# Secondary Science Physics Education Major (2019-2020)

## 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:

**English Department**
- ENC 1930+ ....... University Honors Seminar in Writing *(Permit Only)*
- ENC 1939+ ....... Special Topic: College Writing
- ENC 2452+ ....... Honors Composition for Science

**Anthropology Department**
- ANT 1471+ ....... Cultural Difference in a Globalized Society

**History Department**
- 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.

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## 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.
  - The 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 I *(4 credits) *(REQUIRED)*
  - or any mathematics course for which one of the above courses is the direct prerequisite.

**Group B**
- MAC 1140 ...... Precalculus Algebra
- MAC 1114 ...... Trigonometry
- MAC 1147 ...... Precalculus Algebra & Trigonometry *(5 credits)*
- MAC 2210 ...... Intro Calculus w/Applications *(4 credits)* *(Permit Only)*
- MAC 2233 ...... Methods of Calculus
- MAC 2312 ...... Calculus with Analytic Geometry II *(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**
- Biology Department
  - BSC 1010 & L & D: Biological Principles *(4 cr. Incl. Lab & Dis)*
- Chemistry Department
  - CHM 2045 & L: General Chemistry 1 *(4 cr. Incl. Lab)*
- Physics Department
  - PHY 2048 & L *(REQUIRED)*: General Physics 1 *(5 credits incl. Lab)*

**Group B**
- Biology Department
  - BSC 1011 & L & D: Biodiversity *(4 cr. incl Lab & Dis)*

*Note*: Must select either BSC 1011 & 1010 or CHM 2045 & 2046 *(all with labs)*.

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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**
- History Department
  - AMH 2020 & D: U.S. History Since 1877 *(P/F) *(RECOMMENDED)*
- Anthropology Department
  - ANT 2000 & D: Introduction to Anthropology
- Economics Department
  - ECO 2013: Macroeconomic Principles §
- Political Science Department
  - POS 2041: Government of the United States *(RECOMMENDED)*
- Psychology Department
  - PSY 1012: Introduction to Psychology
- Sociology Department
  - SYG 1000: Sociological Perspectives *(RECOMMENDED)*

**Group B**
- History Department
  - AMH 2010 & D: U.S. History to 1877 *(P/F) *(RECOMMENDED)*
- Economics Department
  - ECO 2023: Microeconomic Principles §
  - ECP 2002: Contemporary Economic Issues
- Exceptional Student Education Department
  - EEX 2091: Disability and Society
- Geosciences Department
  - EVR 2017: Environment and Society
- Languages, Linguistics, & Comparative Literature Department
  - LIN 2001: Introduction to Language *(online course)*
- Public Administration Department
  - PAD 2258: Changing Environment of Soc., Bus., & Gov't
- Sociology Department
  - SYG 2010: Social Problems
- Urban & Regional Planning Department
  - URP 2051: Designing the City

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(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.
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.**
FOREIGN LANGUAGE (0 - 8 credits, 1 or more courses in the same language) - REQUIRED FOR BA MAJOR ONLY
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 (ARA/CHI/FRE/GER/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. All students must meet the Admissions Foreign Language requirement.

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

NOTE: Honors Seminars SHALL BE ACCEPTED AS MEETING THE WAC/GRW REQUIREMENT. See the University Advising Services Office for details.

<table>
<thead>
<tr>
<th>Credits</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>41</td>
<td>Intellectual Foundations Program</td>
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<tr>
<td>17</td>
<td>Free Electives (Foreign Language taken for BA count as electives)</td>
</tr>
<tr>
<td>9</td>
<td>Lower-Division College Requirements</td>
</tr>
<tr>
<td>24</td>
<td>Professional Education</td>
</tr>
<tr>
<td>29</td>
<td>Major Content</td>
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<tr>
<td><strong>120</strong></td>
<td><strong>TOTAL</strong></td>
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For additional information, please contact the College of Education Office for Academic and Student Services:
College of Education, Room 230
(561) 297-3570 or [http://www.coe.fau.edu/menu.htm](http://www.coe.fau.edu/menu.htm)

Note: To be admitted to a Teacher Education program, students must do the following:
1. Have a minimum GPA of 2.5 on a 4.0 scale on the lower division undergraduate general education component.
2. Submit passing scores on all sections of the General Knowledge (GK) test to the College of Education [www.fl.nesinc.com](http://www.fl.nesinc.com)
3. Meet the general university requirements for admission.
4. Complete FAU’s Intellectual Foundations Program or an AA Degree from a Florida State University or College.
5. Be interviewed and recommended for admission.
6. Be programmed by an assigned advisor.
7. Be approved for admission by the College of Education.
MAJOR COURSES, COLLEGE REQUIREMENTS and ELECTIVES

FREE ELECTIVES (17 credits)
Courses in any college, any department, including Education, needed to meet the 120 credits required for graduation.

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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)

LOWER DIVISION COLLEGE REQUIREMENTS (9 credits):
EDF 2005  Intro to the Teaching Profession (15 observation hours) (3 credits)
EDF 2085  Intro to Diversity for Educators (15 observation hours) (3 credits)
EME 2040  Introduction to Technology for Educators (3 credits) – (Online Course)

PROFESSIONAL EDUCATION (24 credits)
EDF 3210  Applied Learning Theory (3 credits)
EDF 3430  Educational Measurement and Evaluation (3 credits)
TSL 4324  ESOL Strategies for Content Area Teachers (3 credits)
SCE 4360  Science: Middle and Secondary School (3 credits)
RED 4335  Reading in the Content Areas (3 credits)
ESE 3940  Secondary School Effective Instruct (3 credits, 90 - hours plus security) **
SCE 4944  Student Teaching: Physics 6 – 12 (6 - 12 credits) (Full-time internship, completed during a fall/spring term)

PHYSICS MAJOR CONTENT (29 credits)
PHY 1090  First Year Physics Seminar (1 credit)
PHY 2049 + L  General Physics II + Lab (5 credits) (Prerequisite of PHY 2048 + L & MAC 2312)
MAP 3305  Engineering Mathematics I (3 credits)
PHY 3101C  Survey to Modern Physics (4 credits) (Prerequisite MAP 3305 Engineering Mathematics I)
PHY 3323  Electromagneism I (4 credits)
PHY 3722  Physical electronics (4 credits)

Upper –Division Physics and Mathematics Electives must be approved by advisor

SELECT TWO: (All courses are 4 credits each)
PHY 3503  Thermodynamics
PHY 4604  Quantum Mechanics I
          (Corequisite: PHZ 4113)
PHY 3221  Classical Mechanics

** Must be programmed and taken the fall/spring semester prior to student teaching.

IMPORTANT NOTES:

Students registered in Education courses must purchase “Live Text” which is an on-line tool that will be used to track individual student competency mastery (CAs) in initial certification programs. For detailed information, please visit: http://www.coe.fau.edu/livetext/default.htm

Field experience is a required component of some Education courses. All students requiring a field experience placement must have evidence of current security clearance. For detailed information, please visit: http://www.coe.fau.edu/students/oass/fieldexperience/default.aspx