

MATHEMATICS - TRADITIONAL (BACHELOR OF SCIENCE)

The Traditional concentration emphasizes coursework to prepare the student for graduate work in mathematics and a career in mathematics (39 hours).

| Course | Title | Credits |
|--------------------------------------|-------|---------|
| Jax MIX General Education Curriculum | | 41 |

The Mathematics major requires completion of the following common courses with a "C" or better:

| Course | Title | Credits |
|--------|---|---------|
| MS 125 | Calculus I | 4 |
| MS 126 | Calculus II | 4 |
| MS 227 | Calculus III | 4 |
| MS 300 | Introduction to Advanced Mathematics (WI) | 3 |
| MS 344 | Differential Equations | 3 |
| MS 352 | Linear Algebra | 3 |
| MS 415 | Advanced Calculus I (WI) | 3 |
| MS 441 | Abstract Algebra I (WI) | 3 |

This concentration requires four elective courses selected from the departmental list of approved mathematics electives:

- At least two MS courses numbered 300 or higher¹
- at least two MS courses numbered 400 or higher

¹ Excludes MS 322 Selected Survey of Secondary School Mathematics (3), MS 331 Peer Educator (1), and MS 332 Peer Educator (2).

In addition to the common and elective courses, this concentration requires the following support courses:

| Course | Title | Credits |
|------------------------------|--|---------|
| PHS 221 | Physics for Scientists and Engineers I w/Lab | 4 |
| Select one of the following: | | 3 |
| CS 230 | Fundamentals of Computing (or higher programming course) | |
| CS 231 | Computer Programming I (or higher programming course) | |

A minor is not required for students majoring in Mathematics.

Note: This schedule reflects the mathematics program beginning with MS 125 (<https://catalog.jsu.edu/search/?P=MS%20125>) Calculus I (4). Freshman Mathematics majors needing additional preparation before beginning calculus will be placed in the appropriate algebra or precalculus courses that provide this preparation. See advisor.

In addition to courses noted below, candidates for graduation must successfully complete all JSU Academic Regulations. More information about Jax MIX requirements (<https://catalog.jsu.edu/undergraduate/jax-mix-requirements/>) and Alabama Transfers equivalents (<https://catalog.jsu.edu/undergraduate/alabama-transfers-equivalents/>) can be found in their respective section of the catalog.

| Freshman | | Hours |
|--|--|-----------|
| Fall | | |
| Jax MIX Communication: EH Composition Sequence | | 3 |
| MS 125 | Calculus I (Jax MIX Communication) | 4 |
| Jax MIX Experience: History | | 3 |
| SSC 101 | First Year Experience | 0 |
| Select one of the following: | | 3 |
| CS 230 | Fundamentals of Computing (or higher programming course) | |
| CS 231 | Computer Programming I (or higher programming course) | |
| Hours | | 13 |

| Spring | | Hours |
|---|-------------|-----------|
| Jax MIX Communication: EH Composition Sequence | | 3 |
| Jax MIX Expression: Fine Arts | | 3 |
| MS 126 | Calculus II | 4 |
| Jax MIX Experience (History if sequence) ¹ | | 3 |
| Jax MIX Experience: Social/Behavioral Science | | 3 |
| Hours | | 16 |

| Sophomore | | Hours |
|--------------------------------|---|-----------|
| Fall | | |
| EH 141 | Speech (Jax MIX Communication) | 3 |
| Jax MIX Expression: Literature | | 3 |
| MS 227 | Calculus III | 4 |
| PHS 221 | Physics for Scientists and Engineers I w/Lab (Jax MIX Inquiry: Science) | 4 |
| Hours | | 14 |

| Spring | | Hours |
|--|---|-----------|
| Jax MIX Expression (Literature if sequence) ¹ | | 3 |
| Jax MIX Inquiry: Science | | 4 |
| Jax MIX Experience: Social/Behavioral Science | | 3 |
| MS 300 | Introduction to Advanced Mathematics (WI) | 3 |
| MS 352 | Linear Algebra | 3 |
| Hours | | 16 |

| Junior | | Hours |
|----------------------------|------------------------|-----------|
| Fall | | |
| MS 344 | Differential Equations | 3 |
| Mathematics 300+ Electives | | 3 |
| General Electives | | 10 |
| Hours | | 16 |

| Spring | | Hours |
|----------------------------|--------------------------|-----------|
| MS 415 | Advanced Calculus I (WI) | 3 |
| Mathematics 300+ Electives | | 3 |
| General Electives | | 9 |
| Hours | | 15 |

| Senior | | Hours |
|----------------------------|-------------------------|-----------|
| Fall | | |
| MS 441 | Abstract Algebra I (WI) | 3 |
| Mathematics 400+ Electives | | 3 |
| General Electives | | 9 |
| Hours | | 15 |

| Spring | | Hours |
|----------------------------|--|------------|
| Mathematics 400+ Electives | | 3 |
| General Electives | | 12 |
| Hours | | 15 |
| Total Hours | | 120 |

¹ Either a history sequence or a literature sequence is required.