

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.

MATHEMATICS MAJOR (2022-2023)

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 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

- ___ COP 1031C Computer Programming & Data Literacy for Everyone (**For Non-College Engineering & Computer Science majors**)
- ___ MAC 1147 Precalculus Algebra & Trigonometry (4 credits)
- ___ 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 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

Group B

-----For Non-Science Majors-----

- ___ 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

-----For Science Majors-----

- ___ BSC 1010 & L & D
Biological Principles
(4 cr. w/Lab & Dis)
- ___ BSC 2085 & L
Anatomy & Physiology 1
(4 cr. w/Lab)
- ___ CHM 2045 & L (**see note**)
General Chemistry 1
(4 cr. w/Lab) ‡
- ___ PHY 2048 & L (**see note**)
General Physics 1
(5 credits w/Lab) *
- ___ PHY 2053 & L
College Physics 1
(5 credits w/Lab) **

-----For Non-Science Majors-----

- ___ ANT 2511 & L
Intro to Biological
Anthropology (4 cr. w/ Lab)
- ___ ETG 2831
Nature: Inter. of Sci., Eng., &
the Humanities
- ___ GLY 2010C
Physical Geol. (4 cr. w/Lab)
- ___ GLY2100
History of Earth and Life
- ___ IDS 2382
Human Mission to Mars
- ___ MET 2010
Weather, Climate & Climate
Change
- ___ PSC 2121
Physical Science

-----For Science Majors-----

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

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

Group B

- ___ AMH 2010 & DUnited States History to 1877
- ___ CCJ 2002.....Law, Crime & the Criminal Justice System ±
- ___ DIG 2202Digital Culture
- ___ ECO 2023.....Microeconomic Principles §
- ___ ECP 2002Contemporary Economic Issues
- ___ EEX 2091Disability and Society
- ___ EVR 1110Climate Change: The Human Dimensions
- ___ EVR 2017Environment and Society
- ___ LIN 2001Introduction to Language (**online course**)
- ___ PAD 2081.....Risk Resilience and Rising Seas ±
- ___ PAD 2258.....Changing Environment of Soc., Bus., & Gov't
- ___ SYG 2010Social Problems
- ___ URP 2051.....Designing the City

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

FOUNDATIONS IN GLOBAL CITIZENSHIP

(6 credit hours required)

Student must choose two (2) courses from among the following:

- ___ ANT 2410.....Culture and Society
- ___ EDF 2854Educated Citizen in Global Context
- ___ GEA 2000.....World Geography
- ___ INR 2002.....Introduction to World Politics
- ___ JST 2452Global Jewish Communities Ω
- ___ LAS 2000.....Intro to Caribbean & Latin American Studies
- ___ LIN 2607Global Perspectives on Language
- ___ MUH 2121Music in Global Society Ω
- ___ POT 2000.....Global Political Theory
- ___ SYP 2450.....Global Society
- ___ SOW 1005Global Perspectives of Social Services
- ___ SOW 1130Race and Cultural Inclusion in Social Work
- ___ WOH 2012 & D.....History of Civilization 1 (WAC) ++
- ___ WOH 2022.....History of Civilization 2
- ___ WST 2351Gender 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
- ___ LIT 2931..... Special Topics in Literature (WAC) ++ Ω
- ___ SPC 2608 Public Speaking ±

STUDENTS ASSUME RESPONSIBILITY FOR MEETING ALL GRADUATION REQUIREMENTS

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

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.

<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

(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.**

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.*

BA	BS	
34 - 38 cr.	35 - 40 cr.	Intellectual Foundations Program w/Foreign Lang (math not included)
36 cr.	44- 47 cr.	Major Core
12 cr.	12 cr.	Math Electives
18 cr.	12 cr.	Upper Division Restricted Free Electives
<u>22 - 26 cr.</u>	<u>9 - 17 cr.</u>	<u>Free Electives</u>
120 Credits	120 Credits	TOTAL

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 FAU3
- (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

	MAC 2311	Calculus w/ Analytic Geometry 1 (4 credits)
	MAC 2312	Calculus w/ Analytic Geometry 2 (4 credits)
	MAC 2313	Calculus w/ Analytic Geometry 3 (4 credits)
	MAD 2104	Discrete Mathematics (3 credits)
	MAD 2502	Intro to Computational Math (3 credits)
	MAS 2103	Matrix Theory or Linear Algebra (3 credits)
	MHF 3202	Introduction to Advanced Mathematics (3 credits)
	MAT 4937	Mathematical Problem Solving (3 credits)
	MAA 4200	Modern Analysis (3 credits)
	MAS 4301	Modern Algebra (3 credits)
	STA 4442	Probability and Statistics 1 (3 credits)

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

	CHM 2045 & Lab or PHY 2048 & Lab	General Chemistry 1 & Lab (4 credits) General Physics 1 & Lab (5 credits)
	MAC 2311	Calculus w/ Analytic Geometry 1 (4 credits)
	MAC 2312	Calculus w/ Analytic Geometry 2 (4 credits)
	MAC 2313	Calculus w/ Analytic Geometry 3 (3 credits)
	MAD 2104	Discrete Mathematics (3 credits)
	MAD 2502	Intro. to Computational Math (3 credits)
	MAP 2302	Differential Equations 1 (3 credits)
	MAS 2103	Matrix Theory or Linear Algebra (3 credits)
	MHF 3202	Introduction to Advanced Mathematics (3 credits)
	MAT 4937	Mathematical Problem Solving (3 credits)
	MAS 4107	Linear Algebra 2 (3 credits)
	MAA 4200	Modern Analysis (3 credits)
	MAS 4301	Modern Algebra (3 credits)
	MAA 4402	Introductory Complex Analysis (3 credits)
	STA 4442	Probability and Statistics 1 (3 credits)

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

SPECIALIZATIONS WITHIN MATHEMATICS

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

ACTUARIAL SCIENCE	COMBINATORICS
APPLIED MATHEMATICS	PURE MATHEMATICS
STATISTICS (MINOR)	CRYPTOGRAPHY
DYNAMICAL SYSTEMS	