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.

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

------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
Biological Principles
(4 cr. w/Lab)
____ 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) ******

Group B

------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
Biodiversity (4 cr. incl Lab)

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

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 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 **§**
____ POS 2041.....Government of the United States ◊
____ PSY 1012.....Introduction to Psychology
____ SYG 1000 .....Sociological Perspectives

Group B

____ AMH 2010 & D .....United States History to 1877
____ CCJ 2002.....Law, Crime & the Criminal Justice System ±
____ DIG 2202 .....Digital Culture
____ ECO 2023.....Microeconomic Principles **§**
____ ECP 2002 .....Contemporary Economic Issues
____ 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

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 Ω
____ 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 Ω
____ POT 2000.....Global Political Theory
____ SYP 2450.....Global Society
____ SOW 1005 .....Global Perspectives of Social Services
____ SOW 1130 .....Race and Cultural Inclusion in Social Work
____ WOH 2012 & D.....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.

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 ±

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.***

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

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.*

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
22 - 26 cr.	9 - 17 cr.	Free Electives
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 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

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