

FLORIDA ATLANTIC UNIVERSITY

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

**PHYSICS MAJOR
(2011 – 2012)**

The Charles E. Schmidt College of Science
Bachelor of Arts (BA) or Bachelor of Science (BS)

**FOUNDATIONS OF WRITTEN COMMUNICATION
(Gordon Rule Writing (GRW), 6 credits required)
(A grade of "C" or higher is required in each course)**

- ___ **ENC 1101** College Writing I (**REQUIRED**)
- ___ ENC 1102+ College Writing II

THE FOLLOWING COURSES CAN BE SUBSTITUTED FOR ENC 1102:

- ___ ANT 1471+ Cultural Difference in a Globalized Society
- ___ ENC 1930+ University Honors Seminar in Writing (**Permit Only**)
- ___ ENC 1939+ Special Topic: College Writing II
- ___ ENC 2452+♦ Advanced Composition for Science
- ___ NSP 1195+ Being Cared For: Reflections from Other Side of Bed

After completing this section, two additional (GRW) classes are required from two different departments. Choices are available in: Foundations in Global Citizenship and/or Foundations of Creative Expression.

**FOUNDATIONS OF SOCIETY & HUMAN BEHAVIOR
(6 credits required, select 2 courses from 2 different departments)**

Anthropology Department

- ___ ANT 2000 & D Introduction to Anthropology

Economics Department

- ___ ECO 2013# Macroeconomic Principles
- ___ ECO 2023# Microeconomic Principles
- ___ ECP 2002 Contemporary Economic Issues

Exceptional Student Education Department

- ___ EEX 2091 Disability and Society

Political Science Department

- ___ POS 2041 Government of the United States

Psychology Department

- ___ PSY 1012 General Psychology

Public Administration Department

- ___ PAD 2258 Changing Env. of Soc., Bus., & Government

Sociology Department

- ___ SYG 1000 Sociological Perspectives
- ___ SYG 2010 Social Problems

Geosciences Department

- ___ EVR 2017 Environment and Society

Urban & Regional Planning Department

- ___ URP 2051 Designing the City

**FOUNDATIONS OF SCIENCE & THE NATURAL WORLD
(13 credits required)
(Courses to be taken from 2 different departments)
(All labs and discussions are required)**

----- **8 credits in Biology or Chemistry are required:** -----

Biology Department

- ___ BSC 1011 & L & D Biodiversity (4 cr. incl. Lab and Discussion)
- ___ BSC 1010 & L & D Biological Principles (4 cr. incl. Lab & Disc)

2 Biology OR 2 Chemistry Courses

Chemistry Department

- ___ CHM 2045 & L† General Chemistry I (4 credits Incl. Lab)
- ___ CHM 2046 & L General Chemistry II (4 credits Incl. Lab)

----- **FOR B.S. & B.A. Degree:** -----

Physics Department

- ___ PHY 2048 & L** General Physics I (5 credits incl. Lab)

**FOUNDATIONS OF MATHEMATICS & QUANTITATIVE REASONING
(Grade of "C" or higher required. 12 credits required)
PRETEST IS REQUIRED BEFORE TAKING YOUR FIRST MATH CLASS
**NOTE: Students must take at least one course with the prefix
MAC or MGF from the list below****

- ___ MAC 2311 Calculus with Analytic Geometry I (4 cr.)
- ___ MAC 2312 Calculus with Analytic Geometry II (4 cr.)
- ___ MAC 2313 Calculus with Analytic Geometry III (4 cr.)

Calculus requires a solid background in Algebra and Trigonometry. If you are not ready to take Calculus the following courses will provide the necessary background:

- ___ MAC 1105 College Algebra
- ___ MAC 1114 Trigonometry
- ___ MAC 1140 Precalculus Algebra
- ___ MAC 1147 Precalculus Algebra & Trig (5 credits)

**FOUNDATIONS IN GLOBAL CITIZENSHIP
(Select 2 courses from 2 different departments)
(6 credits required. At least 1 course from Global Perspectives)**

----- **WESTERN IDENTITIES:** -----

Sociology Department

- ___ SYD 2790 Race, Class, Gender, and Sexuality

Philosophy Department

- ___ PHI 2010++ Introduction to Philosophy (**GRW**)

History Department

- ___ AMH 2010 (P/F) United States History to 1877
- ___ AMH 2020 (P/F) United States History Since 1877

Languages, Linguistics, & Comparative Literature Department

- ___ LAS 2000 Intro to Caribbean & Latin American Studies

----- **GLOBAL PERSPECTIVES (1 course required):** -----

Anthropology Department

- ___ ANT 2410 Culture and Society

Geography Department

- ___ GEA 2000 & D World Geography

History Department

- ___ WOH 2012 & D++ History of Civilization I (**GRW**)
- ___ WOH 2022 History of Civilization II

Sociology Department

- ___ SYP 2450 Global Society

Political Science Department

- ___ INR 2002 Introduction to World Politics

Languages, Linguistics, & Comparative Literature Department

- ___ LIN 2607 Global Perspectives on Language

Curriculum, Culture, & Educational Inquiry Department

- ___ EDF 2854 Educated Citizen in Global Context

Social Work Department

- ___ SOW 1005 Global Perspectives on Social Services

**FOUNDATIONS OF CREATIVE EXPRESSION
(6 credits req., select 2 courses from 2 different departments)**

Architecture Department

- ___ ARC 2208 Culture & Architecture

Visual Art & Art History Department

- ___ ARH 2000 (P/F) Art Appreciation

School of Communication & Multimedia Studies

- ___ FIL 2000 & D Film Appreciation

English Department

- ___ LIT 2010++ Interpretation of Fiction (**GRW**)
- ___ LIT 2030++ Interpretation of Poetry (**GRW**)
- ___ LIT 2040++ Interpretation of Drama (**GRW**)

Languages, Linguistics, & Comparative Literature Department

- ___ LIT 2100 & D Global Great Books

Music Department

- ___ MUL 2010 History & Appreciation of Music

Theatre & Dance Department

- ___ DAN 2100 Appreciation of Dance
- ___ THE 2000 Appreciation of Theatre

STUDENTS ASSUME RESPONSIBILITY FOR MEETING ALL GRADUATION REQUIREMENTS
Course selections should be made in consultation with an advisor

Legend

- +** - ENC 1101 is a prerequisite.
- ++** - Two Foundations of Written Communications classes are required before taking this class.
- #** - Sophomore standing (30 credits earned) is required.
- **** - MAC 2281 or MAC 2311 is a prerequisite for this class. If a lab is needed take General Physics 1 Lab (PHY 2048 Lab).
- ***** - MAC 1105 and MAC 1114 are prerequisites for this class. If a lab is needed take General Physics 1 Lab (PHY 2048 Lab).
- ‡** - A corequisite of College Algebra (MAC 1105) or a prerequisite of Introductory Chemistry (CHM 1025).
- ◇** - A "B" in CHM 2045 and a grade of "C" or better in ENC 1101 in addition to a co-requisite of CHM 2051C is needed.
- GRW** - (WAC) Writing across the curriculum class.
- D** - A discussion is linked to the lecture. Students must register for the discussion in addition to the lecture.
- L** - A lab is linked to the lecture. Students must register for the lab in addition to the lecture.
- P/F** - Course may be taken pass (P) or fail (F) or for a letter grade. Indicate your preferred grading option during registration.

FOREIGN LANGUAGE (4 - 8 credits, 1 or more courses in the same language) - **REQUIRED FOR MAJOR**

Students with more than one year of a foreign language in high school should enroll in the second half of the beginners foreign language class (FOL/FRE/GER/GRE/GRK/HBR/ITA/JPN/LAT/SPN 1121) or a higher level course. Proficiency for a first-level course can be earned by successfully completing a second-level course. For questions related to this requirement, consult an academic advisor. CLEP exam credits meet this requirement: see the catalog.

∄ NOTE: Native Speakers of a foreign language must consult the Languages, Linguistics, and Comparative Literature Department regarding this requirement.

CLAS: College Level Academic Skills (CLAS) requirements need to be met prior to graduation. See the university catalog for additional information.

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

∄ HONORS NOTE: Students can apply for the PSYCHOLOGY HONORS PROGRAM after completion of 60 credits, and before completion of 105 credits. Students must have a 3.2 overall & Psychology GPA to be admitted and retained in the Honors track.

28 – 32 credits	Intellectual Foundations Program & Foreign Language (Excl. Math & Science)
12 credits	Mathematics – Calculus (B.A. and B.S. Degree)
25 – 44 credits	Physics Major (44 credits for B.S. and 25 credits for B.A)
<u>32 – 55 credits</u>	<u>Free Electives</u>
120 CREDITS	TOTAL

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

The Charles E. Schmidt College of Science has the following requirements: (1) Any course work in the major field transferred from another institution must be approved by the major dept; (2) No major course may be taken pass/fail; (3) The maximum amount of credit which may be earned through co-op is 10 credits, some departments allow some of these credits to substitute for major courses, check with dept for specifics; (4) A grade of "C" or better is required in all the physics, mathematics, and chemistry courses taken as part of the course requirements for a degree within the department.

MAJOR COURSES, COLLEGE REQUIREMENTS and ELECTIVES

PHYSICS Core

Introductory Physics Courses - (9 credits) – **REQUIRED for both B.A. and B.S. Degree**

- PHY 2049 & L General Physics II & Lab - **PHY2048 with lab is a prerequisite** (5 credits)
PHZ 2106 General Physics III - **MAC 2313 and PHY 2049 with lab are prerequisites** (4 credits)

BACHELOR OF SCIENCE (BS) DEGREE (44 credits total, 13 courses)

Additional Mathematics Introductory Course (3 credits)

- MAS 2103 Matrix Theory (3 credits)

Bachelor of Science Additional Intermediate Core Requirements (41 credits)

- PHY 3101C Survey of Modern Physics - **PHY 2049 & lab & MAC 2313 are prereqs** (5 credits)
PHY 3221 Classical Mechanics - **PHY 2048 with lab & MAC 2313 are prerequisites** (4 credits)
PHY 3323 Electromagnetism I - **PHY 2049 with labs & MAC 2313 are prerequisites** (4 credits)
PHY 4324 Electromagnetism II - **PHY 3323 is a prerequisite** (4 credits)
PHY 3503 Thermodynamics - **MAC 2313 and PHY 2048 with lab is a prerequisite** (4 credits)
PHY 4523 Statistical Physics - **PHY 3101C is a prerequisite** (3 credits)
PHY 4604 Quantum Mechanics I – **PHY 3101C prereq. and PHZ 3113 a coreq.** (4 credits)
PHY 4605 Quantum Mechanics II - **PHY 4604 is a prerequisite** (3 credits)
PHY 3722C Physical Electronics - **PHY 2049 is a prerequisite** (4 credits)
PHY 4811L Undergraduate Laboratory - **PHY 3101C is a prerequisite** (2 credits)
PHZ 3113 Math. Methods for Physics - **PHZ 2106 a prereq or instructor permission** (3 credits)

BACHELOR OF ARTS (BA) DEGREE (25 credits total, 6 courses)

Additional Mathematics Introductory Course (3 credits)

- MAS 2103 Matrix Theory (3 credits)

Bachelor of Arts Additional Intermediate Core Requirements (22 credits)

- PHY 3101C Survey of Modern Physics - **PHY 2049 & lab & MAC 2313 are prereqs** (5 credits)
PHY 3221 Classical Mechanics - **PHY 2048 with lab & MAC 2313 are prerequisites** (4 credits)
PHY 3323 Electromagnetism I - **PHY 2049 with lab & MAC 2313 are prerequisites** (4 credits)
PHY 4604 Quantum Mechanics I – **PHY 3101C prereq, and PHZ 3113 a coreq** (4 credits)

Choose at least three (3) credits from the following list:

- PHY 3503 Thermodynamics - **MAC 2313 and PHY 2048 with lab is a prerequisite** (4 credits)
PHY 4523 Statistical Physics - **PHY 3101C is a prerequisite** (3 credits)
PHY 3722C Physical Electronics - **PHY 2049 is a prerequisite** (4 credits)

FREE ELECTIVES (32 – 55 credits)

Free electives are courses in any college, any department, including Physics, needed to meet the 120 credits required for graduation.

Optional Preprofessional Track (23 credits) - Required Courses

- BSC 1011 & L Biodiversity with lab (3 + 1 = 4 credits)
BSC 1010 & L Biological Principles with lab (3 + 1 = 4 credits)
CHM 2210 & D Organic Chemistry I with discussion (3 cr) - **CHM 2045 & CHM 2046 with labs are prerequisites**
CHM 2211 Organic Chemistry II (3 credits)
CHM 2211L Organic Chemistry II Lab (2 credits)
PCB 3063 Genetics (4 credits) - **BSC 1011 and BSC 1010 with labs are prerequisites**
BCH 3033 Biochemistry I (3 credits) - **8 credits of organic chemistry is the prerequisite**