FLORIDA ATLANTIC UNIVERSITY – INTELLECTUAL FOUNDATION PROGRAM 2015 – 2016
All courses are three (3) credits unless otherwise indicated. Course selections should be made in consultation with an academic advisor.

MATHEMATICS MAJOR (2015-2016)

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: The American Revolution

Nursing Department (Department Permission Required)
___ NSP 1195+..... Being Cared For: Reflections from Other Side of Bed

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 two of the following courses, one must be from group A. The second course may be from group A or group B.

Group A

Biology Department
___ BSC 1005 & L ...... Life Science (3 credits including Lab)
___ BSC 1010 & L & D.. Biological Principles (4 credits including Lab & Dis)
___ BSC 2085 & L ...... Anatomy & Physiology 1 (4 credits including Lab) *

Chemistry Department
___ CHM 1020C............ Contemporary Chemical Issues
___ CHM 2045 & L ...... General Chem. 1 (4 cr w/Lab) ‡ (see note below)

Geosciences Department
___ ESC 2000 ............. Blue Planet (online course)
___ EVR 1001 ............. Environmental Science and Sustainability

Physics Department
___ AST 2002 .......... Introduction to Astronomy (P/F)
___ PHY 2048 & L ....... General Physics 1 (5 cr w/Lab) ** (see note below)
___ PHY 2053 .......... College Physics 1 (4 credits) ***

Group B

Anthropology Department
___ ANT 2511 & L ....... Intro to Biological Anthropology (4 cr. Incl. Lab)

Biology Department
___ BSC 1011 & L & D.. Biodiversity (4 cr. including Lab & Discussion)

Chemistry Department
___ CHM 2032 & L ...... Chem. for Health Sciences (4 cr. including Lab)
___ CHM 2083 .......... Chemistry in Modern Life (P/F)

Engineering Dean Department
___ ETG 2831 .......... Nature: Inter. of Sci., Eng., & the Humanities

Geosciences Department
___ GLY 2010C ............ Physical Geology (4 cr. including Lab)
___ GLY 2100 .......... History of Earth and Life
___ MET 2010 & D ...... Weather and Climate

Physics Department
___ PSC 2121 .......... Physical Science

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 two of the following courses, one must be from group A. The second course may be from group A or group B.

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
___ STA 2023 .......... Introductory Statistics
___ MAC 2311 .......... Calc. with Analytic Geometry 1 (4 cr) (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 2233 .......... Methods of Calculus
___ MAC 2312 .......... Calc. with Analytic Geometry 2 (4 cr) (REQUIRED)

Philosophy Department
___ PHI 2102 .......... Logic

Note: Students must take at least one course with the prefix MAC or MGF.

Foundations of Society & Human Behavior
(6 credit hours required)
Student must take two of the following courses, one must be from group A. The second course may be from group A or group B.

Group A

History Department
___ AMH 2020 & D ...... United States History Since 1877 (P/F)

Anthropology Department
___ ANT 2000 .......... Introduction to Anthropology

Economics Department
___ ECO 2013 .......... Macroeconomic Principles §

Political Science Department
___ POS 2041 .......... Government of the United States

Psychology Department
___ PSY 1012 .......... Introduction to Psychology

Sociology Department
___ SYG 1000 .......... Sociological Perspectives

Group B

History Department
___ AMH 2010 & D ...... United States History to 1877 (P/F)

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

Public Administration Department
___ PAD 2258 .......... Changing Environment of Soc., Bus., & Gov’t

Sociology Department
___ SYD 2790 .......... Race, Class, Gender, and Sexuality
___ SYG 1010 .......... Social Problems

Urban & Regional Planning Department
___ URP 2051 .......... Designing the City

Charles E. Schmidt College of Science
Bachelor of Arts (BA) or Bachelor of Science (BS)
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.

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.
- Nursing majors are required to take this course in their first semester.
- MAC 2311 is a prerequisite for this course. If a lab is needed, then take General Physics 1 Lab (PHY 2048 Lab).
- MAC 1105 and MAC 1114 are prerequisites 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).

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 and Lit 2070. See advisor for additional details.

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.
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.

- **HONORS NOTE:** Students can apply for the PSYCHOLOGY HONORS PROGRAM after completion of 60 credits, and before completion of 105 credits. Students must have a 3.2 overall & Psychology GPA to be admitted and retained in the Honors track.

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<tr>
<th>BA</th>
<th>BS</th>
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<tr>
<td>50 credits</td>
<td>53 credits</td>
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<td>21 credits</td>
<td>27 credits</td>
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<tr>
<td>15 credits</td>
<td>18 credits</td>
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<td>34 credits</td>
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<tr>
<td><strong>120 CREDITS</strong></td>
<td><strong>120 CREDITS</strong></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. No major course may be taken pass/fail;
4. 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;
5. 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

MATHEMATICS (33-42 credits beyond the Calculus sequence including the major core)

Major Core (21 credits, 7 courses) - REQUIRED FOR BOTH BA and BS DEGREES

- MAD 2104 Discrete Mathematics - MAC 1105 or higher is a prerequisite
- MAD 2502 Introduction to Computational Math - MAC 2311 co-requisite
- MAS 2103 Matrix Theory or Linear Algebra - MAC 2311 is a prerequisite
- MAS 4301 Modern Algebra - MAD 2104 is a prerequisite
- MAA 4200 Modern Analysis - MAC 2313 & MAD 2104 are prerequisites
- MAT 4937 Mathematical Problem Solving - MAD 2104, MAS 2103, MAC 2312 & MAD 2502 are prereqs
- STA 4442 Probability and Statistics - MAC 2313 is a prerequisite

BACHELOR OF ARTS (BA) DEGREE

Thirty-six (36) credits beyond the Major Core and Major Electives

Major Electives (15 credits minimum)

CHOOSE 6 COURSES, CONSULT WITH ADVISOR FOR APPROVAL IN SELECTION:

Any 3000 level or higher Mathematics course, listed in the catalog, not previously taken, EXCEPT: STA 3163, 3949, 4032, 4821, & MAT 3949. Only one pair of (MAP 2302, MAP 3305) or (MAP 4303, MAP 4306) may be counted as part of the elective requirements for the major.

BACHELOR OF SCIENCE (BS) DEGREE

Forty-five (45) credits beyond the Major Core and Major Electives including the following:

- MAA 4402 Introductory Complex Analysis – prerequisite MAC 2313
- MAP 2302 Differential Equations I (3 credits) - prerequisite MAC 2254 or MAC 2312
- MAS 4107 Linear Algebra II - MAS 2103 or Linear Algebra I is a prerequisite,

Major Electives (15 credits minimum)

CHOOSE 8 COURSES FROM THE FOLLOWING IN CONSULTATION WITH YOUR ADVISOR:

Any 3000 level or higher Mathematics course, listed in the catalog, not previously taken, EXCEPT: STA 3163, 3949, 4032, 4821, MAP 3305, and MAT 3949. Only one pair of (MAP 2302, MAP 3305) or (MAP 4303, MAP 4306) may be counted as part of the elective requirements for the major.

FREE ELECTIVES (22 – 24 credits for the BS, 34 for the BA)

Free electives are courses in any college, any department, including Mathematics (22 – 34 credits minimum), needed to meet the 120 credits required for graduation. Recommend COP 2220 – Programming in C.

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