

MECHANICAL ENGINEERING MAJOR (2008-2009)
INTELLECTUAL FOUNDATIONS PROGRAM AND FOREIGN LANGUAGE REQUIREMENTS
All course selections should be made in consultation with an advisor.

ENGLISH COMPOSITION (6 credits, two courses, **MUST GET A C OR BETTER**)

ENC 1101	College Writing 1 (Gordon Rule Writing) (3 credits)
ENC 1102	College Writing 2 (Gordon Rule Writing) (3 credits) (ENC 1101 is a prereq)

MATHEMATICS (12 credits, three courses) (**Gordon Rule, MUST GET A C OR BETTER**) Calculus requires a solid background in algebra and trigonometry. This background, if not attained in high school, can be attained at FAU by taking College Algebra (MAC 1105-3cr.), Trigonometry (MAC 1114-3cr.) and Pre-calculus Algebra (MAC 1140-3cr.) or Pre-Calculus Algebra and Trigonometry (MAC 1147-5cr). **Must take a placement test before registering for math courses**

MAC 2253	Calculus for Engineers 1 (4 credits)*
MAC 2254	Calculus for Engineers 2 (4 credits)*
MAC 2313	Calculus with Analytic Geometry 3 (4 credits)*

SOCIAL SCIENCES (9 credits, 3 courses, **from 3 different departments**)

	ANT 2000 (D)	Introduction to Anthropology (3 credits)
(or)	ANT 2410	Culture and Society
	GEA 2000 (D)	World Geography (3 credits)
	ECO 2023	Microeconomic Principles - Recommended (Sophomore standing is a prereq) (3 credits)
(or)	ECO 2013	Macroeconomic Principles - Recommended (Sophomore standing is a prereq) (3 credits)
(or)	ECP 2002	Contemporary Economic Issues (3 credits) for Non-Business Majors
	PAD 2258	Changing Environment of Society, Business and Government (3 credits)
	POS 1041	The Government of the United States (3 credits)
(or)	INR 2002	Introduction to World Politics (3 credits)
	PSY 1012	General Psychology (3 credits)
	SYG 1000	Introductory Sociology (3 credits)
(or)	SYG 2010	Social Problems (3 credits)

HUMANITIES (9 credits, three courses)

Choose **ONE** from the following six courses,

	ARC 2208	Culture and Architecture: The Master Builder (3 credits)
	ARH 2000	Art Appreciation (3 credits) (cannot be taken for P/F for Mech. Engineering major)
	DAN 2100	Appreciation of Dance (3 credits)
	FIL 2000 (D)	Film Appreciation (3 credits)
	MUL 2010	History and Appreciation of Music (3 credits)
	THE 2000	Appreciation of Theater (3 credits)

AND Choose **TWO** courses from the following from **two different departments** ♦

(Note: ENC 1101 & 1102 are prereqs for LIT courses and PHI 2010. ENC 1101 is prereq for WOH 2012)

	LIT 2010	Interpretation of Fiction (Gordon Rule Writing, C or better)(3 credits)
(or)	LIT 2030	Interpretation of Poetry (Gordon Rule Writing, C or better)(3 credits)
(or)	LIT 2040	Interpretation of Drama (Gordon Rule Writing, C or better)(3 credits)
	WOH 2012 (D)	History of Civilization (Gordon Rule Writing, C or better)(3 credits)
	PHI 2010 (D)	Introduction to Philosophy (Gordon Rule Writing, C or better) (3 credits)

SCIENCE (12 credits from two departments, **ALL THREE** courses required)

CHEMISTRY ("D" or better required)

	CHM 2045&L	General Chemistry I w/lab (4 credits)
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PHYSICS ("C" or better required)

	PHY 2043 & PHY 2048L	Physics for Engineers I (3 credits) & General Physics Lab I (1 credit)* (MAC 2253/2311 is prereq & MAC 2254 is recommended as co-req)
	PHY 2044 & PHY 2049L	Physics for Engineers II (3 credits) & General Physics Lab II (1 credit)*

FOREIGN LANGUAGE - NONE REQUIRED, but must meet Foreign Language **ADMISSION** Requirement - see catalog.

NOTE: Native speakers of a foreign language must consult the Languages & Linguistics dept. regarding this requirement

* **NOTE: A minimum grade of C is required in each required Calculus and Physics course. Repeating more than two courses in the sequence constitutes grounds for denial of admission to the major program.**

♦ **NOTE: Honors Seminars SHALL BE ACCEPTED AS MEETING THE GORDON RULE WRITING REQUIREMENT.** See the Freshman Academic Advising Services for details.

D = Course has discussion section. Must register and attend both lecture and discussion

MAJOR COURSES AND IN/OUT OF COLLEGE REQUIREMENTS

NON-MAJOR, IN AND OUT OF COLLEGE REQUIREMENTS (18 credits, 6 courses) ALL REQUIRED

Engineering Graphics (3 Credits) (MUST GET "C" OR BETTER)

EGSC 1111 Engineering Graphics (3 cr.) - may be taken first or second year.

Math and Computer Core (15 credits, 5 courses) (MUST GET "C" OR BETTER)

MAP 3305 Engineering Math 1 (3 cr.) **prereq:** MAC 2254
EML 2538 Computer Applications in ME 1 (3 cr.) **prereq:** MAC 2254
EML 4534 Computer Applications in ME 2 (3 cr.) **prereqs:** MAP 3305, EML 2538, EGM 3510;
coreq: EGM 3524
MAP 4306 Engineering Math 2 (3 cr.) **prereqs:** MAP 3305, MAC 2313
STA 4032 Probability & Statistics for Engineers (3 cr.) **prereq:** MAC 2254

MECHANICAL ENGINEERING (62 credits minimum, 21 or more courses, MUST GET "C" OR BETTER)

Major Core (51 credits, 17 courses) ALL REQUIRED

EGN 1002 Fundamentals of Engineering (*should be taken in the first semester*) (3 credits)
EGM 3510 Statics - **prereqs** - MAC 2254, PHY 2043 or equivalent (3 credits)
EGM 3400 Dynamics - **prereq** - EGM 3510 (3 credits)
EGM 3524 Strength of Materials - **prereq** - EGM 3510 (3 credits)
EGM 3521 Engineering Materials I - EGM 3524 & EML 3100 are **coreqs** (3 credits)
EGM 4045 Electro-Mechanical Devices - **prereqs:** PHY 2044, MAP 3305; **coreq:** EML 3100 (3 credits)
EML 3100 Thermodynamics I - **prereq** - PHY 2043 or equiv. & MAC 2313 is **coreq** (3 credits)
EML 3701 Fluid Mechanics - EML 3100, EGM 3510 & MAP 3305 are **prereqs** (3 credits)
EMLC 3523 Experimental Methodology - **prereqs** - EGM 3400, EGM 3524, EML 3701, STA 4032 &
EGM 4045 (3 credits)
EML 4730L Mechanical Engineering Laboratory - **prereqs:** EML 3523C, EGM 3521; **coreqs:** EML 4142,
EML 4380 (3 credits)
EML 4380 System Dynamics - **prereqs** - EGM 3400, EML 2538 & MAP 4306 (3 credits)
EML 4142 Heat Transfer - **prereqs** - EML 3701 & EML 4534 (3 credits)
EML 4127 Applied Thermal Fluid Engineering - **prereq** - EML 4142 (3 credits)
EML 4500 Machine Design I - **prereq** - EGM 3524 (3 credits)
EML 4262 Machine Design II - **prereqs** - EML 4500, EGM 3400 & EGM 3524 (3 credits)
EGNC 4410 Engineering Design I - **coreqs:** EML 4127, EML 4500, EGM 3521, EML 3523C, & EML
4541 (3 credits)
EGNC 4411 Engineering Design II **prereq** - EGN 4410 (3 credits)

Technical Electives (11 credits, 4 or more courses, must get a "C" or better)

_____ Departmentally approved technical electives, selected in conjunction with your advisor.

48 credits Intellectual Foundations Program, Foreign Language and Out of College Requirements

18 credits In and Out of College Requirements

51 credits Mechanical Engineering Major

11 credits Technical Electives

128 CREDITS TOTAL

CLAST: Complete the College Level Academic Skills Test (CLAST) with passing scores on all four subsections.

NOTE: See the catalog for specific requirements, course descriptions, and additional information. The requirements for some Intellectual Foundations Program & other courses may be satisfied by passing the appropriate AP or CLEP exam. Check with your advisor and college.

Mechanical Engineering majors have specific **GPA requirements** regarding math, science and major courses, check with department for specific information. Repeating more than two courses in all work attempted, including lower division, constitutes grounds for denial of admission. No major course can be taken pass/fail. See department about Design content requirement. A maximum of 3 credits may be earned from co-op, which may be substituted for one technical elective course.

All course selections should be made in consultation with an advisor.

STUDENTS ASSUME ALL RESPONSIBILITY FOR MEETING ALL GRADUATION REQUIREMENTS. (5/08)