

# 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 higher<sup>1</sup>
- at least two MS courses numbered 400 or higher

<sup>1</sup> 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
<b>Fall</b>		
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)	
<b>Hours</b>		<b>13</b>

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) <sup>1</sup>		3
Jax MIX Experience: Social/Behavioral Science		3
<b>Hours</b>		<b>16</b>

Sophomore		Hours
<b>Fall</b>		
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
<b>Hours</b>		<b>14</b>

Spring		Hours
Jax MIX Expression (Literature if sequence) <sup>1</sup>		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
<b>Hours</b>		<b>16</b>

Junior		Hours
<b>Fall</b>		
MS 344	Differential Equations	3
Mathematics 300+ Electives		3
General Electives		10
<b>Hours</b>		<b>16</b>

Spring		Hours
MS 415	Advanced Calculus I (WI)	3
Mathematics 300+ Electives		3
General Electives		9
<b>Hours</b>		<b>15</b>

Senior		Hours
<b>Fall</b>		
MS 441	Abstract Algebra I (WI)	3
Mathematics 400+ Electives		3
General Electives		9
<b>Hours</b>		<b>15</b>

Spring		Hours
Mathematics 400+ Electives		3
General Electives		12
<b>Hours</b>		<b>15</b>
<b>Total Hours</b>		<b>120</b>

<sup>1</sup> Either a history sequence or a literature sequence is required.