College of Science, Department of Mathematics
Bachelor of Science in Mathematics, **Mathematics Education Option**
For students entering under UG Catalog **2022-2023**

I. Pathways General Education Requirements (48 credits)

Concept 1: Discourse.

(1f) Foundational Discourse (6 credits)

| ENGL 1105: First-Year Writing | 3 | | | ENGL 1106: First-Year Writing* | 3 | |

(1a) Advanced or Applied Discourse (3 credits)

| | 3 | |

Concept 2: Critical Thinking in the Humanities (6 credits)

| | 3 | | | | 3 | |

Concept 3: Reasoning in the Social Sciences (6 credits)

| | 3 | | | | 3 | |

Concept 4: Reasoning in the Natural Sciences (7 credits)

| | 4 | | | | 3 | |

Concept 5: Quantitative and Computational Thinking

(5f) Foundational Quantitative and Computational Thinking (8 credits)

| MATH 1225: Calculus of a Single Variable* | 4 | | | MATH 1226: Calculus of a Single Variable* | 4 | |

(5a) Advanced or Applied Quantitative and Computational Thinking (3 credits)

| STAT 3005: Statistical Methods* or STAT 3604: Statistics for Social Sciences* | 3 | |

See **Statistics** in Section III

Concept 6: Critique and Practice in Design and the Arts (6 credits = [3 in design + 3 in arts] or [6 in integrated design and arts])

| | 3 | | | | 3 | |

Concept 7: Critical Analysis of Identity and Equity in the United States (3 credits)

| | 3 | |

In Pathways, some courses can be used for Concept 7 plus one other concept, but no other double-counting is permitted.

II. Mathematics Bachelor of Science Core Courses (21 credits)

MATH 2114: Introduction to Linear Algebra*		3			

Multi-D Calculus: 6 credits from –
    MATH 2204 Intro Multivariable Calculus*
    MATH 2214 Intro Diff Equations*
    MATH 3214 Calculus of Several Variables*
	MATH 2204 and MATH 2214 are required for math education option.	3		3	

MATH 3034: Introduction to Proofs*		3			
MATH 3144: Linear Algebra I*		3			
MATH 3224: Advanced Calculus*		3			

Computer Programming 3 credits from –
    MATH 1454 Intro to Math Programming*
    MATH 3054 Programming for Math*
    CS 1044 Intro Prog in C
    CS 1114 Intro to Software Design
		3			

*Some courses listed on this checksheet may have prerequisites and/or corequisites; please consult the University Course Catalog or check with your advisor.

III. Required Courses Specific to the Mathematics Education Option (28 credits)

Mathematics

MATH 2644: Mathematics Tutoring*	1	
MATH 3124: Modern Algebra*	3	
MATH 4044: History of Mathematics*	3	
MATH 4334: College Geometry*	3	
MATH 4625, 4626: Math for Secondary Teachers*	6	

Statistics

STAT 3005 Statistical Methods* or STAT 3604 Statistics for Social Sciences* May also be used for Pathways 5a.	3	

Education

(Required)

EDCI 5604: Assessment and Diagnosis for the Mathematics Classroom*	3	

Choose any two (2) of the following:

Take EDCI 5914 during Master's Program (5th year) if at all possible.

EDEP 5154: Psych Foundations for Teachers*	3	
EDCI 5104: Schooling in American Society*	3	
EDCI 5554: Educ Except Learners*	3	
EDCI 5264: Comp and Cont Rdg*	3	
EDCI 5914: Multicultural Teaching ESL*	3	

Students need Senior status to enroll in 5000-level EDCI courses

IV. Restricted Electives (6 credits)

Field Experience

EDCI 3004: Pre-Education Seminar*	3	

Juniors must **apply** for this course in early September in order to get a middle/high school placement for the following spring. See Mathematics Education Program handbook for details.

Mathematics Elective

	3	

If 2204 not used for degree core, 2204; if 2214 not used for Pathways and not used for degree core, 2214; otherwise, any 3000-level or 4000-level math course not used to meet other course-specific degree requirements. Students must petition the Associate Chair to use 4974, 4984, or 4994.

V. Free Electives (Sufficient to achieve the 120 credit graduation requirement)

*Some courses listed on this checksheet may have prerequisites and/or corequisites; please consult the University Course Catalog or check with your advisor.

VI. Outcomes Assessment

Each student is required to participate in the department's Outcomes Assessment procedures as determined by each year's Undergraduate Program Committee and approved by the Chair.

VII. Minimum Hours Required for Graduation

120 Credits

VIII. Foreign Language Requirement

Students who did not successfully complete at least two years of a single foreign, classical, or sign language during high school must successfully complete six credit hours of a single foreign, classical, or sign language at the college level. Courses taken to meet this requirement do not count toward the hours required for graduation. Please consult the Undergraduate Catalog for details.

IX. Satisfactory Progress to Degree

Upon having attempted 36 semester credits, the student must have completed 12 credits of the Pathways General Education Requirements. Upon having attempted 72 credits (including transfer, advanced placement, advanced standing, credit by examination, and course withdrawal), the student must have completed 24 credits of the Pathways General Education Requirements.. In addition, satisfactory progress toward the B.S. in mathematics requires that:
1) Within the previous two semesters, the student must pass at least one mathematics course that is used in the in-major GPA calculation.
2) Upon having attempted 45 semester credits, students must have an in-major GPA of 2.2 or above.
3) Upon having attempted 72 semester credits (including transfer, advanced placement, advanced standing, credit by examination, and course withdrawal), students must have completed the following courses with grades of C- or better: MATH 1225, 1226, 2114, 2204, 2214, and 3034, and not have taken any of these courses more than twice, including attempts ending in course withdrawal.

X. Minimum GPA Required for Graduation

Students are required to have a 2.0 GPA and a 2.0 in-major GPA for Graduation. In-major GPA for this option is computed using all MATH courses with the exception of MATH 1014, 1015, 1016, 1025, 1026, 1524, 1525, 1526, 1535, 1536, 1614, 1624, 2004, 2015, 2016, 2024, 2534, 3624, 4574.