**MATHEMATICS**

**COLLEGE:** ARTS AND SCIENCES  
**SCHOOL:** NONE  
**DEGREE:** BACHELOR OF ARTS  
**OPTION/TRACK:** NON-LIMITED ACCESS TRACK

**LIMITED ACCESS PROGRAM:** NO

**CAMPUS(ES) WHERE OFFERED/CONTACT:**  
TAMPA / Coordinator of Advising, Arts and Sciences, (813) 974-2503  
FT. MYERS / Advisor, Arts and Sciences, (941) 432-5500

- Program of Study at a Florida Community/Junior College or SUS School for Students Planning to Transfer to USF  
(State Mandated Common Prerequisites)

Students wishing to transfer to USF should complete the A.A. degree at the community college. Some courses required for the major may also meet General Education Requirements thereby transferring maximum hours to the university.

A student who transfers without an A.A. degree and has fewer than 60 semester hours of acceptable credit must meet the university’s entering freshman requirements including ACT or SAT test scores, GPA, and course requirements.

Students should complete the following **prerequisite courses** listed below at the lower level prior to entering the University. If these courses are not taken at the community college, they must be completed before the degree is granted. Unless stated otherwise, a grade of “C” is the minimum acceptable grade.

- COP XXXX  Computer Language Course (Pascal, FORTRAN, C, C+, or C++)
- MAC X311  Calculus I
- MAC X312  Calculus II
- MAC X313  Calculus III

Students must also complete two laboratory-based science courses, 4 - 8 semester hours total, from the respective science majors: Biology, Chemistry, Geology, or Physics.

- Admission Requirements to the University Program of Study

Please be aware of the immunization, foreign language, and continuous enrollment policies of the university. This is a non-limited access program with the above courses recommended.

- Requirements for the Major in Mathematics

The courses taken to satisfy the requirements below will constitute the major program referred to in the general graduation requirements of the College of Arts and Sciences.

Majors are encouraged to consult the department’s Undergraduate Advisor before every semester. The Undergraduate Advisor will recommend electives which are appropriate for the student’s interests and goals.

**Mathematics Requirements (Min. 45 cr. hrs.)**

**Core Requirement.** Majors must complete the following five courses (20 cr. hrs.):

- MAC 2311  Calculus I  (4)
- MAC 2312  Calculus II  (4)
- MAC 2313  Calculus III  (4)
- MGF 3301  Bridge to Abstract Mathematics  (4)
- MAS 3105  Linear Algebra  (4)

**Analysis Requirement.** Majors must complete one of the following two courses (4 cr. hrs.):

- MAA 4211  Intermediate Analysis I  (4)
- MAS 4156  Vector Calculus  (4)

Majors who complete both MAA 4211 and MAS 4156 may count one of these towards the Elective Requirement below.

**Elective Requirement.** Majors must complete seven courses from the following electives (Min. 21 cr. hrs.):

- CGS 3414  Problem Solving Using Pascal or C  (3)
- COP 4313  Symbolic Computations in Mathematics  (3)
- MAA 4211  Intermediate Analysis I  (4)
- MAA 4212  Intermediate Analysis II  (3)
- MAA 4402  Complex Variables  (3)
- MAD 4401  Numerical Analysis  (3)
- MAD 4504  Theory of Computation  (3)
- MAD 5305  Introduction to Graph Theory  (3)
- MAP 2302  Differential Equations  (3)
- MAP 5345  Applied Partial Differential Equations  (3)
- MAP 5407  Methods of Applied Mathematics  (3)
- MAS 4124  Numerical Linear Algebra  (3)
- MAS 4156  Vector Calculus  (4)
- MAS 5215  Number Theory  (3)
- MAS 4301  Elementary Abstract Algebra  (3)
- MAT 4970  Mathematics Senior Thesis  (3)
- MHF 5405  History of Modern Mathematics  (3)
- MTG 4214  Modern Geometry  (3)
- MTG 4302  Introduction to Topology  (3)
- STA 4321  Essentials of Statistics  (3)
- STA 4442  Introduction to Probability  (3)

**Special Notes.**

MAT 4930, Selected Topics in Mathematics, or 5000-level mathematics courses may be taken as electives, with the approval of the Undergraduate Advisor.

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Continued
One or two courses from another department which are of high mathematical content may also be taken as electives, with the approval of the Undergraduate Advisor and the Chairman.

Majors wishing to take a course in statistics should first take STA 4442 and then STA 4321.

Majors wishing to continue towards a graduate degree in mathematics should take MAS 4301 and MAA 4211.

**Mathematics-related Courses (Min. 6 cr. hrs.)**

Majors must take two courses in science or engineering which are required courses for the majors within those departments. The two courses need not be in the same department. Science courses must include laboratories and be offered by the Departments of Biology, Chemistry, Geology, or Physics.

Majors, except for majors in mathematics for teaching, must take two courses with laboratories in the Departments of Biology, Chemistry, Geology, or Physics that are required courses for the major within those departments.

Majors will not receive credit toward graduation for the following courses:

- AST 3033 Contemporary Thinking in Astronomy
- QMB 2111 Business and Economic Statistics I
- QMB 3200 Business and Economic Statistics II
- PHY 2020 Conceptual Physics
- STA 2023 Introductory Statistics I
- STA 2122 Social Science Statistics

Majors wishing to take a course in statistics should take STA 4321 Introduction to Statistics.