

Sample Graduation Plan - MATHEMATICS & STATISTICS MAJOR  
Track of Study - **APPLIED MATHEMATICS**

Total Credit Hours: 121 \*\*

| <b>Fall - Year 1 (15 hours)</b> | <b>Pre-Req</b>   | <b>Cr Hr</b> |
|---------------------------------|--|--------------|
| <b>MA 125 - Calculus I</b>      | C or better in MA 113 or MA 115 or sufficient MMT score* | 4            |
| Fine & Perf Arts (Bulletin)     |  | 3            |
| EH 101 - Composition I          |  | 3            |
| CAS 100 - First Year Experience |  | 2            |
| Hum & Fin Arts                  |  | 3            |
|                                 | <b>TOTAL HOURS:</b>                                      | <b>15</b>    |

| <b>Spring - Year 1 (16 hours)</b>          | <b>Pre-Req</b>                             | <b>Cr Hr</b> |
|--|--|--------------|
| <b>MA 126 - Calculus II</b>                | C or better in MA 125                      | 4            |
| <b>MA 320 - Foundations of Mathematics</b> | C or better in EH 102 or EH 104 and MA 125 | 3            |
| EH 102 - Composition II                    |  | 3            |
| CA 110 - Public Speaking                   |  | 3            |
| Hum & Fin Arts                             |  | 3            |
|  | <b>TOTAL HOURS:</b>                        | <b>16</b>    |

| <b>Fall - Year 2 (16 hours)</b>                    | <b>Pre-Req</b>                  | <b>Cr Hr</b> |
|--|---------------------------------|--------------|
| <b>MA 227 - Calculus III</b>                       | C or better in MA 126           | 4            |
| <b>ST 315 - Applied Probability and Statistics</b> | HS level algebra is recommended | 3            |
| Natural Science (Class 1 of 2 - see catalogue)     |                                 | 3            |
| Natural Science Lab (see catalogue)                |                                 | 1            |
| Lit Comp   |                                 | 3            |
| Elective (minor field)                             |                                 | 3            |
|  | <b>TOTAL HOURS:</b>             | <b>17</b>    |

| <b>Spring - Year 2 (16 hours)</b>                | <b>Pre-Req</b>                               | <b>Cr Hr</b> |
|--|--|--------------|
| <b>MA 237 - Linear Algebra I</b>                 | C or better in MA 126                        | 3            |
| <b>MA 238 - Applied Differential Equations I</b> | Should have taken or currently taking MA 227 | 3            |
| Natural Science (Class 2 of 2 - see catalogue)   |  | 3            |
| Natural Science Lab (see catalogue)              |  | 1            |
| Elective (minor field)                           |  | 3            |
| Elective (minor field)                           |  | 3            |
|  | <b>TOTAL HOURS:</b>                          | <b>16</b>    |

| <b>Fall - Year 3 (15 hours)</b>             | <b>Pre-Req</b>  | <b>Cr Hr</b> |
|---|---|--------------|
| <b>MA 334 - Advanced Calc I</b>             | C or better in MA 227 and MA 237; taken MA 320 or consent of instructor | 3            |
| <b>ST 335 - Applied Regression Analysis</b> | ST 210 or ST 315 or ST 320  | 3            |
| Foreign Language (Class 1 of 2)             |   | 3            |
| HY 101 - History of Western Civilization I  |   | 3            |
| Elective (minor field)                      |   | 3            |
|   | <b>TOTAL HOURS:</b>   | <b>15</b>    |

| <b>Spring - Year 3 (15 hours)</b>                       | <b>Pre-Req</b>        | <b>Cr Hr</b> |
|---|-----------------------|--------------|
| <b>MA 354 - Computer Assisted Mathematical Modeling</b> | C or better in MA 334 | 3            |
| <b>ST 340 - Design and Analysis of Experiments</b>      |                       | 3            |
| Foreign Language (Class 2 of 2)                         |                       | 3            |
| HY 102 - History of Western Civilization II             |                       | 3            |
| Elective  |                       | 3            |
|   | <b>TOTAL HOURS:</b>   | <b>15</b>    |

| <b>Fall - Year 4 (15 hours)</b>               | <b>Pre-Req</b>        | <b>Cr Hr</b> |
|---|-----------------------|--------------|
| <b>MA 332 - Differential Equations II</b>     | C or better in MA 126 | 3            |
| <b>MA 311 - Introduction to Number Theory</b> |                       | 3            |
| Hist, Soc, Beh (Bulletin)                     |                       | 3            |
| Elective (minor field)                        |                       | 3            |
| Elective (minor field)                        |                       | 3            |
|   | <b>TOTAL HOURS:</b>   | <b>15</b>    |

| <b>Spring - Year 4 (15 hours)</b>  | <b>Pre-Req</b>      | <b>Cr Hr</b> |
|------------------------------------|---------------------|--------------|
| <b>MA 436 - Numerical Analysis</b> |                     | 3            |
| <b>MA 481 - Cryptography</b>       |                     | 3            |
| Hist, Soc, Beh (Bulletin)          |                     | 3            |
| Elective (minor field)             |                     | 3            |
|                                    | <b>TOTAL HOURS:</b> | <b>12</b>    |

The General 4-Year Graduation Plan is designed as a guide for students preparing for their course selections. This information provides only a suggested schedule. Actual course selections should be made with the advice of a faculty adviser. For detailed information and course descriptions consult the University of South Alabama catalog.

Undergraduate students need 47 hours in Gen Ed and 44 hours in Mathematics/Statistics courses. See bulletin for required courses.  
All College of Arts and Sciences (CAS) students must take CAS 100 their first semester. See bulletin for details.

\* - MMT = MyMathTest (this is the Math Placement Test the university uses)

\*\* - See breakdown of credit hours on Gen Ed and Math Req Tab

|                  |          |
|------------------|----------|
| Elective courses | 21 Hours |
|------------------|----------|

|             |          |
|-------------|----------|
| Math course | 45 Hours |
|-------------|----------|

[Required Introductory and Intermediate Course for All Math Students](#)

[Required Course for APPLIED MATHEMATICS track of study](#)

Required elective (may Substitute MA 367 Combinatorial Enumeration, MA 437 Complex Variables, MA 458 Operations Research or MA 590

Special Topics)

**MA 320 is highly recommended for all Math Majors**