MATHEMATICS EDUCATION (GRADES 4-12) (IB/M)

The secondary mathematics program prepares graduates for certification in mathematics for grades 4-12. Majors are prepared to teach mathematics at the middle school, as well as subject areas such as algebra, geometry, trigonometry, and calculus. Mathematics Education majors must complete a subject area major in Mathematics consisting of a minimum of 36 credits in mathematics and related areas.

Requirements

Students are required to complete 30 credits at the 2000-level or higher. Required courses include:

Course	Title	Credits
MATH 1131Q	Calculus I	4
MATH 1132Q	Calculus II	4
MATH 2110Q	Multivariable Calculus	4
MATH 2210Q	Applied Linear Algebra	3
MATH 2360Q	Geometry	3
MATH 2410Q	Elementary Differential Equations	3
MATH 2710	Transition to Advanced Mathematics	3
MATH 2720W	History of Mathematics	3
MATH 3160	Probability	3
MATH 3240	Introduction to Number Theory	3
MATH 3710	Introduction to Mathematical Modeling	3
STAT 1000Q	Introduction to Statistics I	4
or STAT 1100Q	Elementary Concepts of Statistics	
STAT 2215Q	Introduction to Statistics II	3
Total Credits		**43**

Related Requirement (three credits): To best prepare for interdisciplinary teaching, particularly within STEM areas, students are required to take three credits, and encouraged to take six credits, in a suitable related area such as the following:

- Computer Science
- Environmental Science
- Physics
- Engineering
- Philosophy (Logic)
- Statistics
- Combinatorics

Note that these credits can overlap with Common Curriculum courses.

Professional Education Requirements

Majors must also complete the following Professional Education Requirements:

Course	Title	Credits
EDCI 3100/3100W	Multicultural Education, Equity and Social Justice	3
EDCI 3212	Introduction to Secondary Methods and Clinic: Mathematics	3
EDCI 4010	Teaching Reading and Writing in the Content Areas	2
EDCI 4210W	Instruction and Curriculum in the Secondary School	3
EDCI 4250	Directed Student Teaching	9
EGEN 3100	Seminar/Clinic: Teaching and Learning	3
EGEN 4100	Seminar/Clinic: Methods of Teaching	3
EGEN 4110	Seminar/Clinic: Analysis of Teaching	3
EPSY 3010	Educational Psychology	3
EPSY 3110	Exceptionality	2
EPSY 3125	Classroom and Behavior Management	3
EPSY 4010	Assessment of Learning	2
HIST 1501	United States History to 1877	3
or HIST 1502	U.S. History Since 1877	
PSYC 1100	General Psychology I	3
Master of Arts in Curriculum and Instruction program		
Total Credits		**45**

Curriculum and Instruction (M.A.)

IBM Concentrations in Elementary Education or Secondary Education

Secondary Education includes:

- English Education
- World Languages Education (American Sign Language, French, German, Italian, Latin/Classics, Mandarin Chinese, or Spanish)
- History and Social Studies Education
- Mathematics Education
- Science Education (Biology, Chemistry, Earth Science, General Science, or Physics)

Course	Title	Credits
Required Courses		
EPSY 5195	Workshop in Education	2
EDCI 5092	Practicum	3
EDCI 5093	Advanced Practicum	4
EDCI 5094	Seminar	3
EDCI 5095	Advanced Seminar	3
Select three credits from the following:		3
EDCI 5042	Diversity, Culture, and Music Education	
EDCI 5715	Bilingualism and Second Language Acquisition	
EDCI 5740	Latinos and U.S. Education	
EDCI 5742	Sheltered English Instruction for English Language Learners	
EDCI 5750	Language Diversity and Literacy	
EDCI 5875	Multicultural Education	
EDCI 5885	Introduction to Critical Pedagogy	
EDCI 5890	Educational Linguistics	
CLCS 5324	Teaching for Intercultural Citizenship and Human Rights I	
GERM 5325	Teaching for Intercultural Citizenship and Human Rights II	
EDLR 5015	Teacher Leadership and Organizations	3

EPSY 5221	Wise Integration of Technology into Teaching and Learning Environments	1
Total Credits		**22**

IBM Elective Required Courses

Nine credit hours aligned with content specialty selecting courses in EDCI, EDLR, and EPSY or Graduate Liberal Arts courses totaling nine credit hours.

Exam/Culminating Portfolio Requirement

Will be directed by the student's advisor.