**FLORIDA ATLANTIC UNIVERSITY – INTELLECTUAL FOUNDATION PROGRAM 2021 – 2022**

*All courses are three (3) credits unless otherwise indicated. Course selections should be made in consultation with an academic advisor.*

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## PRE-PROFESSIONAL ENGINEERING PROGRAM (2021-2022)

**College of Engineering and Computer Science**

### FOUNDATIONS OF WRITTEN COMMUNICATION

(6 credit hours required – Writing Across the Curriculum - WAC)
Grade of “C” or higher is required in each course

- ENC 1101......College Writing I (Required)
- ENC 1102......College Writing II +

**THE FOLLOWING COURSES BELOW MAY BE SUBSTITUTED FOR ENC 1102:**

- ENC 1939 +....Special Topic: College Writing
- HIS 2050 + .....Writing History

*Note: Students must take four Writing-Across-the-Curriculum (WAC) courses, two of which must be taken from Foundations of Written Communication.*

### FOUNDATIONS OF MATHEMATICS & QUANTITATIVE REASONING

(6 credit hours required – Grade of “C” or higher is required)
Student must take 2 of the following courses; 1 must be from group A. The second course may be from group A or group B.

**PRETEST IS REQUIRED BEFORE TAKING YOUR FIRST MATH COURSE**

**Group A**

- MGF 1106...... Math for Liberal Arts 1
- MGF 1107...... Math for Liberal Arts 2
- MAC 1105...... College Algebra
- MAC 2311...... Calculus with Analytic Geometry 1 (4 credits) *(Required)*

**or any mathematics course for which one of the above courses is the direct prerequisite**

**Group B**

- MAC 1147...... Precalculus Algebra & Trigonometry (4 credits)
- MAC 2210...... Intro Calculus w/Applications (4 credits) *(Permit Only)*
- MAC 2241...... Life Science Calculus 1 (4 credits)
- MAC 2233...... Methods of Calculus
- MAC 2312...... Calculus with Analytic Geometry 2 (4 credits) *(Required)*

### FOUNDATIONS OF SCIENCE & THE NATURAL WORLD

(6 credit hours required - One of the courses must have a lab)
Student must take 2 of the following courses; 1 must be from group A. The second course may be from group A or group B.

**Group A**

- BSC 1010 & L & D ***** Biological Principles (4 cr. incl. Lab & Dis)
- CHM 2045 & L (Required) ***** General Chemistry 1 (4 cr. Incl. Lab) *
- PHY 2048 & L (Required) ***** General Physics 1 (4 or 5 credits incl. Lab) *

**Group B**

- GLY 2010C **** Physical Geol. (4 cr. incl. Lab)
- PHY 2049 & L ***** General Physics 2 (4 or 5 credits incl. Lab)

*Note: Courses indicating a (D) or (L) are linked with a lecture, a lab, and/or a discussion. If you select one of these courses, you must register for the lecture, lab, and/or discussion. You must attend the lecture, lab, and/or discussion.*

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### FOUNDATIONS OF SOCIETY & HUMAN BEHAVIOR

(6 credit hours required)
Student must take 2 of the following courses, 1 must be from group A. The second course may be from group A or group B.

**Group A**

- AMH 2020 & D......United States History Since 1877 *(P/F)*
- ANT 2000 & D ......Introduction to Anthropology *(WAC)*
- ECO 2013 ............Macroeconomic Principles §
- POS 2041..............Government of the United States
- PSY 1012 ............Introduction to Psychology
- SYG 1000 ............Sociological Perspectives

**Group B**

- AMH 2010 & D......United States History to 1877 *(P/F)*
- DIG 2202 ............Digital Culture
- ECO 2023 ............Microeconomic Principles §
- ECP 2002 ............Contemporary Economic Issues
- EEX 2091 ............Disability and Society
- EVR 1110.............Climate Change: The Human Dimensions
- EVR 2017.............Environment and Society
- LIN 2001.............Introduction to Language *(online course)*
- PAD 2258 ............Changing Environment of Soc., Bus., & Gov’t
- SYG 2010.............Social Problems
- URP 2051 ............Designing the City

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### FOUNDATIONS OF SCIENCE & THE NATURAL WORLD

(6 credit hours required - One of the courses must have a lab)
Student must take 2 of the following courses; 1 must be from group A. The second course may be from group A or group B.

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**FOUNDATIONS IN GLOBAL CITIZENSHIP**
(6 credit hours required)
Student must choose two (2) courses from among the following:
- ANT 2410 .......... Culture and Society
- EDF 2854 .......... Educated Citizen in Global Context
- GEA 2000 .......... World Geography
- INR 2002 .......... Introduction to World Politics
- LAS 2000 .......... Intro to Caribbean & Latin American Studies
- LIN 2607 .......... Global Perspectives on Language
- SYP 2450 .......... Global Society
- SOW 1005 .......... Global Perspectives of Social Services
- WOH 2012 & D .. History of Civilization 1 (WAC) ++
- WOH 2022 .......... History of Civilization 2
- WST 2351 .......... Gender and Climate Change

**FOUNDATIONS OF HUMANITIES**
(6 credit hours required)
Student must take 2 of the following courses, 1 must be from group A. The second course may be from group A or group B.

**Group A**
- ARH 2000 .......... Art Appreciation (P/F)
- MUL 2010 .......... Music Appreciation
- PHI 2010 & D .... Introduction to Philosophy (WAC) ++
- THE 2000 .......... Theatre Appreciation

**Group B**
- ARC 2208 .......... Culture & Architecture
- DAN 2100 .......... Appreciation of Dance
- FIL 2000 & D ...... Film Appreciation
- LIT 2010 .......... Interpretation of Fiction (WAC) ++
- LIT 2030 .......... Interpretation of Poetry (WAC) ++
- LIT 2040 .......... Interpretation of Drama (WAC) ++
- LIT 2070 .......... Interpretation of Creative Nonfiction (WAC) ++

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**Legend**

+ - ENC 1101 is a prerequisite.
++ - Two Foundations of Written Communications classes are required before taking this course.
§ - Sophomore standing (30 credits earned) is a requirement to take this course.
* - MAC 2311 is a prerequisite for this course.
‡ - Co-requisite of College Algebra (MAC 1105) or a prerequisite of Introductory Chemistry (CHM 1025).

**WAC** - (WAC) Writing across the curriculum course.

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**Writing Across the Curriculum (WAC)/Gordon Rule**
Students must attain grades of “C” or higher. 12 credits of writing (WAC) and 6 credits of mathematics are required.

**Please note:**
Students must take four (4) WAC courses. Two (2) courses are to be taken from Foundations of Written Communication. We strongly recommend the two additional WAC courses come from these courses: PHI 2010, WOH 2012, LIT 2010, LIT 2030, LIT 2040 and LIT 2070. See advisor for additional details.

**(D) = Discussion, (L) = Lab**
Courses indicating a (D) or (L) are linked with a lecture, a lab, and/or a discussion. If you select one of these courses, you must register for the lecture, lab, and/or discussion. You **must** attend the lecture, lab, and/or discussion.

**Elective Credits**
The number of elective credits allowed varies by major. Please consult with an academic advisor to determine the number of elective credits required for your major. **Certain majors do not allow any electives.**

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**Students Assume Responsibility for Meeting All Graduation Requirements**

*Course selections should be made in consultation with an academic advisor.*
MAJOR REQUIREMENTS
(All required major courses must earn a “C” or better)
Engineering students must stick to the core curriculum.

EGN 1002 & L Fundamentals of Engineering [Must be taken freshman year] (NOT required for Computer Science majors)

**** SCIENCE REQUIREMENTS BY MAJOR
(All science courses must earn a “C” or better)

Computer, Electrical, Mechanical, and Ocean Engineering:
___ CHM 2045 & L & D General Chemistry 1 (4 cr. w/Lab) ‡ (REQUIRED)
___ PHY 2048 & L .......... General Physics 1 (4 or 5 cr. w/ Lab) * (REQUIRED)
___ PHY 2049 & L .......... General Physics 2 (4 or 5 cr. w/ Lab) (REQUIRED) or PHY 2044 & L...PHYSICS FOR ENGINEERS 2 (4 cr. w/ Lab)

Civil and Environmental Engineering:
___ CHM 2045 & L & D General Chemistry 1 (4 cr. w/Lab) ‡ (REQUIRED)
___ PHY 2048 & L .......... General Physics 1 (4 or 5 cr. w/ Lab) * (REQUIRED)

Civil Engineering must also choose 1 from Science 1:
___ BSC 1010 & L & D...Biological Principles (4 credits including Lab & Discussion)
___ GLY 2010C & D...Physical Geology (4 cr. including Lab) (RECOMMENDED)

And must also choose 1 from Science 2:
___ BSC 1010 & L & D...Biological Principles (4 credits including Lab & Discussion) **
___ GLY 2010C & D...Physical Geology (4 cr. including Lab) **
___ PHY 2049 & L .......... General Physics 2 (4 or 5 cr. w/ Lab) or PHY 2044 & L...PHYSICS FOR ENGINEERS 2 (4 cr. w/ Lab)
___ CHM 2046 & L .......... General Chemistry 6 (4 cr. w/Lab) ‡
**May not be used to satisfy Science 2 if used to satisfy Science 1

Environmental Engineering majors must also take:
___ CHM 2046 & L...General Chemistry 2 (4 cr. w/Lab) ‡ (REQUIRED)

And must also choose 1 from:
___ BSC 1010 & L & D...Biological Principles (4 credits including Lab & Discussion)
___ BSC 1011 & L & D...Biodiversity (4 credits including Lab & Discussion)

And must also choose 1 from:
___ GEO 2200C..........Intro to Physical Geography
___ GLY 2010C & D.... Physical Geology (4 cr. including Lab)

Geomatics Engineering majors must take:
___ PHY 2048 & L..........General Physics 1 (4 or 5 cr. w/ Lab) * (REQUIRED)
___ GEO 2200C..........Intro to Physical Geography

And must also choose 1 from Science 1:
___ CHM 2045 & L & D... General Chemistry 1 (4 cr. w/Lab) ‡
___ GLY 2010C.......... ..Physical Geology (4 cr. including Lab)

And must also choose 2 from Science 2:
___ ANT 2511 & L......Intro to Biological Anthropology (4 credits w/Lab)
___ BSC 1010 & L & D...Biological Principles (4 credits w/Lab & Discussion)
___ BSC 1011 & L & D...Biodiversity (4 credits w/Lab & Discussion)
___ BSC 2085 & L...........Anatomy & Physiology 1 (4 credits including Lab & Discussion)
___ CHM 2045 & L & D.......General Chemistry 1 (4 cr. w/Lab) ‡
___ CHM 2032 & L.......Chemistry for Health Sciences (4 cr. w/Lab)
___ GLY 2010C & D......Physical Geology (4 cr. including Lab) **
___ PHY 2053 & L...........College Physics 1 (4 credits w/ Lab)
**May not be used to satisfy Science 2 if used to satisfy Science 1

Computer Science majors must choose 2 from the following:
___ CHM 2045 & L & D... General Chemistry 1 (4 cr. w/Lab) ‡
___ BSC 1010 & L & D...Biological Principles (4 credits including Lab & Discussion)
___ GLY 2010C.........Physical Geology (4 cr. including Lab)
___ PHY 2048 & L...... General Physics 1 (4 or 5 cr. w/ Lab)
___ PHY 2049 & L......... General Physics 2 (4 or 5 cr. w/ Lab) or PHY 2044 & L... PHYSICS FOR ENGINEERS 2 (4 cr. w/ Lab)
**REQUIREMENT INFORMATION**

**NOTE:** All Engineering students should take Physics I (PHY 2048 & PHY 2048L) with Calculus II (MAC 2312) in the same semester.

**NOTE:** Students must receive a minimum grade of “C” in the courses below in no more than two attempts:
- Electrical, Ocean, Mechanical, Civil, Environmental, & Computer Engineering: MAC 2311 & PHY 2048
- Computer Science & Geomatics: MAC 2311

**Incoming Freshman and students transferring with less than 30 credits contact:**
University Advising Services  
Phone: (561) 297-3064  
Email address: advisingservices@fau.edu

**Transfer students or students with more than 30 credits contact:**
College of Engineering & Computer Science  
Phone: (561) 297-2780  
Email address: engineering-advising@fau.edu