

PROPOSAL SUMMARY AND ROUTING FORM

Proposal Title: B.S. Manufacturing Engineering Technology Minor Clean-Up

Initiating Unit or Individual: Gary Ovans

Contact Person's Name: Gary Ovans e-mail: ovansg@ferris.edu phone: 231-591-2971

Date or Semester of Proposal Implementation: Fall 2008

- Group I - A – New degree/major or major, or redirection of a current offering
- Group I - B – New minors or concentrations
- Group II - A – Minor curriculum clean-up and course changes
- Group II - B – New Course
- Group III - Certificates
- Group IV – Off-Campus Programs

Group/Individual	Signature	Date	Vote/Action *
Program Faculty	<i>Gary Ovans</i>	3/25/08	<input checked="" type="checkbox"/> Support <i>6 yes - 0 no</i> <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Department Faculty	<i>Gary Ovans</i>	3/25/08	<input checked="" type="checkbox"/> Support <i>11 yes 0 no</i> <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Department Head / Chair	<i>Gary Ovans</i>	3/25/08	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
College Curriculum Committee	<i>Ron McKean</i>	9/23/08	<input checked="" type="checkbox"/> Support <i>4 - 0</i> <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Dean	<i>Thomas E. [Signature]</i>	9/30/08	<input type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input checked="" type="checkbox"/> Not Support
University Curriculum Committee	<i>[Signature]</i>	11/20/08	<input checked="" type="checkbox"/> Support <i>8 - 0</i> <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Senate	<i>Richard Liffen [Signature]</i>	11/20/08	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support
Academic Affairs	<i>Ronald [Signature]</i>	11/21/08	<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns <input type="checkbox"/> Not Support

* Support with Concerns or Not Support must include a list of concerns.

To be completed by Academic Affairs

President (Date Approved) _____ Board of Trustees (Date Approved) _____ President's Council (Date Approved) _____

REC'D NOV 20 2008

FORM A CONT.

1. Proposal Summary: This proposal is designed to achieve several objectives. 1) Ensure that students transferring into the program with a litany of different technical back-grounds from FSU Grand Rapids, or any community college, enter at a common level. 2) Easier articulation for students transferring from a community college. They will not need to complete an A.A.S. program that “best matches” ours, but can choose individual technical courses to meet their interests and our requirements. 3) Achieves our goals of having students with improved analytical and computer skills prior to entry in the B.S. program. 4) Meets 128 credit total criteria established by FSU Academic Affairs. 5) Postures program for ABET accreditation.

Detailed description of changes/additions/deletions:

-delete PSYC 150 as a directed elective to provide more flexibility for student scheduling

-delete MFGE 313 Computer Applications for Manufacturing Engineers, and require basic computer competency (ex. ISYS 105) for entry

-delete PDET 322 and require a parametric modeling course as a requirement for program entry

-delete MATH 216 Applied Calculus and add MATH 220 Analytical Geometry and Calculus I, which is readily transferrable to other institutions

-establish updated prerequisites for courses where justified

2. Summary of All Course Action Required*

a. Newly Created Courses to FSU:

Prefix	Number	Title
--------	--------	-------

b. Courses to be Deleted From FSU Catalog:

Prefix	Number	Title
--------	--------	-------

c. Existing Course(s) to be Modified:

Prefix	Number	Title
--------	--------	-------

MFGE	311	Industrial Engineering (prerequisites)
------	-----	----------------------------------------

MFGE	312	CNC & CAM (prerequisites)
------	-----	---------------------------

MFGE	321	Metrology (prerequisites)
------	-----	---------------------------

MFGE	324	Tool Engineering (Princ. of Proc. Plan. I)
------	-----	--------------------------------------------

MFGE	326	Process Tolerance Design & Analysis (prerequisites)
------	-----	-----------------------------------------------------

MFGE	341	Quality Science Statistics (prerequisites)
------	-----	--------------------------------------------

MFGE	393	Internship (prerequisites)
------	-----	----------------------------

MFGE	411	Principles of Proc. Plan. (Princ. Proc. Plan. II)
------	-----	---------------------------------------------------

MFGE	423	Engineering Economics (prerequisites)
------	-----	---------------------------------------

MFGE	442	Design of Experiments I (prerequisites)
------	-----	-----------------------------------------

d. Addition of existing FSU courses to program

Prefix	Number	Title
--------	--------	-------

MATH	220	Analytical Geometry and Calculus I
------	-----	------------------------------------

e. Removal of existing FSU courses from program

Prefix	Number	Title
--------	--------	-------

PDET	322	Model and Prototype Development
------	-----	---------------------------------

Prefix	Number	Title
PDET	322	Model and Prototype Development
MATH	216	Applied Calculus
MFGE	313	Computer Applications for Manufacturing Eng.
PSYC	150	Introduction to Psychology

*Contact Senate Secretary or UCC Chair if spaces for additional courses are needed.

LIBRARY & INSTRUCTIONAL SERVICES CONSULTATION FORM

To be completed by the liaison librarian and approved by the Dean of LIS. All returned forms should be included in the proposal. **Library & Instructional Services must respond within 20 calendar days of receipt of this form to insure that the form is included in the final proposal.**

FAILURE TO RESPOND IS CONSIDERED AS SUPPORT OF THE CHANGE.

RE: Proposal Title: Pre-Manufacturing + B.S.Manufacturing Engineering Technology

Projected number of students per year affected by proposed change: _____

Initiator(s): Gary L. Ovans

Proposal Contact: Gary L. Ovans Date Sent: 10-30-07

Department: MFGE Campus Address: Swan 108
(Please print)

Liaison Librarian signature: Frances Rosen Date: 10/30/07

Dean of LIS Signature: [Signature] Date Returned: 10/31/07

Based upon our review on 10/30/07 (date), Library & Instructional Services concludes that:

Library resources to support the proposed curriculum change are currently available.

Additional Library resources are needed but can be obtained from current funds.

Support, but significant additional Library funds/resources are required in the amount of \$ _____.

Does not support the proposal for reasons listed below.

Comment regarding the impact this proposal will have on library resources, collection development, programs, etc. Use additional pages if necessary:

CURRICULUM CONSULTATION FORM

To be completed by each department affected by the proposed change, new degree, new program, new minor, or new course. Potential duplication of coursework is reason for consultation.

1. This form, with the first six blanks filled in, should be forwarded with the proposal to the chair/head of the affected department.
2. The affected department must respond within 20 calendar days of receipt of this form to insure inclusion in the final proposal. The completed form is returned to the initiator and inserted into the proposal. Failure to respond is interpreted as support for the proposal.
3. The Proposing Department must respond to any concerns by the affected department. This response will be in writing and be included in the proposal following the consultation form.

RE: Proposal Title Pre-Manufacturing + B.S. Manufacturing Engineering Technology

Initiator(s): Gary L. Ovans

Proposal Contact: Gary Ovans Date Sent: 10-30-07

Department: MFGE Campus Address: Swan 108
(Please print)

Responding Department : Social Sciences (ASC-2108)

Chair/Head/Coordinator: Andy Karafz
~~John Thore~~ Date Returned: 11/6/07

Based upon department faculty review on 11/02/07 (date), we

- Support the above proposal.
 Support the above proposal with the modifications and concerns listed below.
 Do not support the proposal for the reasons listed below.

Comment regarding the impact this proposal has on scheduling, room assignments, faculty load, and prerequisites for your department. Use additional pages, if necessary.

We support providing flexibility for general education completion.

CURRICULUM CONSULTATION FORM

To be completed by each department affected by the proposed change, new degree, new program, new minor, or new course. Potential duplication of coursework is reason for consultation.

1. This form, with the first six blanks filled in, should be forwarded with the proposal to the chair/head of the affected department.
2. The affected department must respond within 20 calendar days of receipt of this form to insure inclusion in the final proposal. The completed form is returned to the initiator and inserted into the proposal. Failure to respond is interpreted as support for the proposal.
3. The Proposing Department must respond to any concerns by the affected department. This response will be in writing and be included in the proposal following the consultation form.

RE: Proposal Title Pre-Manufacturing +B.S. Manufacturing Engineering Technology

Initiator(s): Gary Ovans

Proposal Contact: Gary Ovans Date Sent: 10-30-07

Department: MFGECampus Address: Swan 108
(Please print)

Responding Department : Mathematics (ASC-2021)

Chair/Head/Coordinator: Dr. David Frank Date Returned: 11/02/07

Sandra Brigance - ~~Dept~~ Administrative Assistant to Dept. Head

Based upon department faculty review on 11/02/07 (date), we

- Support the above proposal.
 Support the above proposal with the modifications and concerns listed below.
 Do not support the proposal for the reasons listed below.

Comment regarding the impact this proposal has on scheduling, room assignments, faculty load, and prerequisites for your department. Use additional pages, if necessary.

CURRICULUM CONSULTATION FORM

To be completed by each department affected by the proposed change, new degree, new program, new minor, or new course. Potential duplication of coursework is reason for consultation.

1. This form, with the first six blanks filled in, should be forwarded with the proposal to the chair/head of the affected department.
2. The affected department must respond within 20 calendar days of receipt of this form to insure inclusion in the final proposal. The completed form is returned to the initiator and inserted into the proposal. Failure to respond is interpreted as support for the proposal.
3. The Proposing Department must respond to any concerns by the affected department. This response will be in writing and be included in the proposal following the consultation form.

RE: Proposal Title Pre-Manufacturing + B.S. Manufacturing Engineering Technology

Initiator(s): Gary Ovans

Proposal Contact: Gary Ovans **Date Sent:** 10-30-07

Department: MFGE **Campus Address:** Swan 108
(Please print)

Responding Department : Mechanical Design (SWAN-405)

Chair/Head/Coordinator: Richard Goosen **Date Returned:** 10/30/07
RG

Based upon department faculty review on _____ (date), we

- Support the above proposal.
 Support the above proposal with the modifications and concerns listed below.
 Do not support the proposal for the reasons listed below.

Comment regarding the impact this proposal has on scheduling, room assignments, faculty load, and prerequisites for your department. Use additional pages, if necessary.

PROGRAM, MAJOR, OR MINOR CHECK SHEET(S)

Insert both the current curriculum checksheet (if applicable) followed by proposed curriculum check sheet" and/or "academic program requirements" list for Category I, I-A, II, II-A, III, or IV, per instructions. **LABEL CHECK SHEETS AS "FORM D CURRENT" and "FORM D PROPOSED."** Checksheets should indicate total credits, General Education requirements per catalog guidelines (include course levels), and the minimum number of 300 and 400 level courses. Also any special admissions, continuation, or graduation requirements should be shown.

See Attached

Manufacturing Engineering Technology • Bachelor of Science

Why Choose Manufacturing Engineering Technology?

Did you used to drive your parents up the wall by taking things apart 'just to see how they were put together'? (Or do you still do this?) If so, Manufacturing Engineering Technology may be the program for you! Simply put, manufacturing engineers figure out how to make products—anything from tools to toys, cars to consumer goods, electronics to earthmovers.

Good manufacturing engineers can determine how to make their company's products better, faster, safer and less expensive than competitors can. These abilities are always in demand, and the Manufacturing Engineering Technology program at Ferris gives you the skills to command an excellent starting salary. You'll also get to work with state-of-the-art computers and equipment while you're here, plus get more valuable team and project experience than almost anywhere else.

Ferris students learn to identify and select materials based on production requirements and work closely with computer-aided design equipment (CAD/CAM). They conduct time studies, complete costs estimates, utilize computer software to aid in solving manufacturing problems, formulate plant layout requirements, understand management control systems, justify and select quality equipment and automated systems and design a total product manufacturing system. Students also receive on-the-job experience through an internship education program.

Get a Great Job

Manufacturing engineers get involved on the ground level of the production of a variety of industrial and consumer goods and develop the expertise to see production through to completion. Their knowledge of process design, analysis, planning, supervision, manufacturing methods and equipment is used from start to finish. The location of every machine, the movement of each tool or part, the order of operation and the selection of the machines themselves are all decisions that manufacturing engineers make as part of the total production process.

Employment opportunities for Manufacturing Engineering Technology graduates are found across the entire spectrum of manufacturing industries. Specific entry-level positions include manufacturing engineer, process engineer, production engineer, tool engineer, industrial engineer and quality engineer. Graduates of this program typically enjoy high placement rates and starting salaries averaging around \$60,000.

Admission Requirements

Students entering the Manufacturing Engineering Technology program must have completed a two-year program at Ferris in CAD Drafting and Tool Design Technology, Manufacturing Tooling Technology, Mechanical Engineering Technology, Plastics Technology, Rubber Technology or Welding Technology. An A.A.S. degree in a manufacturing-based technology from another institution or 60 semester hours of college work including general courses, technical courses and technical-related courses is acceptable. Prospective students may elect to start as freshman, and follow a customized track into the B.S. program. Students must have at least a 2.75 GPA in their A.A.S. major courses and a 2.5 cumulative GPA.

Graduation Requirements

The Manufacturing Engineering Technology program at Ferris leads to a bachelor of science degree. Graduation requires a minimum 2.0 GPA in core classes, in the major and overall. Students must complete all general education requirements as outlined on the General Education website.

Required Courses

		Credit Hours
General Education		
MATH 216	Applied Calculus	4
PHYS 211	Introductory Physics	4
PSYC 150	Introduction to Psychology *RS	3
Electives:	Cultural Enrichment	6
	Social Awareness (300+ level)	3
Major		
MECH 340	Statics & Strength of Matls	4
MFGE 311	Industrial Engineering	4
MFGE 312	CNC & CAM	4
MFGE 313	Computer Appl for Mfg Engineers	2
MFGE 321	Metrology	3
MFGE 322	Production Processes	3
MFGE 324	Tool Engineering* W	3
MFGE 326	Process Tolerance Design/Analysis.	2
PDET 322	Model & Prototype Development	2
MFGE 341	Quality Science Statistics	3
MFGE 342	Statistical Process Engineering	3
MFGE 393	Internship - Mfg Engineering	4
MFGE 411	Principles of Process Planning	2
MFGE 421	Automation & Syst Design	4
MFGE 422	Mfg Facilities Planning	3
MFGE 423	Engineering Economics	2
MFGE 442	Design of Experiments 1	3
PLTS 325	Plastics Technology for MFG	2
WELD 416	Production Welding Processes	2

Credit hours required for graduation are dependent upon the level of preparation prior to entering the program.



More Information

College of Technology
Ferris State University
919 Campus Drive
Big Rapids, MI 49307-2280
Phone: 231-591-2890

FERRIS STATE UNIVERSITY

C O L L E G E O F T E C H N O L O G Y

**MANUFACTURING ENGINEERING TECHNOLOGY
BACHELOR OF SCIENCE DEGREE
FALL SEMESTER
Curriculum Guide Sheet**

(See the General Education webpage at www.ferris.edu/HTMLS/academics/gened/gened.html for details and acceptable courses in each program)

Communications Competence: 12 semester hours

Scientific Understanding: 7/8 semester hours
including at least one lab course.

Social Awareness: 9 semester hours,
including at least one Foundation course and at least one
200 level or higher.

Quantitative Skills: MATH 115 or ACT score

Cultural Enrichment: 9 semester hours
including at least one course 200 level or higher.

At least one Global Consciousness (G) course and one
Race/Ethnicity/Gender (REG) course
(within Cultural Enrichment or Social Awareness).

Meeting all requirements for graduation is the student's responsibility. Your advisor is available to assist you.

NAME: _____

CWID: _____

Maximum hours required for graduation: 68 (excluding internship)

THIRD YEAR – FALL SEMESTER

	Credits/Grades
MFGE 311 Industrial Engineering (MATH 116 or MATH 120)	4 _____
MFGE 312 CNC & CAM (MFGT 110 & MFGT 114 or equivalent)	4 _____
MFGE 341 Quality Science Statistics (MATH 116 or 120 or 126 or MATH-ACT 24 or SAT 500)	3 _____
PHYS 211 Introductory Physics I (MATH 116 or MATH120)	4 _____
Cultural Enrichment Elective 100 level or above	3 _____
	18

THIRD YEAR – SPRING SEMESTER

MFGE 321 Metrology (MATH 116 or MATH 120 or MATH-ACT 24 or SAT 500)	3 _____
MFGE 322 Production Processes	3 _____
MFGE 324 Principles of Process Planning I (MFGE 311, 312) (MFGE 321, 326 co-req.)	3 _____
MFGE 326 Process Tolerance Design & Analysis (Math 116 or MATH 120)	2 _____
MFGE 342 Statistical Process Engineering (MFGE 341)	3 _____
Social Awareness Elective 100 level or above	3 _____
	17

THIRD YEAR – SUMMER SEMESTER

MFGE 393 Internship (Department Approval)	4 _____
-------------------------------------------	---------

FOURTH YEAR – FALL SEMESTER

MFGE 411 Principles of Process Planning II (MFGE 322, MFGE 324, MFGE 342)	2 _____
MFGE 442 Design of Experiments I (MFGE 321, MFGE 341)	3 _____
MECH 340 Statics and Strength of Materials (MATH 126 or MATH 130, PHYS 211)	4 _____
MATH 220 Analytical Geom. And Calculus I (MATH 126 or MATH 130)	5 _____
WELD 416 Production Welding Processes (may be taken in alternative sequence)	2 _____
	16

FOURTH YEAR – SPRING SEMESTER

MFGE 421 Automation and Systems Design (MFGE 411)	4 _____
MFGE 422 Manufacturing Facilities Planning (MFGE 411)	3 _____
MFGE 423 Engineering Economics (MATH 116 or 120 or 126 or MATH-ACT 24 or SAT 500)	2 _____
PLTS 325 Plastics Processes	2 _____
Social Awareness Elective 200 level or above	3 _____
Cultural Enrichment Elective 200 level or above	3 _____
	17

**CURRICULUM REQUIREMENTS
MANUFACTURING ENGINEERING TECHNOLOGY
BACHELOR OF SCIENCE DEGREE
FALL SEMESTER**

ENTRY CRITERIA

1. 57 semester hours of college course work including technical courses, general courses, and technical-related courses.
2. 2.5 grade point average or department approval.
3. Have completed math through Algebra & Analytical Trigonometry/Pre-calculus; equivalent to MATH 126 or 130 at Ferris.
4. Have taken a public speaking course equivalent to COMM 121 at Ferris.
5. Have completed 6 semester hours of English; equivalent to ENGL 150, 250 (or ENGL 211) at Ferris.
6. Have completed 3 credit hours of an accepted scientific understanding course-Chemistry is preferred.
7. Have completed a basic Material Science course equivalent to MATL 240 at Ferris.
8. Demonstrate Computer competency equivalent to ISYS 105 at Ferris or successfully complete a competency exam.
9. Have completed a Parametric Modeling course equivalent to PDET 122 at Ferris or successfully complete a competency exam.
10. Have completed a basic machining course(s) equivalent to MFGT 110 lecture and MFGT 114 lab at Ferris.
11. It is recommended that at least one Cultural Enrichment and one Social Awareness course be completed as partial fulfillment of graduation requirements.

MODIFY COURSE

Course Date Entry Form

FORM F
Modify Course
rev. 2/14/05

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:

1. Complete all parts of sections I and II; complete only those items in section III that represent changes.
2. If either prefix or number are being changed, use 'Delete Course' and 'New Course' forms rather than this form.

a. List the changes to be made: Prerequisites

b. Term Effective: Semester Fall Year 2009 See instructions.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix MFGE b. Number 311 c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure 3 hr/week LAB 3 hr/week INDEPENDENT Study
Practicum: hr/week Seminar: hr/week

d. Full Course Title: Industrial Engineering

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes in the course. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure hr/week LAB hr/week INDEPENDENT Study
Practicum: hr/semester Seminar: hr/week

d. Full Course Title:

e. Abbreviated Course Title: . (Abbreviate only if necessary. Use Arabic numerals. Limit to 26 characters and spaces.)

f. Semester(s) Offered: (See instructions for listing.) g. Max. Section Enrollment:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

h. Type: Variable Fixed i. Maximum Credit Hours j. Minimum Credit Hours

k. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)


m. May Be Repeated for Added Credit: Check (x) Yes No

n. Levels: Check (x) Undergraduate Graduate Professional

o. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

p. Prerequisites: (if no prerequisites, write "None") Limited to 60 spaces. MATH 116 or MATH 120.

UCC Chair Signature/Date:

 11/29/08

Academic Affairs Approval Signature/Date:

 11/21/08

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Received: _____ Date Completed: _____ Entered: SIS [125 ___ 1D4 ___ 12R ___ 131 ___]

MODIFY COURSE

Course Date Entry Form

FORM F
Modify Course
rev. 2/14/05

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:

1. Complete all parts of sections I and II; complete only those items in section III that represent changes.
2. If either prefix or number are being changed, use 'Delete Course' and 'New Course' forms rather than this form.

a. List the changes to be made: Change pre-requisites

b. Term Effective: Semester Spring Year 09 See instructions.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix MFGE b. Number 321 c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure 2 hr/week LAB 2 hr/week INDEPENDent Study
Practicum: hr/week Seminar: hr/week

d. Full Course Title: Metrology

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes in the course. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure hr/week LAB hr/week INDEPENDent Study
Practicum: hr/semester Seminar: hr/week

d. Full Course Title:

e. Abbreviated Course Title: (Abbreviate only if necessary. Use Arabic numerals. Limit to 26 characters and spaces.)

f. Semester(s) Offered: (See instructions for listing.) g. Max. Section Enrollment:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

h. Type: Variable Fixed i. Maximum Credit Hours j. Minimum Credit Hours

k. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)


m. May Be Repeated for Added Credit: Check (x) Yes No

n. Levels: Check (x) Undergraduate Graduate Professional

o. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

p. Prerequisites: (if no prerequisites, write "None") Limited to 60 spaces. MATH 116 or MATH 120 or MATH-ACT 24 or SAT 500.

UCC Chair Signature/Date:

 11/20/08

Academic Affairs Approval Signature/Date:

 11/21/08

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Received: _____ Date Completed: _____ Entered: SIS [125 ___ 1D4 ___ 12R ___ 131 ___]

MODIFY COURSE

FORM F
Modify Course
rev. 2/14/05

Course Date Entry Form

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:

1. Complete all parts of sections I and II; complete only those items in section III that represent changes.
2. If either prefix or number are being changed, use 'Delete Course' and 'New Course' forms rather than this form.

a. List the changes to be made: Change Title and Prerequisites

b. Term Effective: Semester Spring Year 2009 See instructions.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix MFGE b. Number 324 c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure hr/week LAB hr/week INDEpendent Study
Practicum: hr/week Seminar: hr/week

d. Full Course Title: Tool Engineering

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes in the course. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure hr/week LAB hr/week INDEpendent Study
Practicum: hr/semester Seminar: hr/week

d. Full Course Title: Principles of Process Planning I

e. Abbreviated Course Title: Princ. of Proc. Plan. I. (Abbreviate only if necessary. Use Arabic numerals. Limit to 26 characters and spaces.)

f. Semester(s) Offered: (See instructions for listing.) g. Max. Section Enrollment:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

h. Type: Variable Fixed i. Maximum Credit Hours j. Minimum Credit Hours

k. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)

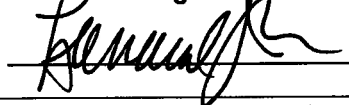
m. May Be Repeated for Added Credit: Check (x) Yes No

n. Levels: Check (x) Undergraduate Graduate Professional

o. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

p. Prerequisites: (if no prerequisites, write "None") Limited to 60 spaces. MFGE 311, MFGE 312, (MFGE 321, 326 co-req.)

UCC Chair Signature/Date:

 11/20/08

Academic Affairs Approval Signature/Date:

 11/24/08

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Received: _____ Date Completed: _____ Entered: SIS [125 ___ 1D4 ___ 12R ___ 131 ___]

MODIFY COURSE

FORM F
Modify Course
rev. 2/14/05

Course Date Entry Form

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:

1. Complete all parts of sections I and II; complete only those items in section III that represent changes.
2. If either prefix or number are being changed, use 'Delete Course' and 'New Course' forms rather than this form.

a. List the changes to be made: Prerequisites

b. Term Effective: Semester Fall Year 2009 See instructions.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix MFGE b. Number 326 c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure 2 hr/week LAB hr/week INDEpendent Study
Practicum: hr/week Seminar: hr/week

d. Full Course Title: Process Tolerance Design and Analysis

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes in the course. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure hr/week LAB hr/week INDEpendent Study
Practicum: hr/semester Seminar: hr/week

d. Full Course Title:

e. Abbreviated Course Title: . (Abbreviate only if necessary. Use Arabic numerals. Limit to 26 characters and spaces.)

f. Semester(s) Offered: (See instructions for listing.) g. Max. Section Enrollment:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

h. Type: Variable Fixed i. Maximum Credit Hours j. Minimum Credit Hours

k. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)

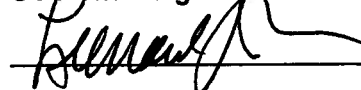
m. May Be Repeated for Added Credit: Check (x) Yes No

n. Levels: Check (x) Undergraduate Graduate Professional

o. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

p. Prerequisites: (if no prerequisites, write "None") Limited to 60 spaces. MATH 116 or 120.

UCC Chair Signature/Date:

 11/20/08

Academic Affairs Approval Signature/Date:

 11/21/08

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Received: _____ Date Completed: _____ Entered: SIS [125 ___ 1D4 ___ 12R ___ 131 ___]

MODIFY COURSE

FORM F

Course Date Entry Form

Modify Course rev. 2/14/05

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:

- 1. Complete all parts of sections I and II; complete only those items in section III that represent changes.
2. If either prefix or number are being changed, use 'Delete Course' and 'New Course' forms rather than this form.

a. List the changes to be made: Prerequisites

b. Term Effective: Semester Fall Year 2009 See instructions.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix MFGE b. Number 341 c. Enter Contact Hours per week in boxes or check Independent Study (X). LECTure 3 hr/week LAB hr/week INDEpendent Study Practicum: hr/week Seminar: hr/week

d. Full Course Title: Quality Science Statistics

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes in the course. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes or check Independent Study (X). LECTure hr/week LAB hr/week INDEpendent Study Practicum: hr/semester Seminar: hr/week

d. Full Course Title:

e. Abbreviated Course Title: (Abbreviate only if necessary. Use Arabic numerals. Limit to 26 characters and spaces.)

f. Semester(s) Offered: (See instructions for listing.) g. Max. Section Enrollment:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

h. Type: Variable Fixed i. Maximum Credit Hours j. Minimum Credit Hours

k. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)

m. May Be Repeated for Added Credit: Check (x) Yes No

n. Levels: Check (x) Undergraduate Graduate Professional

o. CATALOG DESCRIPTION - Limit to 75 words - PLEASE BE CONCISE.

p. Prerequisites: (if no prerequisites, write "None") Limited to 60 spaces. MATH 116 or Math 120 or 126 or MATH ACT of 24 or SAT of 500.

UCC Chair Signature/Date:

[Signature] 11/29/08

Academic Affairs Approval Signature/Date:

[Signature] 11/21/08

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Received: Date Completed: Entered: SIS [125 1D4 12R 131]

MODIFY COURSE

Course Date Entry Form

FORM F
Modify Course
rev. 2/14/05

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:

1. Complete all parts of sections I and II; complete only those items in section III that represent changes.
2. If either prefix or number are being changed, use 'Delete Course' and 'New Course' forms rather than this form.

a. List the changes to be made:

b. Term Effective: Semester Year See instructions.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure hr/week LAB hr/week INDEpendent Study
Practicum: hr/week Seminar: hr/week

d. Full Course Title:

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes in the course. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure hr/week LAB hr/week INDEpendent Study
Practicum: hr/semester Seminar: hr/week

d. Full Course Title:

e. Abbreviated Course Title: . (Abbreviate only if necessary. Use Arabic numerals. Limit to 26 characters and spaces.)

f. Semester(s) Offered: (See instructions for listing.) g. Max. Section Enrollment:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

h. Type: Variable Fixed i. Maximum Credit Hours j. Minimum Credit Hours

k. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)

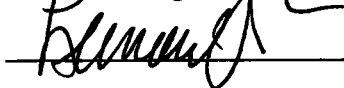
m. May Be Repeated for Added Credit: Check (x) Yes No

n. Levels: Check (x) Undergraduate Graduate Professional

o. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

p. Prerequisites: (if no prerequisites, write "None") Limited to 60 spaces.

UCO Chair Signature/Date:

 11/29/08

Academic Affairs Approval Signature/Date:

 11/24/08

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Received: _____ Date Completed: _____ Entered: SIS [125 ___ 1D4 ___ 12R ___ 131 ___]

MODIFY COURSE

FORM F
Modify Course
rev. 2/14/05

Course Date Entry Form

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:

1. Complete all parts of sections I and II; complete only those items in section III that represent changes.
2. If either prefix or number are being changed, use 'Delete Course' and 'New Course' forms rather than this form.

a. List the changes to be made: Change Title, Prerequisites

b. Term Effective: Semester Fall Year 2009 See instructions.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix MGFE b. Number 411 c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure 1 hr/week LAB 3 hr/week INDEpendent Study
Practicum: hr/week Seminar: hr/week

d. Full Course Title: Principles of Process Planning

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes in the course. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure hr/week LAB hr/week INDEpendent Study
Practicum: hr/semester Seminar: hr/week

d. Full Course Title: Principles of Process Planning II

e. Abbreviated Course Title: Princ. Proc. Plan. II. (Abbreviate only if necessary. Use Arabic numerals. Limit to 26 characters and spaces.)

f. Semester(s) Offered: F (See instructions for listing.) g. Max. Section Enrollment:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

h. Type: Variable Fixed i. Maximum Credit Hours j. Minimum Credit Hours

k. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)

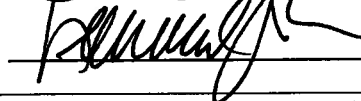
m. May Be Repeated for Added Credit: Check (x) Yes No

n. Levels: Check (x) Undergraduate Graduate Professional

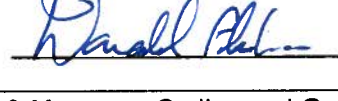
o. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

p. Prerequisites: (if no prerequisites, write "None") Limited to 60 spaces. MFGE 322, MFGE324, MFGE 342.

UCC Chair Signature/Date:

 11/20/08

Academic Affairs Approval Signature/Date:

 11/21/08

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Received: _____ Date Completed: _____ Entered: SIS [125 ___ 1D4 ___ 12R ___ 131 ___]

MODIFY COURSE

FORM F
Modify Course
rev. 2/14/05

Course Date Entry Form

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:

1. Complete all parts of sections I and II; complete only those items in section III that represent changes.
2. If either prefix or number are being changed, use 'Delete Course' and 'New Course' forms rather than this form.

a. List the changes to be made: Prerequisites

b. Term Effective: Semester Fall Year 2009 See instructions.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix MFGE b. Number 423 c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure hr/week LAB hr/week INDEpendent Study
Practicum: hr/week Seminar: hr/week

d. Full Course Title: Engineering Economics

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes in the course. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure hr/week LAB hr/week INDEpendent Study
Practicum: hr/semester Seminar: hr/week

d. Full Course Title:

e. Abbreviated Course Title: . (Abbreviate only if necessary. Use Arabic numerals. Limit to 26 characters and spaces.)

f. Semester(s) Offered: (See instructions for listing.) g. Max. Section Enrollment:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

h. Type: Variable Fixed i. Maximum Credit Hours j. Minimum Credit Hours

k. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)

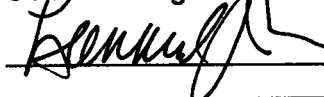
m. May Be Repeated for Added Credit: Check (x) Yes No

n. Levels: Check (x) Undergraduate Graduate Professional

o. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

p. Prerequisites: (if no prerequisites, write "None") Limited to 60 spaces. MATH 116 or MATH 120 or 126 or MATH ACT of 24 or SAT of 500.

UCC Chair Signature/Date:

 11/20/08

Academic Affairs Approval Signature/Date:

 11/14/08

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Received: _____ Date Completed: _____ Entered: SIS [125 ___ 1D4 ___ 12R ___ 131 ___]

MODIFY COURSE

FORM F
Modify Course
rev. 2/14/05

Course Date Entry Form

I. ACTION TO BE TAKEN: MODIFY AN EXISTING COURSE

Notes:

1. Complete all parts of sections I and II; complete only those items in section III that represent changes.
2. If either prefix or number are being changed, use 'Delete Course' and 'New Course' forms rather than this form.

a. List the changes to be made: Prerequisite

b. Term Effective: Semester Fall Year 2010 See instructions.

II. CURRENT: Include information that is in the current course database.

a. Course Prefix MFGE b. Number 442 c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure 3 hr/week LAB hr/week INDEpendent Study
Practicum: hr/week Seminar: hr/week

d. Full Course Title: Design of Experiments I

III. PROPOSED CHANGES: Complete only those boxes that represent proposed changes in the course. Leave all other spaces blank.

a. Course Prefix b. Number c. Enter Contact Hours per week in boxes or check Independent Study (X).
LECTure hr/week LAB hr/week INDEpendent Study
Practicum: hr/semester Seminar: hr/week

d. Full Course Title:

e. Abbreviated Course Title: . (Abbreviate only if necessary. Use Arabic numerals. Limit to 26 characters and spaces.)

f. Semester(s) Offered: (See instructions for listing.) g. Max. Section Enrollment:

Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

h. Type: Variable Fixed i. Maximum Credit Hours j. Minimum Credit Hours

k. Grade Method: Check (x) Normal Grading Credit/No Credit only (Pass/Fail)

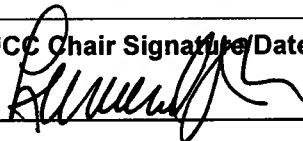
m. May Be Repeated for Added Credit: Check (x) Yes No

n. Levels: Check (x) Undergraduate Graduate Professional

o. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.

p. Prerequisites: (if no prerequisites, write "None") Limited to 60 spaces. MFGE 321, MFGE 341.

UCC Chair Signature/Date:



11/20/08

Academic Affairs Approval Signature/Date:



11/20/08

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code

Basic Skill (BS) General Education (GE) Occupational Education (OC) G.E. Codes

Office of the Registrar use ONLY

Date Received: _____ Date Completed: _____ Entered: SIS [125 ___ 1D4 ___ 12R ___ 131 ___]