

Date Modified:	5.11.22
MSU Transfer Advisor:	Dr. William Bray WBray@MissouriState.edu 417-836-6270

OZARKS TECHNICAL COMMUNITY COLLEGE

Courses are sequenced to provide guidance and to help ensure that prerequisite requirements are met.

Catalog Year: 2022-2023

OTC Associate of Science in Mathematics to MSU Bachelor of Science in Mathematics



**The following is a guide to graduation with completion of OTC's Associate of Science in Mathematics and MSU's Bachelor of Science in Mathematics degree.
The B.S. in Mathematics may be completed on campus only.
*This is a comprehensive major meaning it does not require completion of a minor.***

OTC Year 1 Semester 1

REQUIREMENT DESCRIPTION	OTC COURSE ID	TITLE	CREDIT HOURS	MSU EQUIVALENT	MEETS CORE 42	MSU MAJOR REQUIREMENT
Mathematical Sciences 5 credit hours required for the A.S. in Mathematics <i>Must earn "C" or better</i>	MTH 140	Analytic Geometry and Calculus I	5	MTH 261	✓	✓
Computer Applications Course	CIS 120	Introduction to Computer Programming	3	CSC 130		✓
Written Communications 6 credit hours	Choose one: ENG 100 ENG 101	Composition I with Support Composition I	3-5	ENG 110	✓	
Social/Behavioral Sciences 6 credit hours required for the A.S. in Mathematics 9 credit hours required for Core 42 (Must fulfill 2 disciplines)	Choose one: PLS 101	 HST 120 HST 130	3	HST 121 HST 122 PLS 101	✓	
Semester 1 Total			14-16			

OTC Year 1 Semester 2

REQUIREMENT DESCRIPTION	OTC COURSE ID	TITLE	CREDIT HOURS	MSU EQUIVALENT	MEETS CORE 42	MSU MAJOR REQUIREMENT
Program Specific Course <i>Must earn "C" or better</i>	MTH 141	Analytic Geometry and Calculus II	5	MTH 280		✓
Natural Sciences 10 credit hours required for the A.S. in Mathematics (Must fulfill 2 disciplines including one course with a lab component)	PHY 220	Physics Engrs & Scientists I	5	PHY 203	✓	✓
Humanities and Fine Arts 3 credit hours required for the A.S. in Mathematics 9 credit hours required for Core 42 (Must fulfill 2 disciplines)	Choose one: ART 100 ART 101 ART 105 ART 120▲	ASL 101 ASL 102 CHN 101 ENG 180 ENG 240 ENG 241 ENG 260 ENG 265 ENG 270 ENG 271 FRN 101 FRN 102 GRM 101 GRM 102 HUM 101 MUS 101 MUS 105 MUS 106 MUS 110 MUS 235*▲	3	Varies	✓	
Written Communications 6 credit hours	ENG 150	Technical Writing	3	ENG 221	✓	
Semester 2 Total			16			

OTC Year 2 Semester 3

REQUIREMENT DESCRIPTION	OTC COURSE ID	TITLE	CREDIT HOURS	MSU EQUIVALENT	MEETS CORE 42	MSU MAJOR REQUIREMENT
Program Specific Course <i>Must earn "C" or better</i>	MTH 240	Analytic Geometry and Calculus III	3	MTH 302		✓
Program Specific Course	MTH 215	Algebraic Structures	3	MTH 315		✓
Social/Behavioral Sciences 6 credit hours required for the A.S. in Mathematics 9 credit hours required for Core 42 (Must fulfill 2 disciplines)	ECO 270	Principles of Macroeconomics	3	ECO 155	✓	
Institutional Elective 10 hours required for A.S. Mathematics	Any course numbered 100 and above - your choice.		3	Varies		
Oral Communications 3 credit hours	Choose one: COM 100	COM 105 COM 200	3	Varies	✓	
Semester 3 Total			15			

OTC Year 2 Semester 4

REQUIREMENT DESCRIPTION	OTC COURSE ID	TITLE	CREDIT HOURS	MSU EQUIVALENT	MEETS CORE 42	MSU MAJOR REQUIREMENT
Program Specific Elective	MTH 241	Differential Equations	3	MTH 303		✓
Program Specific Elective	MTH 230	Linear Algebra	3	MTH 333		✓
Natural Sciences 10 credit hours required for the A.S. in Mathematics (Must fulfill 2 disciplines including one course with a lab component)	BIO 160	General Biology I	4	BIO 121	✓	
Institutional Elective 10 hours required for A.S. Mathematics	Any course numbered 100 and above - your choice.		7	Varies		
Semester 4 Total			17			
Total Hours at OTC			62-64	<i>Total Hours Applied Toward MSU Major Requirements:</i>		30

* One credit hour course

▲ May choose only one, falls under MOTR code 'PERF'

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**MSU Bachelor of Science in Mathematics (Comprehensive)
after OTC Associate of Science in Mathematics**

MSU Year 3 Semester 1

REQUIREMENT DESCRIPTION	MSU COURSE ID	TITLE	CREDIT HOURS
Major Requirement	MTH 532	Introduction to Abstract Algebra	3
Major Requirement	MTH 540	Statistical Theory	3
Major Elective	Choose any Mathematics course numbered 400 and above with the assistance of an advisor.		3
Social/Behavioral Sciences <i>9 credit hours</i> (Must fulfill 2 disciplines)	Choose one: ANT 100 ANT 125 ANT 303 CFD 155	COM 260 CRM 210 ECO 101 ECO 155	ECO 165 GRY 100 HST 103 HST 104
		HST 121 HST 122 MED 120 PLN 100	PLS 101 PLS 205 PLS 232 PSY 121
General Elective **	Work with your MSU advisor to identify courses that will complement your specific career goals.		3
Semester 1 Total			15

MSU Year 3 Semester 2

REQUIREMENT DESCRIPTION	MSU COURSE ID	TITLE	CREDIT HOURS
Major Requirement	MTH 503	Advanced Calculus I	3
Major Requirement	Choose one: MTH 421 MTH 541	Numerical Analysis I Statistical Theory II	3
Major Elective	Choose any Mathematics course numbered 400 and above with the assistance of an advisor.		3
Major Elective	Choose any Mathematics course numbered 400 and above with the assistance of an advisor.		3
Humanities and Fine Arts <i>9 credit hours</i> (Must fulfill 2 disciplines)	Choose one: ARB 101 ARB 102 ART 115▲ ART 200 ART 212	ART 271 ART 272 CHI 101 CSD 330 CSD 331	ENG 200 ENG 289 ENG 340 ENG 341 ENG 350 ENG 351
		FRN 101 FRN 102 GRM 101 GRM 102	ITL 101 ITL 102 JPN 101 JPN 102 KOR 101
		KOR 102 LLT 121 MED 274 MUS 100 MUS 162*▲	MUS 175▲ MUS 176*▲ MUS 178*▲ MUS 239 MUS 241
		MUS 345 MUS 346 MUS 347 PHI 105 PHI 110	PHI 115 PTG 101 PTG 102 REL 100 REL 101
		REL 102 REL 210 RUS 101 RUS 102 SPN 101	SPN 102 THE 101
Semester 2 Total			15

MSU Year 4 Semester 3

REQUIREMENT DESCRIPTION	MSU COURSE ID	TITLE	CREDIT HOURS
Major Elective	Choose any Mathematics course numbered 400 and above with the assistance of an advisor.		3
Major Elective	Choose any Mathematics course numbered 400 and above with the assistance of an advisor.		3
Humanities and Fine Arts <i>9 credit hours</i> (Must fulfill 2 disciplines)	Choose one: ARB 101 ARB 102 ART 115▲ ART 200 ART 212	ART 271 ART 272 CHI 101 CSD 330 CSD 331	ENG 200 ENG 289 ENG 340 ENG 341 ENG 350 ENG 351
		FRN 101 FRN 102 GRM 101 GRM 102	ITL 101 ITL 102 JPN 101 JPN 102 KOR 101
		KOR 102 LLT 121 MED 274 MUS 100 MUS 162*▲	MUS 175▲ MUS 176*▲ MUS 178*▲ MUS 239 MUS 241
		MUS 345 MUS 346 MUS 347 PHI 105 PHI 110	PHI 115 PTG 101 PTG 102 REL 100 REL 101
		REL 102 REL 210 RUS 101 RUS 102 SPN 101	SPN 102 THE 101
General Elective **	Work with your MSU advisor to identify courses that will complement your specific career goals.		6
Semester 3 Total			15

MSU Year 4 Semester 4

REQUIREMENT DESCRIPTION	MSU COURSE ID	TITLE	CREDIT HOURS
Major Requirement	MTH 497	Topics	1
Major Elective	Choose any Mathematics course numbered 400 and above with the assistance of an advisor.		3
General Elective **	Work with your MSU advisor to identify courses that will complement your specific career goals.		8
Core 42 Elective	Choose MOTR coded course of your choice with the assistance of an advisor.		1
Semester 4 Total			13
Total Hours at MSU			58
Total Hours Overall			120-122

** Electives provide the opportunity to customize your degree program. Some elective credits may or may not be needed to bring total credit hours to a minimum of 120 credit hours and upper division hours (300+) to 40.

* One credit hour course

▲ May choose only one, falls under MOTR code 'PERF'

This degree is also available as a Bachelor of Arts (BA).
[Click here to access the Bachelor of Arts Degree Requirements](#)
Please consult an MSU transfer advisor to determine your best degree options.

This information is provided as a guide only.

- OTC students are strongly encouraged to meet with their major specific MSU transfer advisor early in their OTC education to discuss the most appropriate OTC coursework for their intended MSU major, MSU degree requirements, etc.
- Students are required to fulfill MSU graduation and GPA requirements to receive a degree and should consult with their MSU advisor and the MSU undergraduate catalog for details, as there may exist pre-requisite requirements as well as periodicity limitations that could affect scheduling sequences.
- Please note that transfer students from Missouri public colleges and universities may follow the general education and general baccalaureate degree requirements in effect at Missouri State when they first enrolled (or re-enrolled after an absence of one calendar year or more) as degree-seeking students at the institutions from which they transferred (e.g., OTC).