

**Academic Pathways Map**  
**Applied Mathematical Sciences Transfer to MT Tech Part Time**  
**A.S. Jumpstart**  
**Engineering and Math**

**Start Here**

<b>SEMESTER 1</b>		CREDITS	MILESTONE	✓
M171	Calculus I	4	*	
WRIT121	Introduction to Technical Writing	3		
COLS101	First Year Seminar	3		

TOTAL CREDITS 10

<b>SEMESTER 2</b>		CREDITS	MILESTONE	✓
M172	Calculus II	4	*	

TOTAL CREDITS 4

<b>SEMESTER 3</b>		CREDITS	MILESTONE	✓
Choose 1 of 3	BIOB160, BIOH201, CHMY141	4	*	
Choose 1 of 3	PHL110, SPNS101, SPNS102	3-4		

TOTAL CREDITS 7-8

<b>SEMESTER 4</b>		CREDITS	MILESTONE	✓
Choose 1 of 3	PHL110, SPNS101, SPNS102	3-4		
Choose 1 of 3	BIOB101, BIOH211, CHMY143	4	*	

TOTAL CREDITS 7 - 8

<b>SEMESTER 5</b>		CREDITS	MILESTONE	✓
PSYX120	Research Methods I	3		
ECNS201	Principles of Microeconomics	3		

TOTAL CREDITS 6

<b>SEMESTER 6</b>		CREDITS	MILESTONE	✓
COMX111	Introduction to Public Speaking	3		
CSCI100	Introduction to Programming	3		
Choose 1 of 3	PHL110, SPNS101, SPNS102	3-4		

TOTAL CREDITS 9 - 10

SEMESTER 7		CREDITS	MILESTONE	✓
Choose 1 of 5	ANTY101, PSCI210, PSYX100, PSYX230, SOCI101	3		
NASX105	Introduction to Native American Studies	3		
STAT216	Introduction to Statistics	3		
PHSX220	Physics I (w/Calculus)	4		

TOTAL CREDITS    13

SEMESTER 8		CREDITS	MILESTONE	✓
CSCI111	Programming with Java I	3		
ECNS202	Principle of Macroeconomics	3		

TOTAL CREDITS    6

**You are finished!**

**Pathway Advising Notes:** This is a Jumpstart Pathway. Courses taken at Helena College will transfer to Montana Technological University and will satisfy most of the coursework required in the first two years of the Applied Mathematics degree.

- There are some courses that are offered on the MT Tech campus only which can be taken after transfer.
- M273 Multivariable Calculus and M274 Differential can be taken at MT Tech.

**Course Advising Notes:** M171: Students not prepared for M 171 their first semester should consider taking M 151 the summer prior. (MT Tech required course)

WRIT121: WRIT 121 meets both HC core and Mt. Tech core for writing. M172: MT Tech required course

1 of PHL110, SPNS101, SPNS102: (PHL110 strongly encouraged)

1 of BIOB160, BIOH201, CHMY141: Student should choose a 2-semester sequence that best suits their career goals.

Student may alternatively take PHSX 222 – see Physics option. (MT Tech required course sequence)

PHSX220: Take PHYS 205 Physics Using Calculus I: Mechanics at Carroll College

1 of PHL110, SPNS101, SPNS102: PHL 110 strongly encouraged but can choose any of these options. H&FA courses shown satisfy MT Tech Gen Ed requirements and HC requirements. (Can be taken any semester)

1 of BIOB101, BIOH211, CHMY143: Course should match the sequence taken in Semester 1. Second course for BIOB160 is BIOB101, not BIOB170. (MT Tech required course sequence)

1 of PHL110, SPNS101, SPNS102: Take 3rd of 3 options

1 of ANTY101, PSCI210, PSYX100, PSYX230, SOCI101: Choose any Social/Psychological Sciences course listed. All courses shown meet the Social Science Core requirement at Mt Tech and the S&PS/H course requirement at HC.

**Career Info:** The 2023 median pay for mathematicians and statisticians was \$104,860 per year, according to the United States Department of Labor Bureau of Labor Statistics. Overall employment is projected to grow 11 percent through 2033.