

The following changes (in red) need to be made to the new catalog for the Mechanical Engineering program in the Academic Programs section.

In the Mechanical Engineering Core section: (below)

1. Two electives have been made required courses for students entering in fall 2013. They are EML 4220 Vibration Synthesis and Analysis and EGM 4350 Finite Element Analysis for Engineering Design. They need to be added to the Mechanical Engineering Core table shown below. They also need to be moved from the Electives listing to the Core Course listing in the Course Description section of the catalog for ME.

2. EGN 4432 Dynamic Systems is a new common course for Mechanical and Ocean Engineering programs replacing EML 4380 System Dynamics. That change should be made under Core Courses also as shown below.

In the Electives section: (below)

1. The number of elective credits should be changed from 14 to 8.

In the Sample 4-year Program section below: (below)

1. In the First Year – Fall, CHM 2045 & CHM 2045L General Chemistry 1 and lab need to be added with EGN 2095 & EGN 2095L Engineering Chemistry and lab as either will be acceptable.

2. In the Second Year – Spring, EGN 2213 Computer Applications in Engineering 1 needs to be substituted for the current course EML 2538 Computer Applications in Mechanical Engineering 1. This is a new common course for both ME and OE that already has been approved.

3. In the Third Year – Spring, EGN 4432 Dynamic Systems should replace EML 4380 System Dynamics. EGM 4350 Finite Element Analysis for Engineering Design should replace the Technical Elective.

4. In the Third Year – Summer, EML 4220 Vibration Synthesis and Analysis should replace one of the Technical Electives.

Electro-Mechanical Devices	EGM 4045	3
Fundamentals of Engineering	EGN 1002	3
Statics	EGN 3311	3
Dynamics	EGN 3321	3
Strength of Materials	EGN 3331	3
Engineering Thermodynamics	EGN 3343	3
Engineering Materials 1	EGN 3365	3
Experimental Methodology	EML 3523C	3
Fluid Mechanics	EML 3701	3
Applied Thermal Fluid Engineering	EML 4127	3
Heat Transfer	EML 4142	3
Vibration Synthesis and Analysis	EML 4220	3
Machine Design 2	EML 4262	3
Finite Element Analysis for Engineering Design	EGM 4350	3
Machine Design 1	EML 4500	3
Engineering Design	EML 4521C	3
Design Project	EML 4551	3
Dynamic Systems	EGN 4432	3
Mechanical Engineering Lab	EML 4730L	3

Electives

8 credits (minimum) of departmentally approved technical electives. Students are required to have two design credits in the technical electives as identified in the approved list in the advising manual.

Directed independent study (DIS) may be used as credit toward one technical elective in the student's program with approval of the faculty advisor and the Department Chair. Only in special cases of follow-up projects with the same faculty advisor, specifically approved by the Department Chair, will DIS be allowed as credit for a second technical elective.

Students are encouraged to take the Fundamentals of Engineering Examination for their professional development. It is recommended that it be taken in the first semester of the senior year. As an incentive to take the exam, students can earn the equivalent of 2 credits of technical elective toward their degree requirements. If they pass the exam, they will register for 2 credits of EML 4905, Directed Independent Study—Professional Registration, in the following semester and will be given pass/fail credit for the course.

Sample Four-Year Program of Study for Bachelor of Science in Mechanical Engineering

First Year, Fall (14 credits)		
College Writing 1*	ENC 1101	3
Calculus for Engineers 1	MAC 2281	4
Engineering Chemistry or General Chemistry I	EGN 2095 or CHM 2045	3
Engineering Chemistry Lab or General Chemistry 1 Lab	EGN 2095L or CHM 2045L	1
Fundamentals of Engineering	EGN 1002	3

First Year, Spring (14 credits)		
College Writing 2* or equivalent	ENC 1102	3

Calculus for Engineers 2	MAC 2282	4
Engineering Graphics	EGS 1111C	3
Physics for Engineers 1	PHY 2043	3
General Physics 1 Lab	PHY 2048L	1

Second Year, Fall (14 credits)		
Statics	EGN 3311	3
Calculus with Analytic Geometry 3	MAC 2313	4
Introduction to Philosophy (GRW) or equiv.**	PHI 2010	3
Physics for Engineers 2	PHY 2044	3
General Physics 2 Lab	PHY 2049L	1

Second Year, Spring (15 credits)		
Strength of Materials	EGN 3331	3
Engineering Thermodynamics	EGN 3343	3
Computer Applications in Engineering 1	EGN 2213	3
Engineering Mathematics 1	MAP 3305	3
Foundations of Society and Human Behavior course**		3

Third Year, Fall (15 credits)

Electro-Mechanical Devices	EGM 4045	3
Dynamics	EGN 3321	3
Fluid Mechanics	EML 3701	3
Computer Applications in Mechanical Engineering 2	EML 4534	3
History of Civilization 1 (GRW) or equiv.**	WOH 2012	3

Third Year, Spring (15 credits)		
Dynamic Systems	EGN 4432	3
Heat Transfer	EML 4142	3
Finite Element Analysis for Engineering Design	EGM 4350	3
Foundations of Creative Expression course**		3
Foundations of Society and Human Behavior course**		3

Third Year, Summer (12 credits)		
Probability and Statistics for Engineers	STA 4032	3
Vibration Synthesis and Analysis	EML 4220	3
Technical Elective		3
Foundations of Creative Expression course**		3

Fourth Year, Fall (15 credits)		
Engineering Materials 1	EGN 3365	3
Experimental Methodology	EML 3523C	3
Applied Thermal Fluid Engineering	EML 4127	3
Machine Design 1	EML 4500	3
Engineering Design	EML 4521C	3

Fourth Year, Spring (14 credits)		
Machine Design 2	EML 4262	3
Design Project	EML 4551	3
Mechanical Engineering Lab	EML 4730L	3
Technical Electives		5
Total		128

Approved by: Department Chair: _____ College Curriculum Chair: _____ College Dean: _____ UUPC Chair: _____ Undergraduate Studies Dean: _____ UFS President: _____ Provost: _____	Date: 4/18/13 4/18/13. 4/19/13 4/19/13 4/19/13	1. Syllabus must be attached; syllabus checklist recommended; see guidelines and checklist: www.fau.edu/academic/registrar/UUPCinfo 2. Review Provost Memorandum: Definition of a Credit Hour www.fau.edu/provost/files/Definition_Credit_Hour_Memo_2012.pdf 3. WAC approval (attach if necessary) 4. Gen. Ed. approval (attach if necessary) 5. Consent of affected departments (attach if necessary)
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