

## **CIVIL ENGINEERING MAJOR (2008 - 2009)**

### **INTELLECTUAL FOUNDATIONS PROGRAM (IFP) AND FOREIGN LANGUAGE REQUIREMENTS**

**Civil Engineering majors must get "C" or better in all course work. No P/F will be accepted for major.**

#### **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)

**MATHEMATICS** (12 credits, three courses) **MUST TAKE A PLACEMENT TEST BEFORE REGISTERING FOR MATH COURSES.** 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), Trigonometry (MAC 1114) and Pre-calculus Algebra (MAC 1140) or Pre-calculus Algebra and Trigonometry (MAC 1147). **These prerequisites, if taken must be completed with a "C" or better.**

<b>MAC 2253</b>	<b>Calculus for Engineers 1 (4 credits)</b> Gordon Rule, <b>must get a C or better</b>
<b>MAC 2254</b>	<b>Calculus for Engineers 2 (4 credits)</b> Gordon Rule, <b>must get a C or better</b>
<b>MAC 2313</b>	<b>Calculus w/analytical Geometry (4 credits)</b> Gordon Rule, <b>must get a C or better</b>

#### **SOCIAL SCIENCES** (9 credits, **3 courses, from 3 different departments\***, **must get "C" or better**)

**(AT LEAST TWO OF THE SOCIAL SCIENCES/HUMANITIES SELECTIONS MUST HAVE GLOBAL PERSPECTIVE)**

(or)	<b>ANT 2000 (D)</b>	<b>General Anthropology (3 credits)*GLOBAL PERSPECTIVE</b>
	ANT 2410	Culture and Society (3 credits)
	<b>GEA 2000 (D)</b>	<b>World Geography (3 credits)* GLOBAL PERSPECTIVE</b>
	ECO 2023	Microeconomic Principles (3 credits - <b>Sophomore standing is a prerequisite</b> )
(or)	ECO 2013	Macroeconomic Principles (3 credits - <b>Sophomore standing is a prerequisite</b> )
(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)	<b>INR 2002</b>	<b>Introduction to World Politics (3 credits)* GLOBAL PERSPECTIVE</b>
	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, **must get "C" or better**)

ARC 2208	Culture and Architecture: Master Builder (3 credits)
ARH 2000	Art Appreciation (3 credits) ( <b>Cannot be taken P/F for Civil Engineering major</b> )
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 courses from **two different departments ♦**:

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

(or)	LIT 2010	Interpretation of Fiction (Gordon Rule Writing) (3 credits)
(or)	LIT 2030	Interpretation of Poetry (Gordon Rule Writing) (3 credits)
(or)	LIT 2040	Interpretation of Drama (Gordon Rule Writing) (3 credits)
	PHI 2010(D)	Introduction to Philosophy (Gordon Rule Writing) (3 credits)
	<b>WOH 2012 (D)</b>	<b>History of Civilization I</b> (Gordon Rule Writing) (3 credits) <b>*(GLOBAL PERSPECTIVE )</b>

#### **SCIENCE** (11 credits from two departments, **All 3 courses required**) (**C or better required**)

##### **CHEMISTRY**

CHM 2095	Chemistry for Engineers (3 credits,)
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##### **PHYSICS**

PHY 2043 & PHY 2048L	Physics for Engineers I (3 credits) & General Physics Lab I (1 cr,)
	(MAC 2253 or MAC 2311 is prerequisite & MAC 2254 or 2312 is recommended as co-requisite),
PHY 2044 & PHY 2049L	Physics for Engineers II (3 credits) & General Physics Lab II (1 cr)

**FOREIGN LANGUAGE** (0-8 cr, 0-2 courses)- **NONE REQUIRED**, but must meet Foreign Language ADMISSION Requirement - see catalog. NOTE: Native speakers of a foreign language must consult the Languages and Linguistics department regarding this requirement. For questions related to this requirement, consult an academic advisor.

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

**D = Course has Discussions Section**

## MAJOR COURSES AND IN/OUT OF COLLEGE REQUIREMENTS

### **COMMUNICATIONS** (3 credits, **must get a "C" or better**)

SPC 2601 Public Speaking (3 credits)

### **ENGINEERING FUNDAMENTALS (COLLEGE REQUIREMENTS)** (21 credits, 7 courses, **must get a "C" or better**)

EGN 1002 Fundamentals of Engineering (3 cr., **should be taken in the first semester**)  
 EEL 2161 C for Engineers (3 credits)  
 EGN 3311 Statics - *prereqs* - MAC 2253 & PHY 2043 or PHY 2048 (3 credits)  
 EGM 3400 Dynamics - *prereq* - EGN 3311 (3 credits)  
 CES 3104 Strength of Materials - *prereq* - EGN 3311 (3 credits)  
 \_\_\_\_\_ Engineering Science Elective (3 credits) (**see attached list (2) of approved electives**)  
 CGN 2327 Fundamentals of Autocad - *prereq* - MAC 2253 (3 credits) (**junior status required**)

### **ADDITIONAL MATH and SCIENCES** (9 credits, 3 courses, **must get C or better**)

MAP 3305 Engineering Mathematics 1 - *prereq* - MAC 2254 (3 credits)  
 STA 4032 Probability & Statistics for Engineers - *prereq* - MAC 2254 (3 credits)  
 SUR \_\_\_\_\_ Surveying (3 credits)

### **CIVIL ENGINEERING PROFESSIONAL CORE** (42 credits minimum, 13 or more courses, **must get a "C" or better**)

CGN 3501C Civil Engineering Materials - *prereq* - CGS 3104(3 credits)  
 CWR 3201C Applied Hydraulics - *prereqs* - MAP 3305; CES 3104(4 credits)  
 CWR 4202 Hydrologic Engineering - *prereqs* - CWR 3201C (3 credits)  
 ENV 3001 Environmental Science and Engineering - *prereqs* - MAP 3305, CES 3104 & CHM 2095 (4 cr)  
 ENV 4514 Water & Wastewater Technology - *prereqs* - ENV 3001 & CWR 3201C (3 credits)  
 CEG 3011C Soil Mechanics - *prereqs* - CRS 3104 (4 credits)  
 CEG 4012 Foundation Engineering - *prereq* - CEG 3011C(3 credits)  
 CES 3102 Analysis of Structures - *prereq* - CES 3104 (3 credits)  
 CES 4605 Structural Steel Design - *prereq* - CES 3102 (3 credits)  
 CES 4702 Reinforced Concrete Design - (3 credits)  
 TTE 4004 Transportation Engineering I - *prereqs* - CES 3102 & CES 3104 (3 credits)  
 TTE 4005 Transportation Engineering II - *prereq* - TTE 4004 (3 credits)  
 CGN 4803C Civil Engineering Design I - Prereq: CGN 3501C, CWR 3201C, ENV 3001, CEG 3011C, CES 3102, ITE 4005, CGN 2327 and proof of FE Exam registration. (3 cr)  
 CGN 4804C Civil Engineering Design II - Prereq: CGN 4803C, CES 4605, CES 4702, CEG 4012, & TTE 4005. Coreq: CWR 4212, ENV 4514. (3 credits)

### **TECHNICAL ELECTIVES** (3 credits)

Students select 1 CE technical elective from a list of approved Civil Engineering technical electives - contact the dept. for list.

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47 credits	Intellectual Foundations Program
3 credits	Communication (SPC 2601)
21 credits	Engineering Fundamentals
9 credits	Additional Math and Sciences
43 credits	Civil Engineering Professional Core
3 credits	Technical Electives
<b>128 CREDITS</b>	<b>TOTAL</b>

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**CLAST:** Satisfy the College Level Academic Skills Test (CLAST): see catalog or check with your advisor.

**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.

**Degree requirements:** The Bachelor of Science in Civil Engineering requires the completion of 128 credit hours. For credit towards the degree, a **grade of "C" or better must be received in each course listed**. In addition **all prerequisites for each mathematics, science or engineering course must be completed with a grade of "C" or better**. Students have to take the Fundamentals of Engineering examination (for professional licensure) before registering for CGN 4803C - Civil Engineering Design I - contact the department for details.

Civil engineering is a uniquely broad and wide-ranging profession. Various departments offer minors and certificate programs that augment a student's civil engineering education. The CE faculty encourages students to pursue a minor or certificate. Areas appropriate for CE include: Business Administration; Economics; Languages; International Economics; Geographic Information Systems; Geography; Geology; Mathematics; Public Management; Statistics. Please note that obtaining a minor will require the completion of credits beyond the 128 required for the BS in Civil Engineering. Contact the department offering the minor or certificate for more details.

**All course selections shall be made in consultation with an academic advisor.**

**(1) ENGINEERING SCIENCE ELECTIVE** - Choose **ONE** (3 credits needed)

Other courses may be approved by petition to the CIVE faculty (see Department Chair)

Course Number	Course Title	Department	Credits
EEL 3111	Circuit I	Electrical Engineering	3
EML 3100	Thermodynamics I	Mechanical Engineering	3
EOC 3141	Engineering Thermodynamics	Ocean Engineering	3

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**SOCIAL SCIENCE/HUMANITIES COURSES WITH GLOBAL PERSPECTIVE** - Choose **TWO** courses (6 credits)

Course Number /Title	Department	Credits
ANT 2000 - General Anthropology	Anthropology (Social Science)	3
GEA 2000 - World Geography	Geography (Social Science)	3
INR 2002 - Introduction to World Politics	Political Science (Social Science)	3
WOH 2012 - History of Civilization I	History (Humanities - Gordon Rule writing course)	3

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