

# MATHEMATICS | BACHELOR OF SCIENCE: MATHEMATICS (MIDDLE SCHOOL MATH)

## Program Summary

Code	Title	Hours
General Education Courses		34
Major Core Courses		33-35
Cognates		20
Science Requirement <sup>2</sup>		20
Open Electives <sup>1</sup>		11-13
<b>Total hours to complete BS - Math</b>		<b>120</b>
Additional Credit Hours Required for Teacher Education:		
Teacher Education Requirements		31

<sup>1</sup> Open electives are the credit hours required to reach a minimum of 120 total hours and 45 upper-level hours. The number listed assumes all courses are completed at FHSU as listed. This number may vary if students transfer courses, or have individual substitutions allowed. Students should speak with their advisor if either situation applies to determine if the number will vary, and to ensure they enroll in a minimum of 45 upper-level hours. Students entering within 1 year of high school graduation will take UNIV 101 Freshman Seminar and may apply that hour in the open elective category.

<sup>2</sup> A candidate for a Bachelor of Science degree must complete 20 hours of Natural Science coursework outside the major area.

## Program Requirements

### General Education

All undergraduate degrees require completion of the Kansas Systemwide General Education (<https://catalog.fhsu.edu/general-education/>).

Courses identified with <sup>GE</sup> on this page may satisfy a general education requirement in addition to the identified degree requirement. Students who apply a degree requirement to satisfy a general education requirement will typically add an equal number of hours to the the university elective category. This flexibility may allow you to complete a minor or certificate within the 120 hour degree. Transfer students and students majoring in programs with approved exceptions (<https://www.fhsu.edu/general-education/documents/fhsu-gen-ed-transfer-exceptions-explainer1.pdf>) are especially encouraged to select these courses in completing General Education requirements to maximize the likelihood of completing the degree with 120 credit hours.

Code	Title	Hours
<b>General Education</b>		<b>34-35</b>
<b>Major Core Courses</b>		
CSCI 121	Computer Science I	3
MATH 130	Pre-Calculus Mathematics <sup>GE</sup>	3
MATH 180	Concepts of Elementary Mathematics	3

MATH 234	Analytic Geometry and Calculus I	5
MATH 250	Elements of Statistics <sup>GE</sup>	3
MATH 277	Early Field Experience: Mathematics Education	1
MATH 278	Apprenticeship-Mathematics	2
MATH 370	History of Mathematics	3
MATH 381	Teaching of Secondary School Mathematics	3
MATH 620	Modern Geometry	3
MATH 675	Seminar in Mathematics	1-3
TEEL 360	Mathematics Methods	3
<b>Cognate</b>		
PHYS 111	Physics I <sup>GE</sup>	4
PHYS 111L	Physics I Laboratory <sup>GE</sup>	1
<b>Total Hours</b>		<b>38-40</b>

<sup>1</sup> Only 11 credit hours may be counted from TEEL 496 - Student Teaching Elementary

<sup>2</sup> Only one credit hour may be counted from TEEL 675 - Seminar in Education I

<sup>3</sup> These courses count toward cognate course requirements for Teacher Education

The Bachelor of Science in Education with an emphasis in Secondary Education is available only as part of a dual major in conjunction with a major in an academic teaching field approved by the KSDE at the PreK-12 and 6-12 levels. The teaching fields available at FHSU for students interested in licensure at middle or high school levels are art, biology, business, chemistry, earth/space science, English, modern languages (Spanish), journalism, mathematics, music, physical education, physics, psychology, technology education (communications; power, energy, transportation; production), history and government. For requirements in each content, please contact the appropriate teaching area departmental office. Students wishing to complete the requirements for the Secondary Education major must also meet the Teacher Education Program admission requirements. This program follows the Conceptual Framework for Teacher Education at Fort Hays State University.

Code	Title	Hours
Secondary Education Core		19
Courses from field of study		variable
Student Teaching		12
<b>Total number of credit hours varies based on chosen field of study</b>		

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<b>General Education</b>		<b>34-35</b>

## Program Admission Requirements & General Education Courses

To earn an undergraduate degree at FHSU, you must complete 34 hours of General Education coursework. For the Secondary Education degree the following classes typically applied to the general education requirements must be completed with the specified grade for admission to the teacher education program, these include:

Code	Title	Hours
ENG 101	English Composition I (Grade C) <sup>GE</sup>	3
ENG 102	English Composition II (Grade B) <sup>GE</sup>	3
COMM 100	Fundamentals of Oral Communication (Grade B) <sup>GE</sup>	3
or COMM 304	Intermediate Interpersonal Communication	
MATH 110	College Algebra (Grade C) <sup>GE</sup>	3
or MATH 101	Contemporary Mathematics	
or MATH 130	Pre-Calculus Mathematics	
or MATH 234	Analytic Geometry and Calculus I	
MATH 250	Elements of Statistics (Grade C) <sup>GE</sup>	3

For a current list of all teacher education admission requirements check out the programs website (<https://www.fhsu.edu/cert/admission-to-teacher-education/>)

## Secondary Education Requirements

These requirements are in addition to the requirements for the primary degree

Code	Title	Hours
<b>Secondary Education Core Non-Restricted Courses</b>		
TEEL 202	Foundations of Education (Grade C)	3
TEEL 231	Human Growth and Development (Grade C) <sup>GE</sup>	3
TECS 301	Introduction to Instructional Technology (Grade C)	3
___ 277	Early Field Experience (Grade C)	
<b>Secondary Education Core Restricted Courses (Admission to Teacher Education Required)</b>		
TESP 302	Educating Students with Exceptionalities	3
TEEL 431	Educational Psychology	3
TESS 494	The Secondary School Experience	4
<b>Student Teaching Courses</b>		
TESS 496	Student Teaching Secondary	11
TEEL 675	Seminar in Education I	1

Total Secondary Education Courses: 31 Credit Hours. The 31 credit hours doesn't include method classes in the discipline or additional cognates necessary for specific fields.

- All program courses must be completed with a C or better
- Major requires 2.75 GPA

## Degree Requirements

Code	Title	Hours
<b>All bachelor degrees require:</b>		
GPA of 2.0 on FHSU courses & 2.0 on all coursework (Higher program requirements prevail over the 2.0 when set)		
A minimum of 30 hours earned from FHSU with a grade of D, C, B, or A		
Successful completion of an upper division Writing and Information Literacy course (Most majors contain a course designated)		
A minimum of 45 hours of recognized upper division credit		
A minimum of 120 hours of recognized college credit		

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A minimum of 45 hours of recognized upper division credit		
A minimum of 120 hours of recognized college credit		

## Degree Maps

Course	Title	Hours
<b>First Year</b>		
<b>Fall</b>		
ENG 101	English Composition I	3
COMM 100	Fundamentals of Oral Communication	3
UNIV 101	Freshman Seminar	1
MATH 130	Pre-Calculus Mathematics	3
SGE060 - Arts Humanities Discipline Area		3
Open Electives		3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
SGE070 - Institutionally Designated Area: Personal and Professional Development		3
SGE040 - Natural Physical Science Discipline Area		4
ENG 102	English Composition II	3
MATH 234	Analytic Geometry and Calculus I	5
<b>Hours</b>		<b>15</b>
<b>Second Year</b>		
<b>Fall</b>		
SGE060 - Arts Humanities Discipline Area		3
SGE050 - Social Behavioral Sciences Discipline Area		3
MATH 180	Concepts of Elementary Mathematics	3
SGE050 - Social Behavioral Sciences Discipline Area		3
TEEL 202	Foundations of Education	3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
Open Electives		3
Open Electives		3
MATH 250	Elements of Statistics	3

MATH 277	Early Field Experience: Mathematics Education	1
MATH 370	History of Mathematics	3
TEEL 231	Human Growth and Development	3
<b>Hours</b>		<b>16</b>
<b>Third Year</b>		
<b>Fall</b>		
Open Electives		3
PHYS 111 & 111L	Physics I and Physics I Laboratory	5
CSCI 121	Computer Science I	3
Open Electives		3
TECS 301	Introduction to Instructional Technology	3
<b>Hours</b>		<b>17</b>
<b>Spring</b>		
TEEL 360 & TEEL 377	Mathematics Methods and Mathematics Internship	4
MATH 620	Modern Geometry	3
TESP 302	Educating Students with Exceptionalities	3
SGE070 - Institutionally Designated Area: Critical Thinking		3
MATH 278	Apprenticeship-Mathematics	2
<b>Hours</b>		<b>15</b>
<b>Fourth Year</b>		
<b>Fall</b>		
Open Electives		1
MATH 381	Teaching of Secondary School Mathematics	3
TEEL 431	Educational Psychology	3
TESS 494	The Secondary School Experience	4
MATH 675	Seminar in Mathematics	3
<b>Hours</b>		<b>14</b>
<b>Spring</b>		
TESS 496	Student Teaching Secondary	11
TEEL 675	Seminar in Education I	1
<b>Hours</b>		<b>12</b>
<b>Total Hours</b>		<b>120</b>

**Academic Degree Maps** are term-by-term sample course plans that specify milestones, courses, and special requirements that are necessary for facilitating on-time completion. Degree Maps are *examples* and are not prescriptive. Individualized choices such as concentration options, transfer credits, optional minors, advisory programs (certificates), etc. can alter the recommended coursework. Course offerings are subject to change. Students should consult with their academic advisors for additional guidance on course planning.

To determine courses to take in the directed choices (often listed as Program Elective Course) and directed elective course blocks see the overview tab for courses. To locate approved courses in General Education areas (Undergraduate Programs) see the general education section (<https://catalog.fhsu.edu/general-education/>) of the catalog.

The undergraduate course maps typically advise the most efficient route for students to complete the general education requirements. Courses that are required in the major may be listed as fulfilling relevant general education requirements. This will result in more open elective course hours in some maps than is listed on the degree overview page.