. to B.S.
 - ? Creation of a new degree award in a related academic area. Examples include creation of a certificate program from an existing degree program, or a new degree program from an existing degree program (e.g., Art History BA from Art BA.)
3. **Relocation** of an existing program. This is a proposal to move an existing program from one site to be exclusively offered at another site, and requires closing the program offered at the original site. For example, a program offered both on-campus and through extended campus is to be offered only at the extended campus site.
4. **Replication** of an existing program. This is a proposal to offer an existing program at a new site, which may be an existing MnSCU-approved site, or another campus of the same institution. Replicated programs are offered at both the original site and the new location.
5. **Suspension or reinstatement** of a program. This proposal suspends admission of students into an existing program, and is good for three years. Reinstatement proposals request the reopening of student admissions into a given program.
6. **Closure** of a program. This proposal requests closure of an existing program and its removal from an institution's official inventory of academic programs. Unless a department seeks to re-open a suspended program, it should be closed within three years of suspension.



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Signature Page

Department

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

[Signature] 11/07/05
Department Chair Date

Comments:

College Curriculum Committee

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

[Signature] 3-28-06
Committee Chair Date

Comments:

College Dean

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

[Signature] 3/29/06
Dean Date

Comments:

General Education Subcommittee

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

General Education Subcommittee Chair Date

Comments:

Undergraduate Curriculum and Academic Policy Committee

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

[Signature] 4/19/06
UCAP Faculty Chair Date

Comments:

Faculty Association Graduate Committee

Recommended
 Not Recommended

Faculty Association Graduate Chair Date

Comments:

Graduate Dean

Recommended
 Not Recommended

Graduate Dean Date

Comments:

Academic Affairs Council

Recommended (Category/ies _____)
 Not Recommended (Category/ies _____)

[Signature] 4/26/06
Assistant Vice President Date

Comments:

Senior Vice President and Vice President for Academic Affairs

Approved (Category/ies _____)
 Not Approved (Category/ies _____)

[Signature] 4/26/06
Sr. Vice President / Vice Pres. Academic Affairs Date

Comments:

This program proposal reflects course changes made in MET courses. The proposed AET BS will have MET 141 (4 credits) dropped and MET 245 (4 credits) renumbered to MET 142 (3 credits). A new course MET 341 (4 credits) is added to the proposed program. The combination of these changes results in no change in overall number of credits to the BS.

Current Catalog

2005-2006 Undergraduate Bulletin			
Automotive Engineering Technology			
Required for Major (Core, 60 credits)			
AET	102	Introduction to Automotive Engineering Technology (1)	
EET	113	DC Circuits (3)	
MET	141	Computer Aided Drafting (4)	
MET	144	Product Development & Design (3)	
AET	160	Automotive Technology & Systems (4)	
MET	177	Material Processing and Metallurgy 1 (4)	
MET	245	Computer Aided Design (3)	
AET	261	Automotive Driveability & Diagnostics (4)	
AET	262	Automotive Computers and Electronics (4)	
MET	322	Statics, Dynamics, and Mechanics of Materials (5)	
AET	334	Fluid Power Systems (3)	
AET	364	Chassis Design & Emission/Performance Testing (4)	
AET	366	Automotive Thermodynamics & Engine Design	
AET	378	Composite Materials (3)	
AET	387	Junior Design Project (1)	
MET	424	Industrial and Construction Safety (2)	
AET	465	Automotive Laboratory Experience (2)	
AET	468	Automotive Research Methods & Design of Experiments (4)	
AET	488	Senior Design I (1)	
AET	489	Senior Design II (2)	

Proposed Catalog

2006-2007 Undergraduate Bulletin			
Automotive Engineering Technology			
Required for Major (Core, 60 credits)			
AET	102	Introduction to Automotive Engineering Technology (1)	
EET	113	DC Circuits (3)	
MET	142	Computer Aided Design (3)	
MET	144	Product Development & Design (3)	
AET	160	Automotive Technology & Systems (4)	
MET	177	Material Processing and Metallurgy 1 (4)	
AET	261	Automotive Driveability & Diagnostics (4)	
AET	262	Automotive Computers and Electronics (4)	
MET	322	Statics, Dynamics, and Mechanics of Materials (5)	
AET	334	Fluid Power Systems (3)	
MET	341	Advanced Computer Aided Design (4)	
AET	364	Chassis Design & Emission/Performance Testing (4)	
AET	366	Automotive Thermodynamics & Engine Design	
AET	378	Composite Materials (3)	
AET	387	Junior Design Project (1)	
MET	424	Industrial and Construction Safety (2)	
AET	465	Automotive Laboratory Experience (2)	
AET	468	Automotive Research Methods & Design of Experiments (4)	
AET	488	Senior Design I (1)	
AET	489	Senior Design II (2)	

Sample Student Learning Outcomes Assessment Plan

Program: Manufacturing Engineering Technology

Department: Automotive and Manufacturing Engineering Technology

Student Learning Outcomes	Method(s) of Assessment	Standard of Mastery/Criterion of Achievement	Persons Responsible for Conducting Assessment	Frequency of Assessment	Plan for Dissemination and Use of Assessment Results
The primary goal for MET 341 is to enhance in-depth solid modeling by using Computer Aided Design technology and advanced CAD modules.	Student projects	See attached sheet	Instructor	Weekly	Grades, ABET report, Self assessment
CAD system for this class is Pro-E which provides parametric solid modeling option and is widely used in mechanical/manufacturing industries. This knowledge will give students access to existing professional databases of products and processes.	Ability of use system	See attached sheet	Instructor	Weekly	Grades, ABET report, Self assessment
Students will learn the modern approach in using graphic representations of new design to produce CAM and RP models	Quality of graphics and models	See attached sheet	Instructor	Weekly	Grades, ABET report, Self assessment
Students will develop skills to build solid models of medium level of complexity and arrange them into assemblies of several parts and test and produce these models.	Quality of models and assemblies	See attached sheet	Instructor	End of projects	Grades, ABET report, Self assessment
Engineering design skills based on CAD are very important in Manufacturing Engineering Technology careers (ABET Program Criteria for MET): Process and System, Manufacturing Operations, Technical Functions for preparing all kind of designing and production technical documentations.	Quality of projects	See attached sheet	Instructor	End of projects	Grades, ABET report, Self assessment

Z
A

A 100-90; B 89-80; C 79-70; D 69-60; F <60
Incompletes (I) or In Progress (IP) grades will be given only within the Academic Policies and Procedures established by Minnesota State University, Mankato.

ASSESSMENT CRITERIA:

	Letter Grade Equivalent	Rubric (Evaluation Criteria) Rational
		For Assignments and Activities
	A	Work is of exceptional quality, organization, and content presentation. Shows a desire to pursue the intended learning at a deep level. Work shows evidence of personal reflection and synthesis of discipline studied. Uses an array of quality resources to add to the scope and depth of assignment.
	B	Work is completed with attention to detail, is sequential, and is logical. Shows evidence of thoughtful analysis of the assignment. Work shows that adequate time and planning were allocated. Seeks new resources and additional information to complete work.
	C	Assignments completed correctly and with accuracy. Work shows basic grasp of the assignment's intent. Meets assignment deadlines adequately. Makes use of basic course resources provided to complete work.
	D	Work completed with little attention to accuracy or content quality. May be sloppy and/or contain errors. Emphasis is on getting work done rather than learning. Assignments are sometimes late or missing. Uses current knowledge rather than additional resources to complete work. Procrastinates.
	F	Work is incomplete, not completed accurately or at all. Illegible or difficult to read or comprehend. Uses direct language or copies from text or other resources inappropriately or without citing references when allowed.