

Mathematics Major (Track 1), 27.0101 rev. March 2009
2009-2010 Catalog

Student Name _____

Date _____

e-mail _____

Phone _____

Advisor _____

Student No. _____

This is an abbreviated, general checklist. The Athens State Catalog, either printed or online, is the official document for Major, Minor, and University Requirements. This checklist is reflective of the Curriculum changes to be implemented with the 2009-2010 catalog.

General Education Requirements

| | | | |
|---------------|------------------------|------|-------|
| Area I | English Composition I | 3 SH | _____ |
| | English Composition II | 3 SH | _____ |

| | | | |
|----------------|-----------------------------|------|-------|
| Area II | Humanities/Fine Arts | | |
| | One Fine Arts Course | 3 SH | _____ |
| | One Literature Course | 3 SH | _____ |
| | Humanities/Fine Arts | 3 SH | _____ |
| | Humanities/Fine Arts | 3 SH | _____ |

| | | | |
|-----------------|--|------|-------|
| Area III | Mathematics and Natural Science | | |
| | Precalculus Algebra | 3 SH | _____ |
| | Natural Science (lab based) | 8 SH | _____ |

Calculus-based Physics I and II are highly recommended

| | | | |
|----------------|--|------|-------|
| Area IV | History/Behavioral and Social Science | | |
| | One History Course | 3 SH | _____ |
| | History, Behavioral or Social Science | 3 SH | _____ |
| | History, Behavioral or Social Science | 3 SH | _____ |
| | History, Behavioral or Social Science | 3 SH | _____ |

TOTAL General Education **41 Semester Hours**

| | | |
|--|--------|-------|
| Area V. Pre Professional | | |
| CIS 146 Microcomputer Applications or | | |
| CIS 301 Problem Solving with Computers | 3 SH | _____ |
| Precalculus Trigonometry | 3 SH | _____ |
| Calculus I, II, III | 12 SH | _____ |
| General Electives | 1-5 SH | _____ |

Total Major Prerequisite Hours **19-23 Semester Hours**

Total General Education and Major Prerequisite **60-64 Semester Hours**

A minimum of 60 semester hours of coursework must be taken at the 300-400 level. A minimum of 33 semester hours of the last 39 of these must be taken at Athens State. All professional course work must be completed with a grade of C or higher. *You must schedule your Math Exit Exam during your last semester. It is YOUR responsibility to schedule this exit exam with your Mathematics Advisor.*

Professional Courses

| | | |
|--|--------------------------|--|
| MA 308 Discrete Math | 3 SH | |
| MA 310 Linear Algebra or its equivalent | 3 SH | |
| MA 320 Introduction to Abstract Algebra | 3 SH | |
| MA 330 Advanced Math Software | 3 SH | |
| MA 421 Differential Equations | 3 SH | |
| *MA 431 Introduction to Mathematical Stats | 3 SH | |
| **Computer Programming Language, CS 317, C ⁺⁺ I | 3SH | |
| Computer Programming Language, CS 318, C ⁺⁺ II | 3 SH | |
| Total Required Professional | 24 Semester Hours | |

Three (3) Electives from the following:

| | |
|---|-------------------------|
| ❖ MA 314 College Geometry (take as General elective if you are Alternative B certification student) | |
| MA 316 Vector Analysis | |
| ***MA 401 Complex Variables | |
| MA 423 Numerical Analysis | |
| MA 428 Partial Differential Equations | |
| MA 441 Special Topics | |
| MA 445 Mathematical Modeling and Simulation | |
| MA 450 Advanced Calculus I | |
| MA 451 Advanced Calculus II | |
| ***MA 452 Introductory Real Analysis | |
| Total ELECTIVE Mathematics Hours | 9 Semester Hours |

A Two Semester Sequence is required from

| | |
|--|--|
| MA 421 DE and MA 428 PDE | |
| Or MA 450 and MA 451 Advanced Calculus I and II | |
| Or MA 401 Complex Analysis and MA 452 Real Analysis | |

Total Professional Hours **33 Semester Hours**

- *MA 331 Applied Probability and Statistics (or its equivalent) is recommended as a prerequisite and may be taken as a general elective. MA 308 is prerequisite
- **If no programming course ever taken, take CS 305 Intro to Programming as a general elective
- ***Recommended for Graduate School

MINOR: Minimum of 18 semester hours **18 Semester Hours**

General Electives **13 Semester Hours**

TOTAL Hours for Graduation **124-128 Semester Hours**

Departmental Math Exit Exam must be taken to qualify for graduation. Please contact your mathematics advisor about scheduling the exam when you apply for graduation.

**ALL UNIVERSITY REQUIREMENTS APPLY TO YOUR
GRADUATION REQUIRMENTS. CHECK THE ASU CATALOG
for THESE UNIVERISTY REQUIREMENTS.**