

Mathematics

Associate of Science to Bachelor of Science

EFFECTIVE BEGINNING ACADEMIC YEAR 2023-24

LAST REVISED: April 2, 2025

The following table outlines how transfer credits will be applied to the Bachelor of Science in Mathematics degree at Central State University for students who completed an Associate of Science degree via the Ohio Guaranteed Mathematics Transfer Pathway. The OGTP designation guarantees the transfer and applicability of credits, but does not guarantee admission to a program. Some bachelor-degree granting programs may be competitive, and students should check with individual institutions for their program admission requirements.

COURSE EQUIVALENCIES FROM THE ASSOCIATE DEGREE	COURSE NUMBER	CREDIT HOURS
GENERAL EDUCATION REQUIREMENTS/OHIO TRANSFER 36		
Any Ohio Transfer 36 approved First Writing (TME001) course	ENG 1101	4
Calculus I (TMM005)1	MTH 2502	4
Any Ohio Transfer 36 approved Arts and Humanities course ²	Ohio Transfer 36 Elective*	3
Any Ohio Transfer 36 approved Arts and Humanities course ²	Ohio Transfer 36 Elective*	3
Any Ohio Transfer 36 approved Social and Behavioral Sciences course	Ohio Transfer 36 Elective*	3
Any Ohio Transfer 36 approved Social and Behavioral Sciences course	Ohio Transfer 36 Elective*	3
Calculus-based Physics I with lab (OSC016)	PHY 2411	5
Calculus-based Physics II with lab (OSC017) or any Ohio Transfer 36 approved Natural Sciences course	Ohio Transfer 36 Elective*	3
Any Ohio Transfer 36 approved Second Writing (TME002) course	ENG 1102	4
Calculus II (TMM006)	MTH 2503	5
Up to 3 additional hours of Ohio Transfer 36 approved courses²	OT36 Elective	3
PRE-MAJOR/BEGINNING MAJOR		
Calculus III/Multivariate Calculus (OMT018)	MTH 3002 (To be submitted) ³	4
Elementary Linear Algebra (OMT019)	MTH 3001	3
Elementary Differential Equations (OMT020)	MTH 3110	4
OTHER RECOMMENDATIONS		
General Electives as needed (Recommended: Discrete Mathematics (TMM023); May include FYE or Orientation course) ^{2,4}	Varies*	7-12
TOTAL HOURS FROM ASSOCIATE DEGREE:		60-65

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- (*) Indicates that coursework will be evaluated for applicable equivalency upon transfer at the university. If a Transfer Assurance Guide (TAG) course is taken, the approved course equivalency will be awarded.
- ¹ A prerequisite may be needed for a student to reach Calculus I (TMM005).
- ² Central State University recommends students complete one course in Western/World Civilization OHS041 or OHS042. If a course is not completed, an additional course may be required upon transfer.
- ³ "To be submitted" indicates that the course does not currently carry the statewide course equivalency guarantee. However, the institution is working towards this goal and will act in good faith to ensure the appropriate equivalency is given that counts toward the degree.

 ⁴ Central State University recommends students take Introductory Statistics (TMM010).



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The following additional coursework will be required to complete the Bachelor of Science in Mathematics degree at Central State University after a student has completed an Associate of Science Ohio Guaranteed Mathematics Transfer Pathway degree. 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.

MAINING COUR	SEWORK TO COMPLETE BACHELOR'S DEGREE	COURSE NUMBER	CREDIT HOURS
Major Requirement:	Abstract Algebra I	MTH 3520	3
Major Requirement:	Introduction to Real Analysis	MTH 4120	3
Major Requirement:	Capstone: Selected Topics in Mathematics	MTH 4600	3
Major Requirement:	Computer Science I	CPS 1191	4
Major Requirement:	Computer Science II	CPS 1192	4
Major Requirement:	Choose three: Numerical Methods Operations Research Abstract Algebra II Intro. to Discrete Structures History of Mathematics Functions of a Complex Variable	MTH 3310 MTH 3430 MTH 3521 MTH 3610 MTH 4030 MTH 4730	9
Major Requirement:	Foundation of Mathematics	MTH 2540	3
Major Requirement:	Probability & Statistics I (if not taken as part of the associate degree)	MTH 2001	0-3
Major Requirement:	Probability & Statistics II	MTH 2002	3
Major Requirement:	Scientific Writing and Research	MTH 3530	2
Electives:	ELECTIVE From List B, C, D or math option	OT36 Elective	3
Electives:	General Electives	Varies	25-29
Marauder Lifestyle:	Undergraduate Success Seminar	USS 1000	2
Marauder Lifestyle:	Physical Activity	Varies	1
MAINING COURSEW	ORK TO COMPLETE BACHELOR'S DEGREE TOTAL:1		65-68

Advising Notes:

¹ Central State University requires 120 to complete degree requirements. The total number of hours to complete a bachelor's degree represents a range of hours that may be needed depending on the individual course selections made during the associate degree program.

COMPLETE BACHELOR'S DEGREE	TOTAL CREDIT HOURS
BACHELOR'S DEGREE TOTAL:	120

SPECIAL NOTES

For more information, please contact: Dr. Deng Cao, Chair and Professor, Computer Science dcao@centralstate.edu 937-376-6624



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SAMPLE DEGREE MAP

THIRD YEAR

SEMESTER 5		
COURSE NAME & NUMBER	CREDIT HOURS	
CPS 1191 Computer Science I	4	
MTH 2001 Probability & Statistics I (if not taken as part of the associate degree)	3	
MTH 2540 Foundations of Mathematics	3	
Elective	3	
USS 1000 Undergraduate Success Seminar	2	
Physical Activity	1	
Total SEMESTER 5 Credit Hours	16	

SEMESTER 6		
COURSE NAME & NUMBER	CREDIT HOURS	
CPS 1192 Computer Science II	4	
MTH 2002 Probability & Statistics II	3	
MTH 3520 Abstract Algebra I	3	
MTH XXXX Mathematics Elective	3	
ELECTIVE From List B, C, D or math option	3	
Total SEMESTER 6 Credit Hours	16	

FOURTH YEAR

SEMESTER 7		
COURSE NAME & NUMBER	CREDIT HOURS	
MTH XXXX Mathematics Elective	3	
MTH XXXX Mathematics Elective	3	
MTH 3530 Scientific Writing and Research	3	
Elective	3	
Elective	3	
Elective	3	
Total SEMESTER 7 Credit Hours	18	

SEMESTER 8		
COURSE NAME & NUMBER	CREDIT HOURS	
MTH 4120 Introduction to Real Analysis	3	
MTH 4600 Capstone: Selected Topics in Math	3	
Elective	3	
Total SEMESTER 8 Credit Hours	18	