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Department of Mathematics and Statistics

Department Head: Mohsen Razzaghi

Associate Director and Graduate Coordinator: Mohammad Sepehrifar Undergraduate Coordinator: Matt McBride Associate Undergraduate Coordinator for Advising: Robert Banik Office: 410 Allen Hall

The Department of Mathematics and Statistics offers a Bachelor of Arts degree and a Bachelor of Science degree. Both degrees are 124 hours. The department also offers undergraduate minors in mathematics and statistics which are described below.

Candidates for the Bachelor of Arts degree are required to complete a minimum of 36 hours of mathematics. Candidates for the Bachelor of Science degree are required to take a minimum of 42 hours of mathematics. Required courses for each degree are listed below. Students must also satisfy the General Education requirements and College Core requirements, including speech, computer literacy and writing requirements.

Mathematics courses below Calculus I (MA 1713), do not count toward a degree in mathematics. Entering freshmen who plan to major in mathematics but do not meet the prerequisites for MA 1713 are encouraged to take the necessary courses during the summer in order to avoid adding one or two semesters to their degree. Otherwise, students who wish to major in mathematics but who do not meet the prerequisites of MA 1713 should join the undeclared major until they are ready to take Calculus I. At that time, they will be assigned an advisor in the Department of Mathematics and Statistics.

For all degree programs, including minors, a student must have an overall C average and a C average in the math classes which count toward the degree. Moreover, students pursuing a B.A. or B.S. degree in mathematics must have at least a GPA of 2.5 in Calculus I-IV, Linear Algebra and Differential Equations (MA 1713, MA 1723, MA 2733, MA 2743, MA 3113 and MA 3253). Students who fail to meet this requirement must withdraw from the B.A. and B.S. degree programs in Mathematics, subject to appeal to the department's undergraduate coordinator.

Regarding graduate study, the Department of Mathematics and Statistics offers a Master of Science in Mathematics, Master of Science in Statistics, and a Doctor of Philosophy in Mathematical Sciences. Major areas of study for the Doctor of Philosophy in Mathematical Sciences include applied and computational mathematics, ordinary and partial differential equations, functional analysis and operator theory, graph theory, geometric combinatorics, topology and statistics. Please see the graduate coordinator for more details.

B.A. in Mathematics

General Education and College Requirements

English Composition

EN 1103	English Composition I	3
or EN 1163	Accelerated Composition I	
EN 1113	English Composition II	3
or EN 1173	Accelerated Composition II	
Foreign Language		
3 semesters - one Foreign Language - s	ee advisor	9
Humanities		
Literature - see University/A&S Core		3
History - see University/A&S Core		3
Philosophy - see University/A&S Core		3
From at least 2 different areas of Human	lities	9
Math		
See Major Core		6
Fine Arts		
See A&S Requirements		3
Natural Sciences		
BIO 1134	Biology I	4
or BIO 1144	Biology II	
AND		
CH 1213	Chemistry I	3
CH 1223	Chemistry II	3
CH 1211	Investigations in Chemistry I	1
OR		

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onsult advisor 16-28	CSE 1233	Computer Programming with C	3
	General Electives		
tal Hours 124	Consult advisor		16-28
	Total Hours		124
1 hours must be 3000/4000 from A&S)	(31 hours must be 3000/4000 from A&S)		

B.S. in Mathematics

General Education and College Requirements

English Composition		
EN 1103	English Composition I	3
or EN 1163	Accelerated Composition I	
EN 1113	English Composition II	3
or EN 1173	Accelerated Composition II	
Foreign Language		
2 semesters - one Foreign Lang	guage - see advisor	6
Humanities		
Literature - see University/A&S	Core	3
History - see University/A&S Co	pre	3
Math		
See Major Core		6
Fine Arts		
See A&S Requirements		3
Natural Sciences		
Choose one of three options:		15-18
Option 1		
PH 2213	Physics I	
PH 2223	Physics II	
PH 2233	Physics III	
CH 1213	Chemistry I	

CH 1223 Chemistry II PH 223 PH 223 Physics II PH 224 Physics II PH 225 Physics II Physics II PH 225 Physics II Physics Physics II Physics Physics II Physics Physi	CH 1992	Chemistry II	
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MA 4633Advanced Calculus I3MA 4643Advanced Calculus II3Math Elective (3000+)3Math Elective (4000)3Oral Communication RequirementCO 1003Fundamentals of Public SpeakingCO 1003Senior Seminar in MathematicsMA 4213Senior Seminar in MathematicsComputer Literacy3CSE 1233Computer Programming with CCSE 1233Computer Programming with CConsult advisor30-40Total Hours30-40	MA 3253	Differential Equations I	3
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MA 4643Advanced Calculus II3Math Elective (3000+)3Math Elective (4000)3Oral Communication Requirement3CO 1003Fundamentals of Public SpeakingMA 4213Senior Seminar in MathematicsMA 4213Senior Seminar in MathematicsComputer Literacy3CSE 1233Computer Programming with CConsult advisor30-40Total Hours30-40	MA 4633	Advanced Calculus I	3
Math Elective (4000)3Oral Communication Requirement3CO 1003Fundamentals of Public Speaking3Writing Requirement3MA 4213Senior Seminar in Mathematics3Computer Literacy3CSE 1233Computer Programming with C3General Electives30-40Consult advisor30-40Total Hours124	MA 4643	Advanced Calculus II	
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Oral Communication RequirementCO 1003Fundamentals of Public Speaking3Writing RequirementMA 4213Senior Seminar in Mathematics3Computer LiteracyComputer Programming with C3CSE 1233Computer Programming with C3General Electives30-40Consult advisor30-40Total Hours124			
CO 1003Fundamentals of Public Speaking3Writing RequirementMMA 4213Senior Seminar in Mathematics3Computer LiteracyComputer Programming with C3General Electives3Consult advisor30-40Total Hours124			
Writing RequirementMA 4213Senior Seminar in Mathematics3Computer Literacy3CSE 1233Computer Programming with C3General Electives30-40Consult advisor30-40Total Hours124	-	Fundamentals of Public Speaking	3
MA 4213Senior Seminar in Mathematics3Computer LiteracyComputer Programming with C3CSE 1233Computer Programming with C3General Electives30-40Consult advisor30-40Total Hours124	Writing Requirement		
CSE 1233 Computer Programming with C 3 General Electives 30-40 Consult advisor 30-40 Total Hours 124		Senior Seminar in Mathematics	3
CSE 1233 Computer Programming with C 3 General Electives 30-40 Consult advisor 30-40 Total Hours 124	Computer Literacy		
General ElectivesConsult advisor30-40Total Hours124		Computer Programming with C	3
Consult advisor30-40Total Hours124			
Total Hours 124			30-40

Math Minor

A minor in mathematics consists of

MA 1713	Calculus I	3
MA 1723	Calculus II	3
MA 2733	Calculus III	3
MA 2743	Calculus IV	3
MA 3113	Introduction to Linear Algebra	3

MA 3253	Differential Equations I	3

One additional math course at the 3000 level and one additional 4000-level math course

4+1 Program

Highly qualified students with a 3.00 GPA or higher on a 4.00 scale in all undergraduate work with a 3.25 GPA or higher on a 4.00 scale in math/stats courses and a minimum of 60 completed hours of undergraduate work may apply for the accelerated BS/MS degree in Mathematics or Statistics. In addition to the admission requirements for a Master's Degree program, the applicant should submit three recommendation letters from our current Graduate faculty in the program. The Department will reimburse the application fees during the first semester of starting the program. For details and specifics, please contact the Associate Undergraduate Coordinator for Advising.

Statistics (ST)

Major Advisor: Associate Professor Mohammad Sepehrifar

Courses in statistics are designed to satisfy two objectives. The first objective is to provide graduate training for those students wishing to pursue a career as professional statisticians. Both graduate and undergraduate courses are available for this purpose. The second is to provide minors for students from other disciplines.

A minor in statistics consists of ST 3123 Introduction to Statistical Inference and an additional 15 hours of ST 4000+ coursework.

Graduate study is offered in the Department of Mathematics and Statistics leading to the degree of Master of Science in Mathematics, Master of Science in Statistics, and a Doctor of Philosophy in Mathematical Sciences. Many applied statistics courses are offered which are suitable for a minor in statistics at the master's or doctoral level. Specific course requirements for the graduate minor in statistics may be obtained from the Graduate Coordinator of the Department of Mathematics and Statistics.

Admission to the master's program in statistics is open to graduates in all disciplines. The program of study is a blend of both statistical theory and statistical methods. In addition, there is ample flexibility in the non-thesis option to allow a graduate student with special interests in an area of statistical application to minor in that particular applied field. The department awards a limited number of teaching assistantships. For further details, consult the Graduate Coordinator of the Department of Mathematics and Statistics.