OZARKS TECHNICAL COMMUNITY COLLEGE

OTC Associate of Science in Mathematics to
MSU Bachelor of Science in Mathematics (Comprehensive)

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

Catalog Year: 2021-2022

FINISH IN 4 GO BEARS!

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.
The Mathematics degree 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* *Must earn "C" or better*	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 *Must earn "C" or better*	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 ASL 101 ENG 240 ENG 270 GRM 101 MUS 106 PHL 105 SPN 101 ART 101 ASL 102 ENG 241 ENG 271 GRM 102 MUS 110 REL 100 SPN 102 ART 105 CHN 101 ENG 260 FRN 101 MUS 101 MUS 235✶▲ REL 101 THR 101 ART 120▲ ENG 180 ENG 265 FRN 102 MUS 105 PHL 101 REL 102		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 *Must earn "C" or better*	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	5	BIO 121	✔	
Institutional Elective *10 hours required for A.S. Mathematics*	Any course numbered 100 and above - your choice.		7	Varies		
		Semester 4 Total	**18**			
		Total Hours at OTC	**63-64**	*Total Hours Applied Toward MSU Major Requirements:*		22

✶ One credit hour course   ▲ May choose only one, falls under MOTR code 'PERF'

Missouri State
U N I V E R S I T Y

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 *9 credit hours* (Must fulfill 2 disciplines)	**Choose one:** ANT 100 COM 260 ECO 165 HST 121 PLS 101 SOC 150 ANT 125 CRM 210 GRY 100 HST 122 PLS 205 SOC 152 ANT 303 ECO 101 HST 103 MED 120 PLS 232 CFD 155 ECO 155 HST 104 PLN 100 PSY 121		3
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 *9 credit hours* (Must fulfill 2 disciplines)	**Choose one:** ARB 101 ART 271 ENG 200 ENG 289 ENG 362 ITL 101 KOR 102 MUS 175▲ MUS 345 PHI 115 REL 102 SPN 102 ARB 102 ART 272 ENG 203▲ ENG 340 FRN 101 ITL 102 LLT 121 MUS 176∗▲ MUS 346 PTG 101 REL 210 THE 101 ART 115▲ CHI 101 ENG 205▲ ENG 341 FRN 102 JPN 101 MED 274 MUS 178∗▲ MUS 347 PTG 102 RUS 101 ART 200 CSD 330 ENG 215▲ ENG 350 GRM 101 JPN 102 MUS 100 MUS 239 PHI 105 REL 100 RUS 102 ART 212 CSD 331 ENG 282 ENG 351 GRM 102 KOR 101 MUS 162∗▲ MUS 241 PHI 110 REL 101 SPN 101		3
		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 *9 credit hours* (Must fulfill 2 disciplines)	**Choose one:** ARB 101 ART 271 ENG 200 ENG 289 ENG 362 ITL 101 KOR 102 MUS 175▲ MUS 345 PHI 115 REL 102 SPN 102 ARB 102 ART 272 ENG 203▲ ENG 340 FRN 101 ITL 102 LLT 121 MUS 176∗▲ MUS 346 PTG 101 REL 210 THE 101 ART 115▲ CHI 101 ENG 205▲ ENG 341 FRN 102 JPN 101 MED 274 MUS 178∗▲ MUS 347 PTG 102 RUS 101 ART 200 CSD 330 ENG 215▲ ENG 350 GRM 101 JPN 102 MUS 100 MUS 239 PHI 105 REL 100 RUS 102 ART 212 CSD 331 ENG 282 ENG 351 GRM 102 KOR 101 MUS 162∗▲ MUS 241 PHI 110 REL 101 SPN 101		3
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.	9
		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).