

Mathematics B.S. Option 1 (Applied)

Mathematics, B.S., Concentration 1 (Applied) Eight-Semester Degree Program

Students wishing to follow the eight-semester degree plan should see the Eight-Semester Degree Policy (<http://catalog.uark.edu/undergraduatecatalog/academicregulations/eightsemesterdegreecompletionpolicy/>) for university requirements of the program.

Core requirement hours may vary by individual, based on placement and previous credit granted. Once all core requirements are met, students may substitute a three-hour (or more) general elective in place of a core area.

First Year	Units	
	Fall	Spring
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1)	3	
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1) ^{1, 2}	4	
U.S. History or Government State Minimum Core requirement (Satisfies General Education Outcome 4.2)	3	
Social Sciences State Minimum Core requirement (Satisfies General Education Outcome 3.3) ³	3	
General elective or coursework, as needed	3	
ENGL 1023 Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.1)		3
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505) ¹		4
MATH 2803 Transition to Advanced Mathematics		3
Science State Minimum Core lecture with corequisite lab requirement (Satisfies General Education Outcome 3.4)		4
Year Total:	16	14

Second Year	Units	
	Fall	Spring
MATH 2574 Calculus III (ACTS Equivalency = MATH 2603) ¹	4	
CSCE 2004 Programming Foundations I ¹	4	
Social Sciences State Minimum Core requirement (Satisfies General Education Outcomes 3.3 and 4.1) ⁴	3	
Science State Minimum Core lecture with corequisite lab requirement (Satisfies General Education Outcome 3.4)	4	
MATH 2584 Elementary Differential Equations ^{1, 5}	4	
MATH 3093 Abstract Linear Algebra ^{1, 5}	3	

Social Sciences State Core requirement (Satisfies General Education Outcomes 3.3 and 5.1) ⁶		3
Fine Arts or Humanities State Minimum Core requirement, as needed (Satisfies General Education Outcome 3.1 or 3.2) ^{7, 8}		3
General Elective or coursework, as needed		3
Year Total:	15	16

Third Year	Units	
	Fall	Spring
MATH 3113 Introduction to Abstract Algebra I ^{1, 5}	3	
STAT 3013 Introduction to Probability ^{1, 5}	3	
MATH 4423 Introduction to Partial Differential Equations	3	
or MATH 3583 Foundations of Applied Mathematics		
General Electives or coursework, as needed	6	
MATH 4353 Numerical Linear Algebra ^{1, 5}		3
MATH or STAT Electives numbered 3000 or higher, or CSCE 4133		3
Humanities or Fine Arts State Minimum Core requirement, as needed (Satisfies General Education Outcome 3.2 or 3.1) ^{7, 8}		3
General Electives or coursework, as needed		6
Year Total:	15	15

Fourth Year	Units	
	Fall	Spring
MATH 4513 Advanced Calculus I ^{1, 5}	3	
MATH 4363 Numerical Analysis ^{1, 5}	3	
MATH or STAT Electives numbered 3000 or higher, or CSCE 4133	3	
General Electives or coursework, as needed	6	
MATH 4933 Mathematics Major Seminar (Satisfies General Education Outcomes 1.2 and 6.1) ^{1, 5}		3
General Electives or coursework, as needed to complete 120 degree credit hours		11
Year Total:	15	14

Total Units in Sequence: 120

¹ Meets 40-hour advanced credit hour requirement. See College Academic Regulations (<http://catalog.uark.edu/undergraduatecatalog/collegesandschools/jwilliamfulbrightcollegeofartsandsciences/>).

² Students have demonstrated successful completion of the learning indicators identified for learning outcome 2.1, by meeting the prerequisites for MATH 2554.

³ The Social Sciences Elective courses which satisfy General Education Outcome 3.3 include: AGEC 1103, AGEC 2103, ANTH 1023, COMM 1023, ECON 2013, ECON 2023, ECON 2143, EDST 2003, HDFS 1403, HDFS 2413, HDFS 2603, HIST 1113, HIST 1113H, HIST 1123, HIST 1123H, HIST 2003, HIST 2013, HIST 2093, HUMN 1114H, HUMN 2114H, INST 2813, INST 2813H, PLSC 2003, PLSC 2013, PLSC 2203, PLSC 2813, PLSC 2813H, PSYC 2003, RESM 2853, SOCI 2013, SOCI 2013H, or SOCI 2033.

⁴ The Social Sciences Elective courses which satisfy General Education Outcomes 3.3 and 4.1 include: ANTH 1023, COMM 1023, HDFS 1403,

HDFS 2413, HIST 1113, HIST 1113H, HIST 1123, HIST 1123H, HIST 2093, HUMN 1114H, HUMN 2114H, INST 2813, INST 2813H, PLSC 2013, PLSC 2813, PLSC 2813H, RESM 2853, SOCI 2013, SOCI 2013H, or SOCI 2033.

- ⁵ Meets 24-hour rule (24 hours of 3000-4000 level courses in Fulbright College), in addition to meeting the 40-hour rule. See College Academic Regulations (<http://catalog.uark.edu/undergraduatecatalog/collegesandschools/jwilliamfulbrightcollegeofartsandsciences/>).
- ⁶ The Social Sciences Elective courses which satisfy General Education Outcomes 3.3 and 5.1 include: HDFS 1403, HDFS 2603, HIST 2093, HUMN 1114H, HUMN 2114H, INST 2813, INST 2813H, PLSC 2813, or PLSC 2813H.
- ⁷ The Fine Arts Elective courses which satisfy General Education Outcome 3.1 include: ARCH 1003, ARHS 1003, COMM 1003, DANC 1003, LARC 1003, MLIT 1003, MLIT 1003H, MLIT 1013, MLIT 1013H, MLIT 1333, THTR 1003, THTR 1013, or THTR 1013H.
- ⁸ The Humanities Elective courses which satisfy General Education Outcome 3.2 include: AAST 2023, ANTH 1033, ARCH 1013, CLST 1003, CLST 1003H, CLST 1013, COMM 1233, DANC 1003, ENGL 1213, GNST 2003, HIST 1113, HIST 1113H, HIST 1123, HIST 1123H, HIST 2003, HIST 2013, HUMN 1124H, HUMN 2213, LALS 2013, MRST 2013, MUSY 2003, MUSY 2003H, PHIL 2003, PHIL 2003C, PHIL 2003H, PHIL 2103, PHIL 2103C, PHIL 2303, THTR 1003, THTR 1013, THTR 1013H, WLIT 1113, WLIT 1123, or intermediate-level world language (usually 2003-level).