

MATHEMATICS, INSTRUCTIONAL CERTIFICATION: TEACHER CERTIFICATION IN MATHEMATICS (PRESCHOOL- GRADE 12)

Program Requirements

Code	Title	Credits
Teaching Field Requirements		
<i>Mathematics Core</i>		
CSIT 111	Fundamentals of Programming I	3
MATH 122	Calculus I	4
MATH 221	Calculus II	4
MATH 222	Calculus III	4
MATH 225	Linear Algebra	4
MATH 340	Probability	3
MATH 350	College Geometry	3
MATH 431	Foundations of Modern Algebra	3
Mathematics Electives		
Select 6 credits from the list (see below)		6
<i>Teaching Methods</i>		
MATH 470	Teaching of Mathematics	3-4
or MATH 519	Teaching Mathematics	
Total Credits		37-38

Mathematics Electives

Code	Title	Credits
MATH 271	Special Topics in Modern Mathematics	3
MATH 323	Complex Variables	3
MATH 325	Ordinary Differential Equation	4
MATH 364	Operations Research I	3
MATH 369	Mathematical Modeling	3
MATH 425	Advanced Calculus I	3
MATH 426	Advanced Calculus II	3
MATH 433	Theory of Numbers	3
MATH 450	Foundations of Geometry	3
MATH 451	Topology	3
MATH 463	Numerical Analysis	3
MATH 465	Operations Research II	3
MATH 485	Applied Combinatorics and Graph Theory	3
MATH 490	Honors Seminar	3
MATH 495	Special Topics in Advanced Undergraduate Mathematics	1-3
MATH 497	Mathematics Research I	1-3
MATH 498	Mathematics Research II	1-3
MATH 574	Problem Analysis in Secondary Mathematics	3
MATH 575	Special Topics in Mathematics Education	3

MTHM 579	Applied Mathematics for the Middle Schools	3
STAT 341	Statistical Computing	3
STAT 443	Theory of Statistics	3

Graduate Professional Sequence

Code	Title	Credits
Introductory Sequence		
SASE 505	Teaching, Democracy, and Schooling	3
SASE 518	Technology Integration in the Classroom	1
Diversity and Instructional Sequence		
EDFD 509	Sociocultural Perspectives on Curriculum and Assessment	3
or SASE 509	Sociocultural Perspectives on Curriculum and Assessment	
EDFD 516	Meeting the Needs of English Language Learners	1
or SASE 516	Meeting the Needs of English Language Learners	
SASE 517	Inclusive Classrooms in Middle and Secondary Schools ¹	1
READ 501	Techniques of Reading Improvement in the Secondary School	3
EDFD 519	Assessment for Authentic Learning	3
or SASE 519	Assessment for Authentic Learning	
Pedagogical Sequence I		
SASE 526	Seminar in Inclusive Pedagogies	3
SASE 527	Clinical Practice I	3
Pedagogical Sequence II		
SASE 514	In-Service Graduate Clinical Practice II ²	6
or SASE 529	Clinical Practice II	
SASE 543	Advanced Seminar in Inclusive Pedagogies	3
Teaching Methods		
Select from the list below according to subject area:		3-6
Total Credits		33-36

Teaching Methods Courses

Code	Title	Credits
Select course(s) according to subject area:		
<i>Art</i>		6
ARED 511	Foundations of Methods and Curriculum in Art Education I: P-12	
ARED 512	Foundations of Methods and Curriculum in Art Education II: P-12	
<i>Biological Science, Earth Science, Physics or Physical Science</i>		4
SASE 502	Teaching Science in Secondary Schools	
<i>Chemistry</i>		3
CHEM 501	Teaching Chemistry in the Secondary School	
<i>English</i>		4
ENGL 571	Teaching Methods (Secondary English)	
<i>Teaching English as a Second Language</i>		3
APLN 525	Methodology of Teaching ESL	
<i>French</i>		6
FREN 502	Theories and Approaches to Teaching French as a Second Language	
FREN 519	Teaching French in P-12: Practice	

<i>Mathematics</i>		4
MATH 519	Teaching Mathematics	
<i>Music</i>		6
MUED 556	Teaching Methods for the Elementary Music Class	
MUED 557	Teaching Methods for Music in the Secondary Schools	
<i>Social Studies</i>		3
SASE 501	Graduate Methods of Teaching Social Studies	
<i>Spanish</i>		3
SPAN 518	Teaching Spanish in K-12	

¹ Post-BA students in the Health and Physical Education program are exempt from this course.

² SASE 514 is for in-service teachers.

Additional Requirements for State Certification

The following additional requirements must be met prior to student teaching. Upon admission to the program, the student's submitted transcripts are evaluated to determine if any of these requirements have been fulfilled by previous coursework. In such cases, the requirement(s) appears on the degree audit as being waived.

- CMST 101 or Speech Challenge Exam or documented & approved experience
- Physiology & Hygiene - free test at county office of education or BIOL/HLTH course
- Educational Psychology - EDFD 582 or PSYC 560
- Psychology 101 or equivalent undergraduate course work

Note: Certification requirements are subject to change.