

# MATHEMATICS EDUCATION MAJOR (M)

One of the reasons mathematics is so appealing is because it's irrefutable. In our program, you'll find satisfaction in discovering the best way to get your students to the right answer, all while enjoying the challenge of complicated problems. Throughout the program, you'll learn how to use computers and computer systems in the classroom to enhance problem solving. You'll explore the relationship between a Christian worldview and a technological science. Every step of the way, you'll have experienced professors guiding you. And even though numbers may be your thing, you're certainly not a number at Concordia – you're a student who'll get to know your professors and receive meaningful mentorship, providing a workable model for the future relationships you'll form with your students.

## Program Learning Outcomes

- 1. Learner Development:** The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences (Human Relations, Pedagogical Knowledge)
- 2. Learning Differences :** The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards. (Human Relations, Pedagogical Knowledge)
- 3. Learning Environments:** The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self-motivation. (Teaching Practice, Human Relations)
- 4. Content Knowledge:** The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make these aspects of the discipline accessible and meaningful for learners to assure mastery of the content. (Content Knowledge)
- 5. Application of Content:** The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.
- 6. Assessment Strategies:** The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making. (Content Knowledge, Pedagogical Knowledge)
- 7. Planning for Instruction:** The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context. (Content Knowledge, Pedagogical Knowledge)
- 8. Instructional Strategies:** The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways. (Pedagogical Knowledge, Communication Skills, Teaching Practice)

9. **Professional Learning and Ethical Practice:** The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

10. **Leadership and Collaboration:** The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

11. **Character/Faith Development:** All teachers model a value system which emphasizes moral and ethical character. Teachers in Christian schools integrate faith and learning while modeling Christian mission and service with a biblical worldview. Lutheran teachers adhere to the doctrine and practice of the Lutheran Church-Missouri Synod. (Human Relations, Professional Dispositions, Content Knowledge)

## Curriculum

NOTE: All licensable majors and minors require that students pass applicable content examinations for licensure in the state of Wisconsin.

Code	Title	Hours
Core Requirements ( <a href="https://catalog.cuw.edu/undergraduate/university/acad-prog/trad/core/">https://catalog.cuw.edu/undergraduate/university/acad-prog/trad/core/</a> )		<b>42-45</b>
<b>Secondary Curriculum</b>		<b>31-37</b>
<b>Major Subject Area</b>		<b>43</b>
<b>Electives</b>		<b>4</b>
<b>Total Hours</b>		<b>120-129</b>

NOTE: Check with the Chair of the Secondary Education Department for possible changes in this major.

## Core Curriculum - 42 - 45 Credits

Concordia Common Core

Code	Title	Hours
Theology - Public Education		
REL 100	The Bible	3
REL 110	Christian Faith	3
Theology - Lutheran (LTD) & Christian (CTC)		
REL 201	Old Testament	3
REL 203	New Testament	3
REL 204	Biblical Theology	3
Liberal Arts Dimensions		
CCE 130	Christian Citizen	3
CCE 140	Science & Humanity	3
CCE 110	Western Culture & Worldview	3
CCE 120	Western Thought & Worldview	3
Introduction to Writing		
ENG 104	Introduction to Writing	3
Public Speaking (or a Language course)		
COMM 105	Public Speaking (or a Language course)	3
Interpersonal Communication		
Faith and Life Elective: Any course with REL prefix other than REL 100, 110, 201, 203, 204		
ED 1102	Foundations of Education	3
HHP 100	Stewardship of the Body	1

HHP Activity Course	1	MATH 203	Calculus III	4	
Human Creativity and Expression: Art, Music, Theater, Literature or Graphic Design activity course	3	MATH 220	Discrete Math	3	
SCI 110	Introduction to Life and Physical Sciences	4	MATH 305	Statistics II	3
MATH 205	Statistics I ((Satisfies Core mathematics requirements))	4	MATH 313	Math in the Middle School	3
ED 1103	Human Relations for Teachers (register with ED 1212)	3	MATH 321	Abstract Algebra	3
			MATH 325	Linear Algebra and Differential Equations	4
			MATH 331	Geometry	3
			MATH 441	Real Analysis	3
Note: Two CUW - approved writing intensive courses are required for graduation. Other Electives if under 120 credits:	3-6	ED 4374	Curriculum and Methods of Teaching Mathematics - Secondary <sup>2,3</sup>	3	

**Secondary Curriculum- 31 - 37 credits**

Code	Title	Hours
<i>Field Experience (clinical experiences are graded as pass/fail)</i>		
ED 1211	Discovery Clinical	0
ED 1212	Cultural Clinical	0
ED 1213	Special Education Clinical	0
<i>Education Seminars (seminars are graded as pass/fail)</i>		
ED 1000	Orientation Seminar	0
ED 2000	UDS Seminar	0
ED 3000	Student Teaching Seminar	0
<i>Theoretical &amp; Practical Components</i>		
ED 1230	Nature of the Exceptional Child (register with ED 1213)	3
ED 1275	Human Learning (register with ED 1211)	3
ED 3318	The Art & Science of Planning <sup>2</sup>	3
ED 4337	The Art and Science of Assessment <sup>2,3</sup>	3
ED 4339	The Art and Science of Instruction <sup>2,3</sup>	3
ED 4411	The Profession and Ethics of Teaching <sup>2</sup>	3
<i>Student Teaching Component (Take these courses in the same semester)</i>		
ED 4414	Portfolio Completion-Secondary <sup>2</sup>	1
ED 4433 & ED 4434	Secondary Ed Student Teaching 1 and Secondary Ed Student Teaching 2 <sup>2</sup>	12
<b>Lutheran (LCMS Members) Teacher Diploma Requirements</b>		
ED 2306	Teaching the Faith	3
REL 404	Lutheran Confessions	3
<b>Christian Teacher Certification Requirements</b>		
ED 2306	Teaching the Faith	3
Select one of the following:		
REL 404	Lutheran Confessions	
REL 347	Law and Gospel in the Life of the Church	
REL 333	A Survey of Christian Thought	
PHIL 325	Christian Apologetics	
PHIL 334	Christ and Culture	

**Major Requirements - 43 credits**

Code	Title	Hours
<b>Required Core Courses</b>		
MATH 205	Statistics I	3
<b>Required Courses</b>		
CSC 150	Foundations of Computer Science	3
MATH 201	Calculus I	4
MATH 202	Calculus II	4

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**Total Hours** **43**
<sup>2</sup> Course Requires Upper Division Status.<sup>3</sup> ED4337, ED4339, and ED4374 are taken concurrently during the Fall prior to student teaching.