

# Mathematics

## Associate of Science to Bachelor of Science

Effective beginning Academic Year 2019-20 (Last revised June 6, 2019)

GENERAL EDUCATION REQUIREMENTS/OHIO TRANSFER MODULE		Course Number	Credit Hours
ENGLISH COMPOSITION AND ORAL COMMUNICATION:			3-4
Course 1:	Any OTM approved First Writing (TME001) course	ENG 111 or ENG 111P	3-4
MATHEMATICS, STATISTICS, AND LOGIC:			5
Course 1:	Calculus I (TMM005) <sup>1</sup>	MTH 180	5
ARTS AND HUMANITIES:			6
+ Course 1:	Any OTM approved Arts and Humanities course	OTM Elective (see list on last page)	3
+ Course 2:	Any OTM approved Arts and Humanities course	OTM Elective (see list on last page)	3
SOCIAL AND BEHAVIORAL SCIENCES:			6
+ Course 1:	Any OTM approved Social and Behavioral Sciences course	OTM Elective (see list on last page)	3
+ Course 2:	Any OTM approved Social and Behavioral Sciences course	OTM Elective (see list on last page)	3
NATURAL SCIENCES:			10
Course 1:	Calculus-based Physics I with lab (OSC016)	PHY 221	5
Course 2:	Calculus-based Physics II with lab (OSC017) or any OTM approved Natural Sciences course	PHY 222	5
ADDITIONAL CREDITS: <sup>2</sup>			8
Course 1:	Any OTM approved Second Writing (TME002) course	ENG 112 or HON 201	3
Course 2:	Calculus II (TMM006)	MTH 232	5
<b>GENERAL EDUCATION/OHIO TRANSFER MODULE TOTAL:</b>			<b>38-39</b>
<p>Advising Notes:            Where it indicates "Any OTM approved," students should work closely with their advisors.            (+) indicates that the courses chosen should be from two different areas within that category.  <sup>1</sup> A prerequisite, such as College Algebra (TMM001), may be needed for a student to reach Calculus I (TMM005).  <sup>2</sup> Due to the variability across institutions, students should work with their academic advisor to determine an appropriate program of study and appropriate amount of additional credits to satisfy the OTM.</p>			

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PRE-MAJOR/BEGINNING MAJOR		Course Number	Credit Hours
Course 1:	Calculus III (OMT018)	MTH 233	4
Course 2:	Elementary Linear Algebra (OMT019)	MTH 235	3
Course 3:	Elementary Differential Equations (OMT020)	MTH 234	3
PRE-MAJOR/BEGINNING MAJOR TOTAL:			10

OTHER REQUIREMENTS		Course Number	Credit Hours
Electives:	General Electives as needed (May include FYE or Orientation course) <sup>1</sup>	STM 105	2
		Electives	12
OTHER REQUIREMENTS TOTAL:			14

**Advising Notes:**

<sup>1</sup> Certain institutions may require two semesters or more of foreign language for Bachelor of Arts and Bachelor of Science degrees. If so, foreign language should be taken – check with your receiving institution. Additional recommended pre-major/major coursework may include a course in programming or proofs. Consult with your academic advisor and your receiving institution to determine an appropriate program of study.

ASSOCIATE DEGREE	Total Credit Hours
ASSOCIATE DEGREE TOTAL:	62-63

### SPECIAL NOTES

Students with plans of pursuing a pre-professional or graduate studies track in the future should work closely with their academic advisor and receiving institution starting in the first year of their program in order to adequately prepare themselves for those types of tracks. Some pre-professional degrees include pre-medicine, pre-veterinary, pre-law, and pre-dentistry.

Some bachelor-degree granting programs may be competitive and admission into the program is not guaranteed. Students should check with individual institutions for their program admission requirements.

Some bachelor-degree granting institutions require additional general education courses outside of the Ohio Transfer Module and students may be required to take these courses in their junior or senior year. Students will still be able to follow this pathway and complete their bachelor's degree in approximately 60 additional credit hours.

For additional information, please contact:  
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### SAMPLE DEGREE MAP

#### FIRST YEAR

SEMESTER 1		SEMESTER 2	
Course Name & Number	Credit Hours	Course Name & Number	Credit Hours
ENG 111 Composition I or ENG 111P Composition I Plus	3-4	MTH 232 Calculus II	5
MTH 180 Calculus I	5	OTM Arts and Humanities Elective (see list on last page)	3
STM 105 Technology in Society	2	OTM Social and Behavioral Sciences Elective (see list on last page)	3
OTM Arts and Humanities Elective (see list on last page)	3	ENG 112 Composition II or HON 201 Interpretations Seminar	3
OTM Social and Behavioral Sciences Elective (see list on last page)	3	General Elective	3
<b>Total Semester 1 Credit Hours</b>	<b>16-17</b>	<b>Total Semester 2 Credit Hours</b>	<b>17</b>

#### SECOND YEAR

SEMESTER 3		SEMESTER 4	
Course Name & Number	Credit Hours	Course Name & Number	Credit Hours
MTH 233 Calculus III	4	MTH 234 Differential Equations	3
PHY 221 Calculus-Based Physics I	5	MTH 235 Linear Algebra	3
General Elective	3	PHY 222 Calculus-Based Physics II	5
General Elective	3	General Elective	3
<b>Total Semester 3 Credit Hours</b>	<b>15</b>	<b>Total Semester 4 Credit Hours</b>	<b>14</b>

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### OHIO TRANSFER MODULE AND GENERAL EDUCATION ELECTIVES

Please work closely with your advisor when selecting courses.

OTM ARTS AND HUMANITIES	Course Number	Credit Hours
Art Appreciation	ART 101	3
History of Western Art	ART 105	3
Introduction to Literature	ENG 200	3
Introduction to Fiction	ENG 210	3
American Multicultural Lit	ENG 215	3
Introduction to Poetry	ENG 220	3
Women in Literature	ENG 225	3
American Literature I	ENG 266	3
American Literature II	ENG 267	3
World Civilization I	HIS 151	3
World Civilization II	HIS 152	3
Amer History I (Begin to 1877)	HIS 201	3
Amer Hist II (1877 - Present)	HIS 202	3
World War II	HIS 250	3
History of Women in America	HIS 270	3
Intro to the Humanities	HUM 100	3
World Religions	HUM 275	3
Music Appreciation	MUS 101	3
Survey of Jazz Styles	MUS 102	3
History of Popular Music	MUS 103	3
Music of World Cultures	MUS 105	3
Music History I	MUS 201	3
Music History II	MUS 202	3
Intro to Philosophy	PHL 101	3
Principles of Ethics	PHL 102	3
Introduction to Film	THE 261	3

OTM NATURAL SCIENCES	Course Number	Credit Hours
Astronomy	AST 101	3
General Biology I	BIO 201	5
General Biology II	BIO 202	5
Anatomy and Physiology I	BIO 211	4
Anatomy and Physiology II	BIO 212	4
Human Genetics	BIO 239	3
General Chemistry I	CHM 121	5
General Chemistry II	CHM 122	5
Organic Chemistry I	CHM 201	5

OTM SOCIAL AND BEHAVIORAL SCIENCES	Course Number	Credit Hours
Intro to Anthropology	ANT 101	3
Cultural Anthropology	ANT 200	3
Current Economic Issues	ECO 100	3
Principles of Economics	ECO 111	3
Microeconomics	ECO 201	3
Macroeconomics	ECO 202	3
Intro to Comparative Politics	GOV 100	3
American Government	GOV 111	3
State and Local Government	GOV 205	3
Contemporary Global Issues	GOV 207	3
Human Geography	GPH 106	3
Geography of the US and Canada	GPH 108	3
Physical Geography	GPH 110	3
World Regional Geography	GPH 206	3
General Psychology	PSY 101	3
Psychology of Childhood	PSY 210	3
Social Psychology	PSY 215	3
Intro to Human Sexuality	PSY 217	3
Abnormal Psychology	PSY 220	3
Intro to Gerontology	PSY 230	3
Life Span Psychology	PSY 260	3
The Psychology of Gender	PSY 270	3
Sociology	SOC 101	3
Social Problems	SOC 201	3
Marriage and the Family	SOC 210	3
Multicultural Diversity in US	SOC 220	3
Criminology	SOC 240	3

OTM NATURAL SCIENCES, CONTINUED	Course Number	Credit Hours
Climate & Weather	CLW 105	3
Intro to Environmental Science	ENV 101	3
Lab Intro to Environmental Science	ENV 102	1
General Physics I	PHY 201	5
General Physics II	PHY 202	5
Calculus Based Physics I	PHY 221	5
Calculus Based Physics II	PHY 222	5