

OCEAN ENGINEERING MAJOR (2008 - 2009)

INTELLECTUAL FOUNDATIONS PROGRAM, SCIENCE REQUIREMENTS AND ELECTIVES (48 credits)

ENGLISH COMPOSITION (6 credits, two courses, **MUST EARN "C" OR BETTER**)

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

MATHEMATICS (12 credits minimum, three courses) (Gordon Rule, **MUST EARN "C" OR BETTER**)

Must take a placement test before registering for math courses

MAC 1140 **and/or** MAC 1114 Pre-calculus Algebra and/or Trigonometry (3 credits each) or MAC 1147 Pre-calculus Algebra and Trigonometry (5 credits) (*Recommended if not ready for MAC 2253- credits do not count towards OE degree*)

MAC 2253 Calculus for Engineers 1 (4 credits) - REQUIRED*

MAC 2254 Calculus for Engineers 2 (4 credits) - REQUIRED*

MAC 2313 Calculus with Analytic Geometry 3 (4 credits) - REQUIRED*

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

ANT 2000 (D) Introduction to Anthropology (3 credits)
or ANT 2410 Culture and Society (3 credits)
GEA 2000 (D) World Geography (3 credits)
ECO 2023 Microeconomic Principles - Recommended (**Sophomore standing is a prerequisite**) (3 credits)
or ECO 2013 Macroeconomic Principles - Recommended (**Sophomore standing is a prerequisite**) (3 credits)
or ECP 2002 Contemporary Economic Issues - **for Non-Business majors** (3 credits)
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) **grade or P/F**
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 Theatre (3 credits)

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

LIT 2010 Interpretation of Fiction (Gordon Rule Writing, 3 credits, C or better) () **prereq: ENC 1101 & 1102**
LIT 2030 Interpretation of Poetry (Gordon Rule Writing, 3 credits, C or better) **prereq: ENC 1101 & 1102**
LIT 2040 Interpretation of Drama (Gordon Rule Writing, 3 credits, C or better) **prereq: ENC 1101 & 1102**
PHI 2010 (D) Introduction to Philosophy (Gordon Rule Writing, 3 credits, C or better) **prereq: ENC 1101 & 1102**
WOH 2012 (D) History of Civilization (Gordon Rule Writing, 3 credits, C or better) **prereq: ENC 1101**

SCIENCE (12 - 14 credits)

CHEMISTRY (**C or better required**)

CHM 2045 & L General Chemistry I w/lab (4 credits, Chemistry) - **REQUIRED**

PHYSICS (**C or better required**)

PHY 2043 & PHY 2048 L Physics for Engineers I (3 cr) & General Physics I Lab (1 cr) - **REQUIRED***
(**MAC 2253 is prerequisite & MAC 2254 is recommended as co-requisite**)
PHY 2044 & PHY 2049L Physics for Engineers II (3 cr) & General Physics II Lab (1 cr) - **REQUIRED***

FOREIGN LANGUAGE: NOT REQUIRED. No graduation requirement, 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**

CLAST: Complete the College Level Academic Skills Test (CLAST)

***NOTE: A minimum grade of C is required in all math and Physics courses taken.**

♦**NOTE: Honors SEMINARS SHALL BE ACCEPTED AS MEETING THE GORDON RULE WRITING REQUIREMENT.**

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

MAJOR COURSES AND IN/OUT OF COLLEGE REQUIREMENTS

NON-MAJOR, IN AND OUT OF COLLEGE REQUIREMENTS (25 or 26 credits, 8 courses)

Math Core (6 credits, 2 courses)

MAP 3305* Engineering Mathematics I (3 credits) Prerequisite: MAC 2254 or MAC 2312

MAP 4306* Engineering Mathematics II (3 credits) Prerequisite: MAC 2313 & MAP 3305

Science Core (3 credits, 1 course)

OCG 3002 Oceanography (3 credits) Prerequisite: CHM 2045

Engineering Core (16 or 17 credits, 5 courses)

EEL 2161 C for Engineers (3 Credits)

CDA 3201C Intro to Logic Design (4 credits) Prerequisite: EEL 2161 or COP 2220

EGSC 1111 Engineering Graphics (3 credits -- **(must be taken at FAU)**)

EEL 3111 Circuits I (3 credits) Prerequisite: MAC 2254, MAP 3305, PHY 2044 or PHY 2049

EEL 3300 Electronics I (4 credits) Prerequisite: EEL 3111

or EOC 4930 Electrical Machines (3 Credits)

OCEAN ENGINEERING (64 credits) * GRADE OF C OR BETTER

Major Core

EGN 1002 Fundamentals of Engineering (3 credits)

EOC 2801 Fabrications of Ocean Engineering Systems (1 credit)

EOC 3105* Statics (3 credits) Prerequisite: MAC 2253, PHY 2043 & 2048L; corequisite EGS 1111C

EOC 3113* Dynamics (3 credits) Prerequisite: EOC 3105

EOC 3114* Vibrations (3 credits) Prerequisite: EOC 3113, EOC 3150, MAP 4306

EOC 3123* Fluid Mechanics I (4 credits) Prerequisite: EOC 3113, EOC 3141, COP 2220, MAP 4306, EOC 3130

EOC 3130L Ocean Eng. Laboratory (3 credits) Prereq: CHM 2045 & L; PHY 2044 & 2049L; MAP 3305; EEL 2161

EOC 3141* Thermodynamics (3 credits) Prerequisite: MAC 2313, CHM 2045 & lab, PHY 2044 & PHY 2049L

EOC 3150* Strength of Materials (3 credits) Prerequisite: EOC 3105

EOC 3306 Acoustics I (3 credits) Prerequisite: EEL 3111, MAP 4306, EOC 3130

EOC 3200 Engineering Materials I (3 credits) Prerequisite: EOC 3141; Corequisite is EOC 3150

EOC 3213 Materials I Marine Topics (1 credit) Prerequisite: EOC 3141, EOC 3200

EOC 3410C Structural Analysis I (3 credits) Prerequisite: EOC 3150

EOC 4804 Ocean System Control & Design I (3 credits) All 3000 level courses, Corequisite is EOC 3631

EOC 4804L Ocean System Control and Design Project (4 credits) Prerequisite: EOC 4804

EOC 4193 Ocean Thermal Systems (3 credits) Prerequisite: EOC 3141, Corequisite is EOC 3123

EOC 4422 Ocean Wave Mechanics (3 credits) Prerequisite: EOC 3114 & EOC 3123

EOC 4620 Dynamic Systems (3 credits) Prerequisite: EOC 3114

EOC 3631 Ocean & Environmental Data Analysis (3 credits) Prerequisite: EOC 3130, MAP 4306

Choose two of the following 4 classes (8 credits):

EOC 4412 Structural Analysis II (4 credits) Prerequisite: EOC 3410

EOC 4124 Fluid Mechanics II (4 credits) Prerequisite: EOC 3123

EOC 4115C Acoustics II (4 credits) Prerequisite: EOC 3306

EOC 4201C Materials II (4 credits) Prerequisite: EOC 3200

Non-required Electives:

EOC 2902 Professional Development (3 credits)

EOC 2131C Ocean Engineering Diving (1 credit)

46 or 48 credits Intellectual Foundations Program and Science Requirements

25 or 26 credits In and Out of College Requirements, Non-major

64 credits Ocean Engineering Major

136 CREDITS

TOTAL

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

Ocean Engineering majors have specific GPA requirements regarding math, science and major courses; check with department for specific information. A maximum of 6 credits may be earned in co-op; this is additive credit and does not substitute for other credits. No pass/fail courses may be used to meet curriculum, pre-requisite or graduation requirements.

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

THE STUDENT ASSUMES ALL RESPONSIBILITY FOR MEETING ALL GRADUATION REQUIREMENTS. (5/08)