

MATHEMATICS EDUCATION CONCENTRATION

Mathematics, Bachelor of Science with a Concentration in Mathematics Education Requirements

Code	Title	Credits
GENERAL EDUCATION REQUIREMENTS - 46 Hours Required		
Minimum of "C-" required		
Fundamental Academic Skills		15
ENGL 1150	ENGLISH COMPOSITION I	
ENGL 1160	ENGLISH COMPOSITION II	
Writing in the Discipline Course		
CMST 1110	PUBLIC SPEAKING FUNDS	
or CMST 2120	ARGUMENTATION AND DEBATE	
MATH 1120	INTRODUCTION TO MATHEMATICAL AND COMPUTATIONAL THINKING	
or MATH 1100	DATA LITERACY AND VISUALIZATION	
or MATH 1130	QUANTITATIVE LITERACY	
or MATH 1140	QUANTITATIVE REASONING FOR HEALTHCARE PROFESSIONALS	
or MATH 1300	COLLEGE ALGEBRA WITH SUPPORT	
or STAT 1100	DATA LITERACY AND VISUALIZATION	
or STAT 1530	ELEMENTARY STATISTICS	
Distribution Requirements		31
Natural Science - From two disciplines and at least one lab - 7 hrs		
Social Science - From two disciplines - 9 hrs		
Humanities and Fine Arts - From two disciplines- 9 hrs		
Global Diversity - 3 hrs		
US Diversity - 3 hrs		
MAJOR REQUIREMENTS		
**Course will satisfy UNO's General Education requirement		
^Course requires pre-requisite(s)		
Mathematics Major with a Concentration in Mathematics Education - 46 Hours Required		
This concentration is recommended for students interested in pursuing a career in Secondary Education. In some cases it is possible to simultaneously earn a B.S. or a B.A. in Math and a B.S. in Secondary Education.		
Required Coursework		25
MATH 1950	CALCULUS I (^)	
MATH 1960	CALCULUS II	
MATH 1970	CALCULUS III	
MATH 2050	APPLIED LINEAR ALGEBRA	
MATH 2230	INTRODUCTION TO ABSTRACT MATH	
MATH 2350	DIFFERENTIAL EQUATIONS	
MATH 3230	INTRODUCTION TO ANALYSIS	
Select one of the following		3
CIST 1400	INTRODUCTION TO COMPUTER SCIENCE I	

MATH 2200	MATHEMATICAL COMPUTING I (Recommended for Mathematics Education Concentration)	
MATH 3250	INTRODUCTION TO NUMERICAL METHODS	
Select all of the following Mathematics Education Concentration courses		12
MATH 3640	MODERN GEOMETRY	
MATH 3850	HISTORY OF MATHEMATICS	
MATH 4030	MODERN ALGEBRA	
MATH 4740	INTRODUCTION TO PROBABILITY AND STATISTICS I	
Select two of the following Mathematics Education Concentration courses		6
MATH 3100	APPLIED COMBINATORICS	
MATH 3200	MATHEMATICAL COMPUTING II	
MATH 4050	LINEAR ALGEBRA	
MATH 4560	NUMBER THEORY & CRYPTOGRAPHY	
MATH 4610	INTRODUCTION TO TOPOLOGY	
Select all of the following Educator Preparation Program Requirements		27
TED 2100	EDUCATIONAL FOUNDATIONS (** ^)	
TED 2200	HUMAN RELATIONS FOR BIAS-FREE CLASSROOMS (** ^)	
TED 2380	DEVELOPMENT AND LEARNING IN ADOLESCENCE	
TED 2400	PLANNING FOR EFFECTIVE TEACHING	
TED 3550	SECONDARY CLASSROOM MANAGEMENT (^)	
TED 3690	LITERACY AND LEARNING (^)	
TED 4000	SPECIAL METHODS IN THE CONTENT AREA (^)	
SPED 3800	DIFFERENTIATION AND INCLUSIVE PRACTICES (^)	
For those who want a Nebraska Math 6-12 Teaching Certificate		12
TED 4600	CLINICAL PRACTICE AND SEMINAR: ELEMENTARY OR SECONDARY LEVEL (^) 1	
1 These requirements also fulfill the College of Arts & Sciences breadth requirement.		
College Breadth		
College of Arts and Sciences' college breadth requirement satisfied by this major		
Bachelor of Science Cognate Requirement		15
The Bachelor of Science Degree requires at least 15 hours of related Cognate coursework that must be approved by the Mathematics Academic Advisor/Coordinator. Students can also choose a UNO Minor to satisfy their cognate requirement; however, this Cognate minor cannot double-count as the Option 1 minor for the College of Arts & Sciences College Breadth Requirement. A Computer Science Minor cannot satisfy the Cognate requirement for Mathematics. No more than 6 credits of cognate coursework may double-count within the general education requirements.		
ELECTIVES		
Elective hours as required to reach a total of 120 hours		

Mathematics, Bachelor of Science with a Concentration in Mathematics Education Four Year Plan

Freshman

Fall		Credits
ENGL 1150	ENGLISH COMPOSITION I (*)	3
MATH 1950	CALCULUS I (**)	5
Natural/Physical Science Course, with lab		4
Humanities/Fine Arts Course, Global Diversity		3

*ENGL 1150: Requires placement via AP, ACT, or EPPE.

**MATH 1950: Requires placement.

Credits 15

Spring

CMST 1110 or CMST 2120	PUBLIC SPEAKING FUNDS or ARGUMENTATION AND DEBATE	3
ENGL 1160	ENGLISH COMPOSITION II	3
MATH 1960	CALCULUS II	4
MATH 2050	APPLIED LINEAR ALGEBRA (*)	3
Natural/Physical Science Course**		3

*MATH 2050: Requires MATH 1950

**Natural/Physical Science Course must be in a 2nd discipline.

Recommended: Begin studying for Praxis CORE Academic Skills.

Credits 16

Sophomore

Fall		Credits
MATH 1970	CALCULUS III	4
MATH 2230	INTRODUCTION TO ABSTRACT MATH (*)	3
TED 2100	EDUCATIONAL FOUNDATIONS (**)	3
TED 2200	HUMAN RELATIONS FOR BIAS-FREE CLASSROOMS (***)	3
Social Science		3

*MATH 2230: Requires MATH 1960

**TED 2100: Requires 2.50 GPA. Fulfills Advanced Writing Requirement.

***TED 2200: Requires 2.50 GPA.

Required: Apply for Educator Preparation Program at this time.

Recommended but not required: Pass the Praxis CORE Academic Skills.

Credits 16

Spring

MATH 3230	INTRODUCTION TO ANALYSIS (*)	3
MATH 3850	HISTORY OF MATHEMATICS (**)	3
TED 2400	PLANNING FOR EFFECTIVE TEACHING (***)	6
TED 2380	DEVELOPMENT AND LEARNING IN ADOLESCENCE (***)	3

*MATH 3230: Requires MATH 2230

**MATH 3850 Requires: MATH 1970 and MATH 2230.

***TED 2400 and 2380 must be taken back-to-back, in either a Morning or Afternoon block.

Required: Pass Praxis CORE Academic Skills by the end of this semester.

Required: Acceptance into Educator Preparation Program.
Must have 2.75 GPA.

Credits 15

Junior

Fall		Credits
MATH 2200	MATHEMATICAL COMPUTING I (*)	3
MATH 3640	MODERN GEOMETRY (**)	3
MATH 4740	INTRODUCTION TO PROBABILITY AND STATISTICS I (***)	3
Social Science		3
Humanities/Fine Arts		3
Elective		1

*MATH 2200: Requires MATH 1950

**MATH 3640: Requires MATH 2230

***MATH 4740: Requires MATH 1970 and MATH 2230

Credits 16

Spring

MATH/CSCI 3100 or MATH 4560 or MATH 4050	APPLIED COMBINATORICS (*,**) or NUMBER THEORY & CRYPTOGRAPHY or LINEAR ALGEBRA	3
MATH 3200	MATHEMATICAL COMPUTING II (***)	3
TED 3550	SECONDARY CLASSROOM MANAGEMENT (^)	3
TED 3690	LITERACY AND LEARNING (^)	3
Social Science#		3

*MATH 3100 or MATH 4560: Requires MATH 2230

**MATH 4050: Requires MATH 2050 and MATH 2230.

***MATH 3200: Requires MATH 1970

^TED 3550 and TED 3690 must be taken back-to-back, in either a Morning or Afternoon block.

#Social Sciences Course must be in a 2nd discipline

Credits 15

Senior

Fall		Credits
MATH 2350	DIFFERENTIAL EQUATIONS (*)	3
MATH 4030	MODERN ALGEBRA (**)	3
SPED 3800	DIFFERENTIATION AND INCLUSIVE PRACTICES (***)	3
TED 4000	SPECIAL METHODS IN THE CONTENT AREA	3
Humanities/Fine Arts^		3

*MATH 2350: Requires MATH 1960.

**MATH 4030: Requires MATH 2230

***SPED 3800: Must be taken concurrently with TED 4000 or TED 3550

^Humanities/Fine Arts course must be in a 2nd discipline

Recommended but not required: Pass Praxis II.

Credits 15

Spring

TED 4600	CLINICAL PRACTICE AND SEMINAR: ELEMENTARY OR SECONDARY LEVEL	12
----------	--	----

Credits 12

Total Credits 120

This roadmap is a suggested plan of study and does not replace meeting with an advisor. Please note that students may need to adjust the actual

sequence of courses based on course availability. Please consult an advisor in your major program for further guidance.

This plan is not a contract and curriculum is subject to change

Additional Information About this Plan:

University Degree Requirements: The minimum number of hours for a UNO undergraduate degree is 120 credit hours. Please review the requirements for your specific program to determine all requirements for the program. In order to graduate on-time (four years for an undergraduate degree), you need to take 30 hours each year.

Placement Exams: For Math, English, Foreign Language, a placement exam may be required. More information on these exams can be found at <https://www.unomaha.edu/enrollment-management/testing-center/placement-exams/information.php>

**Transfer credit or placement exam scores may change suggested plan of study

GPA Requirements: TED 2100 and TED 2200 require a 2.50 GPA. TED 2380 and TED 2400 as well as Admission into the Teacher Prep Program require a 2.75 GPA.

Graduation Requirements: 2.75 GPA.