# MATHEMATICS MAJOR (2023-2024)

**CHARLES E. SCHMIDT COLLEGE OF SCIENCE**  
Bachelor of Arts (BA) or Bachelor of Science (BS)

## 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 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
- BSC 1005 & L Life Science (3 cr. w/Lab)
- CHM 1020C Contemp. Chemical Issues
- ESC 2000 The Blue Planet (online)
- EVR 1001 Env. Sci. and Sustainability

### Group B
- ANT 2511 & L Intro to Biological Anthropology (4 cr. w/ Lab)
- ETG 2831 Physical Geol. (4 cr. w/Lab)
- GLY 2100 History of Earth and Life
- IDS 2382 Human Mission to Mars
- MET 2010 Weather, Climate & Climate Change
- PSC 2121 Physical Science

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

## 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 2010 & D ...... United States History to 1877 §
- AMH 2020 & D ...... United States History Since 1877 ◊
- ANT 2000 & D ...... Introduction to Anthropology (WAC)
- ECO 2013 .......... Macroeconomic Principles ◊
- ECO 2023 .......... Microeconomic Principles §
- ECO 2025 .......... Contemporary Economic Issues
- ECP 2002 .......... Changing Environment of Soc., Bus., & Gov’t
- EEX 2091 .......... Disability and Society
- EME 2620 .......... Digital Literacy in a Globally Connected World §
- 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 2010 .......... Social Problems
- URP 2051 .......... Designing the City

### Group B
- CCJ 2002 .......... Law, Crime & the Criminal Justice System ±
- DIG 2202 .......... Digital Culture
- ECO 2025 .......... Microeconomic Principles §
- EEC 2092 .......... Disability and Society
- EME 2620 .......... Digital Literacy in a Globally Connected World §
- 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 2010 .......... Social Problems
- URP 2051 .......... Designing the City

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**FLORIDA ATLANTIC UNIVERSITY – INTELLECTUAL FOUNDATION PROGRAM 2023 – 2024**  
*All courses are three (3) credits unless otherwise indicated. Course selections should be made in consultation with an academic advisor.*

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**University Advising Services**  
May 23, 2023
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
- JST 2452 Global Jewish Communities
- LAS 2000 Intro to Caribbean & Latin American Studies
- LIN 2607 Global Perspectives on Language
- MAR 2142 Culture, Consumers and the Global Marketplace
- MUH 2121 Music in Global Society
- POT 2000 Global Political Theory
- SOW 1005 Global Perspectives of Social Services
- SOW 1130 Race and Cultural Inclusion in Social Work
- WOH 2012 History of Civilization 1 (WAC)
- WOH 2022 History of Civilization 2
- WST 2351 Gender and Climate Change

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
Ω - Starting Spring 2023
◊ - See information box below regarding Civic Literacy Requirement
WAC - (WAC) Writing across the curriculum course.

$ 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, LIT 2070 and LIT 2391. 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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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

Civic Literacy Requirement
https://www.fau.edu/ugstudies/civic-literacy-requirement/
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.

<table>
<thead>
<tr>
<th>BA</th>
<th>BS</th>
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<tbody>
<tr>
<td>34 - 38 cr.</td>
<td>35 - 40 cr.</td>
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<tr>
<td>36 cr.</td>
<td>44 - 47 cr.</td>
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<tr>
<td>12 cr.</td>
<td>12 cr.</td>
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<tr>
<td>18 cr.</td>
<td>12 cr.</td>
</tr>
<tr>
<td>22 - 26 cr.</td>
<td>9 - 17 cr.</td>
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<tr>
<td>120 Credits</td>
<td>120 Credits</td>
</tr>
</tbody>
</table>

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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</thead>
<tbody>
<tr>
<td>MAC 2311</td>
<td>Calculus w/ Analytic Geometry 1</td>
<td>4</td>
</tr>
<tr>
<td>MAC 2312</td>
<td>Calculus w/ Analytic Geometry 2</td>
<td>4</td>
</tr>
<tr>
<td>MAC 2313</td>
<td>Calculus w/ Analytic Geometry 3</td>
<td>4</td>
</tr>
<tr>
<td>MAD 2104</td>
<td>Discrete Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MAD 2502</td>
<td>Intro to Computational Math</td>
<td>3</td>
</tr>
<tr>
<td>MAS 2103</td>
<td>Matrix Theory or Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MAA 4200</td>
<td>Modern Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MAS 4301</td>
<td>Modern Algebra</td>
<td>3</td>
</tr>
<tr>
<td>STA 4442</td>
<td>Probability and Statistics 1</td>
<td>3</td>
</tr>
</tbody>
</table>

### Upper Division Math Electives (12cr.)

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>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 2045 &amp; Lab or PHY 2048 &amp; Lab</td>
<td>General Chemistry 1 &amp; Lab</td>
<td>4</td>
</tr>
<tr>
<td>MAC 2311</td>
<td>Calculus w/ Analytic Geometry 1</td>
<td>4</td>
</tr>
<tr>
<td>MAC 2312</td>
<td>Calculus w/ Analytic Geometry 2</td>
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<td>3</td>
</tr>
<tr>
<td>MAD 2502</td>
<td>Intro. to Computational Math</td>
<td>3</td>
</tr>
<tr>
<td>MAP 2302</td>
<td>Differential Equations 1</td>
<td>3</td>
</tr>
<tr>
<td>MAS 2103</td>
<td>Matrix Theory or Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MAA 4200</td>
<td>Modern Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MAS 4301</td>
<td>Modern Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MAA 4402</td>
<td>Introductory Complex Analysis</td>
<td>3</td>
</tr>
<tr>
<td>STA 4442</td>
<td>Probability and Statistics 1</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