### Mathematics Major (2022-2023)

**Bachelor of Arts (BA) or Bachelor of Science (BS)**

- **Mathematics Major**
  - **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
  - **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**
      - AST 2002
      - Intro. to Astronomy
    - **Group B**
      - MAC 1105 ..... College Algebra
      - MAC 2311 ..... Calc. w/Analytic Geometry 1 (4 credits) *(REQUIRED)*

- **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.
  - **Group A**
    - MAC 1105 ..... College Algebra
    - MAC 2311 ..... Calc. w/Analytic Geometry 1 (4 credits) *(REQUIRED)*
    - or any mathematics course for which one of the above courses is the direct prerequisite
  - **Group B**
    - MAC 2210 ..... Intro Calculus w/Applications (4 credits) *(Permit Only)*
    - MAC 2233 ..... Methods of Calculus
    - MAC 2241 ..... Life Science Calculus 1 (4 credits)
    - MAC 2312 ..... Calc. w/Analytic Geometry 2 (4 credits) *(REQUIRED)*
    - PHI 2102..... Logic

- **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 ♦
    - ANT 2000 & D ..... Introduction to Anthropology *(WAC)*
    - ECO 2013 ..... Macroeconomic Principles §
    - 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 2081 ..... Risk Resilience and Rising Seas ±
    - PAD 2258 ..... Changing Environment of Soc., Bus., & Gov’t
    - SYG 1000 ..... Sociological Perspectives
    - SYG 1001 ..... Sociology*
    - URP 2051 ..... Designing the City

**Note:** students seeking BS degree must select either CHM 2045 & Lab or PHY 2048 & Lab

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**University Advising Services**

March 16, 2022

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**FLORIDA ATLANTIC UNIVERSITY – INTELLECTUAL FOUNDATION PROGRAM 2022 – 2023**

All courses are three (3) credits unless otherwise indicated. Course selections should be made in consultation with an academic advisor.
## 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
- **POT 2000** ............. Global Political Theory ±
- **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
- **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
- **HUM 2471** .......... Racism and Anti-Racism ±
- **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) ++
- **LIT 2100** .......... Introduction to World Literature
- **SPC 2608** .......... Public Speaking ±

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### Students Assume Responsibility for Meeting All Graduation Requirements

Course selections should be made in consultation with an academic advisor.

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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.
** - MAC 2233 is a prerequisite for this course. If a lab is needed, then take General Physics 1 Lab (PHY 2048 Lab).
‡ - Co-requisite of College Algebra (MAC 1105) or a prerequisite of Introductory Chemistry (CHM 1025).
± - Starting Spring 2022 and afterwards.
◊ - See information box below regarding Civic Literacy Requirement

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.

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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.

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**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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[https://myfau.fau.edu](https://myfau.fau.edu)  
Go to MyFAU to:
- Check e-mail
- See FAU Announcements

**FAU Self-Service:**
- Course schedules
- Registration (drop/add classes) and withdrawals
- Student records and financial aid
- Tuition payments
- The University Course Catalog

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**Civic Literacy Requirement**

[https://www.fau.edu/ugstudies/civic-literacy-requirement/](https://www.fau.edu/ugstudies/civic-literacy-requirement/)

Beginning in Fall 2018, students entering a Florida public institution as a degree-seeking student for the first time needs to demonstrate civic literacy through either taking a certain course (AMH 2020 or POS 2041) or passing an assessment exam. Beginning in Summer 2021, Florida Legislature amended the statute and now requires students to complete **both** a civic literacy course (AMH 2020 or POS 2041) and an assessment exam.
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 (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.

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.

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<tr>
<th></th>
<th>BA</th>
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<tr>
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<td>34 - 38 cr.</td>
<td>35 - 40 cr.</td>
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<td>36 cr.</td>
<td>44 - 47 cr.</td>
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<td></td>
<td>18 cr.</td>
<td>12 cr.</td>
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<td>22 - 26 cr.</td>
<td>9 - 17 cr.</td>
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<td>120 Credits</td>
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<td>Intellectual Foundations Program w/Foreign Lang (math not included)</td>
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<td>Major Core</td>
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<td>Math Electives</td>
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<td>Upper Division Restricted Free Electives</td>
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<td>Free Electives</td>
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NOTE: See the catalog for specific requirements, course descriptions and additional information. The requirements for some Intellectual Foundations Program (IFP) courses & other courses may be satisfied by passing the appropriate AP or CLEP exam. Check with your advisor and college. The Department of Mathematical Sciences accepts passing scores for Calculus AB and Calculus BC.

The Department of Mathematical Sciences has the following requirements:

1. At least 15 credits of 3000 level or above (upper division) Mathematics core and elective requirements must be completed at FAU.
2. Any course work in the major field transferred from another institution must be approved by the math department.
3. The maximum amount of credit which may be earned through co-op is 10 credits; Mathematics Department does not allow these credits to count as major courses.
4. The Mathematics Department requires a minimum **2.2 GPA overall for (BA)** or **2.5 GPA overall for (BS)** in all Mathematics courses taken at FAU.
MAJOR COURSES, COLLEGE REQUIREMENTS and ELECTIVES

BACHELOR OF ARTS (BA) DEGREE

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>MAC 2311</td>
<td>Calculus w/ Analytic Geometry 1 (4 credits)</td>
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<tr>
<td>MAC 2312</td>
<td>Calculus w/ Analytic Geometry 2 (4 credits)</td>
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<tr>
<td>MAC 2313</td>
<td>Calculus w/ Analytic Geometry 3 (4 credits)</td>
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<tr>
<td>MAD 2104</td>
<td>Discrete Mathematics (3 credits)</td>
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<tr>
<td>MAD 2502</td>
<td>Intro to Computational Math (3 credits)</td>
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<tr>
<td>MAS 2103</td>
<td>Matrix Theory or Linear Algebra (3 credits)</td>
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<tr>
<td>MHF 3202</td>
<td>Introduction to Advanced Mathematics (3 credits)</td>
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<tr>
<td>STA 4442</td>
<td>Probability and Statistics 1 (3 credits)</td>
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Upper Division Math Electives (12 cr.)

Upper-division mathematics electives: These electives must be chosen from courses offered by the Department of Mathematical Sciences and numbered 3000 or higher. The following courses may not be used as upper-division mathematics electives:

STA 3163, STA 3173, STA 3949, MAT 3949, MAP 4945, or STA 4821

BACHELOR OF SCIENCE (BS) DEGREE

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHM 2045</td>
<td>General Chemistry 1 &amp; Lab (4 credits)</td>
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<tr>
<td>PHY 2048</td>
<td>General Physics 1 &amp; Lab (5 credits)</td>
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<tr>
<td>MAC 2311</td>
<td>Calculus w/ Analytic Geometry 1 (4 credits)</td>
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<td>MAP 2302</td>
<td>Differential Equations 1 (3 credits)</td>
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SPECIALIZATIONS WITHIN MATHEMATICS

CHECK WITH THE MATHEMATICS DEPARTMENT FOR SPECIALIZATION AREAS AND COURSES, INCLUDING:

ACTUARIAL SCIENCE
APPLIED MATHEMATICS
STATISTICS (MINOR)

COMBINATORICS
PURE MATHEMATICS
CRYPTOGRAPHY

DYNAMICAL SYSTEMS