

BS IN MATHEMATICS TO MS IN COMPUTATIONAL AND QUANTITATIVE METHODS FAST TRACK

Degree: Bachelor of Science to Master of Science

Major: Mathematics to MS in CQM Fast Track

Total Hours: 150

Code	Title	Hours
<i>General Education Core Curriculum</i>		
<i>Communication</i>		
ENGL 1301	Composition I	3
Select one of the following:		3
COMM 1315	Public Speaking I	
COMM 1321	Business and Prof Speech	
ENGL 1302	Composition II	
FREN 1311	Beginning French I	
SPAN 1311	Beginning Spanish I	
<i>Mathematics¹</i>		
MATH 2413	Calculus I	4
<i>Life and Physical Sciences^{1,6}</i>		
Select two courses from the following:		8
BIOL 1406	General Biology I (Majors)	
BIOL 1407	General Biology II (Majors)	
CHEM 1311	General Chemistry I	
CHEM 1312	General Chemistry II	
GEOL 1403	Geology I: Physical Geology	
GEOL 1403	Geology I: Physical Geology	
PHYS 2425	Univ Physics I	
PHYS 2426	University Physics II	
<i>Language, Philosophy and Culture</i>		
Select one of the following:		3
DSDE 1374	Introduction to Deaf Studies	
ENGL 2300	Ethics and Literature	
ENGL 2322	British Literature	
ENGL 2326	American Literature	
ENGL 2331	World Literature	
ENGL 2376	African-American Literature	
PHIL 1370	Philosophy of Knowledge	
PHIL 2306	Ethics	
<i>Creative Arts</i>		
Select one of the following:		3
ARTS 1301	Art Appreciation	
ARTS 1303	Art History I	
COMM 1375	Film Appreciation	
COSC 1324	The Art of Computer Game Development	
DANC 2303	Dance Appreciation	
MUSI 1306	Music Appreciation	
MUSI 1309	Jazz History and Appreciation	
MUSI 1310	History of Rock and Roll	
PHIL 1330	Arts and Ideas	
THEA 1310	Theatre Appreciation	
<i>American History</i>		
Select two of the following:		6
HIST 1301	U S History I 1763-1877	
HIST 1302	U S History II Since 1877	
HIST 2301	Texas History	
<i>Government/Political Science</i>		
POLS 2301	Intro to American Government I	3
POLS 2302	Intro/American Government II	3
<i>Social and Behavioral Sciences</i>		
Select one of the following:		3
ANTH 2346	Introduction to Anthropology	
ANTH 2351	Cultural Anthropology	
BULW 1370	Business Environment and Public Policy	
CRIJ 1301	Intro to Criminal Justice	
ECON 1301	Principles and Policies	
ECON 2301	Principles of Economics I Macro	
ECON 2302	Principles of Economics II Micro	
FINC 2310	Intro to Consumer Finance	
INEN 2373	Engineering Economics	
PSYC 2301	General Psychology	
PSYC 2315	Lifespan Development	
POLS 1301	Intro to Political Science	
SOCI 1301	Introduction to Sociology	
SOWK 2361	Intro Social Work	
<i>Component Area Option</i>		
ENGL 1302	Composition II	3
Additional hours are from Math and Lab Science applied here		
Required Major Courses		
<i>Mathematics Courses</i>		
MATH 2318	Linear Algebra	3
MATH 2414	Calculus II	4
MATH 2415	Calculus III	4
MATH 3322	Intro to Advanced Mathematics	3
MATH 3370	Introduction to the Theory of Statistical Inference	3
MATH 4325	Analysis I	3
MATH 3350	Modern Algebra - Groups	3
	or MATH 3351 Modern Algebra - Rings	
Select one of the following Programming Courses:		3
COSC 1336	Programming Fundamentals I	
	& COSC 1173 and Programming Lab ²	
	or COSC 3306 NIX/C++	
	or ELEN 1301 Computers and Programming I	
Electives		
MATH Courses ^{3,5}		15
Elective Courses		16
<i>Minor</i>		
Must complete seven courses - four of which must be at the 3000-level or above ⁴		21

MS in Computational and Quantitative Methods

MATH 5300	Regression Analysis ⁵	3
MATH 5381	Advanced Statistical Methods	3
MATH 5384	Advanced Machine Learning	3
Program Specific Courses		
MATH 5317	Prob Thry/Stochastic Pro	3
MATH 5382	Time Series Analysis	3
MATH 5383	Predictive Analytics	3
MATH 5395	Internship	3
Elective Courses - three from:		9
ACCT 5315	Financial & Managerial Accounting Foundations	
COSC 5311	Data Mining	
CPSC 5340	Data Engineering for AI Sys	
FINC 5370	Derivatives & Risk Management	
MATH 5315	Numerical Analysis ⁵	
MATH 5319	Design and Analysis of Experiments ⁵	
MATH 5380	Statistical Inference ⁵	
Total Hours		150

- ¹ The additional hours from these sections are applied in the Component Area Option.
- ² With Departmental Approval
- ³ From 6 to 12 hours may be taken from the selected list of graduate courses
- ⁴ This is a non-math minor and should be comprised of courses from outside mathematics.
- ⁵ Students who successfully complete the graduate version of these courses will receive both graduate credit and institutionally awarded undergraduate credit.

Student must earn a minimum GPA of 2.0 with at most one grade of "D" in all math courses for the undergraduate degree.

The graduate program requires a minimum GPA of 3.0 and a "C" or better in all courses.

First Year

Fall		Hours
MATH 2413	Calculus I	4
HIST 1301	U S History I 1763-1877	3
Life & Physical Sciences		4
Creative Art		3
Communication		3
Hours		17

Spring

MATH 2414	Calculus II	4
MATH 2318	Linear Algebra	3
Life & Physical Sciences ¹		4
HIST 1302	U S History II Since 1877	3
ENGL 1301	Composition I	3
Hours		17

Second Year

Fall		Hours
POLS 2301	Intro to American Government I	3
MATH 3322	Intro to Advanced Mathematics	3
MATH 2415	Calculus III	4
COSC		3

ENGL 1302	Composition II	3
Hours		16
Spring		
MATH 3351 or MATH 3350	Modern Algebra - Rings or Modern Algebra - Groups	3
POLS 2302	Intro/American Government II	3
MATH 3370	Introduction to the Theory of Statistical Inference	3
Secondary Area/Minor ¹		3
Electives ¹		3
Hours		15
Third Year		
Fall		
Secondary Area/Minor ¹		3
MATH Elective ^{1,2}		3
MATH Elective ^{1,2}		3
Language, Philosophy & Culture		3
MATH 4325	Analysis I	3
Hours		15
Spring		
Social & Behavioral Sciences		3
Secondary Area/Minor ¹		3
Secondary Area/Minor ¹		3
MATH Elective ^{1,2}		3
Electives ¹		3
Hours		15
Fourth Year		
Fall		
MATH Elective ^{1,2}		3
Secondary Area/Minor ¹		3
Secondary Area/Minor ¹		3
Elective		4
Hours		13
Spring		
Electives ¹		3
Electives ¹		3
MATH Elective ^{1,2}		3
Secondary Area/Minor ¹		3
Hours		12
Total Hours		120

- ¹ Students should meet with their academic advisor to choose their best option.
- ² From 6-12 hours of these courses can be taken from the selected list of graduate courses. Students who successfully complete the graduate courses will receive both graduate credit and institutionally awarded undergraduate credit.