MATHEMATICS (B.S.)

Integrative Studies Requirements

40 credits minimum

Major Requirements (80-88 credits)Core CoursesMATH-141Introductory StatisticsMATH-141Introductory StatisticsMATH-181Comp Tools for Problem SolvingMATH-211Calculus IMATH-212Calculus IMATH-225Discrete Math With ProofMATH-335Linear AlgebraMATH-421Abstract AlgebraMATH-422GeometryMATH-423Real AnalysisMATH-423Real AnalysisMATH-311University Physics ISelect three of the following:12MATH-312Differential EquationsMATH-324ProbabilityMATH-325Discrete starsSelect one of the following:4INPHYS-241University Physics ISelect three of the following:12MATH-312Differential EquationsMATH-324ProbabilityMATH-381Math ModelingSelect one of the following:4INPHYS-342Data Analysis for ScientistsRelated Minor	Code	Title	Credits	Completed	
Core CoursesMATH-141Introductory Statistics4MATH-181Comp Tools for Problem Solving4MATH-211Calculus I4MATH-212Calculus I4MATH-213Discrete Math With Proof4MATH-335Linear Algebra4MATH-421Abstract Algebra4MATH-422Geometry4MATH-423Real Analysis4MATH-423Real Analysis4INPHYS-241University Physics I4Select three of the following:12MATH-312Differential EquationsMATH-324ProbabilityMATH-335Linear AlgebraMATH-342ProbabilityMATH-314Differential EquationsMATH-315Differential EquationsMATH-342ProbabilityMATH-342ProbabilityMATH-343Math ModelingSelect one of the following:4ISCS-210Python ProgrammingIIPHYS-342Data Analysis for ScientistsRelated Minor	Major Requirements (80-88 credits)				
MATH-141 Introductory Statistics 4 MATH-181 Comp Tools for Problem Solving 4 MATH-181 Comp Tools for Problem Solving 4 MATH-211 Calculus I 4 MATH-212 Calculus II 4 MATH-312 Discrete Math With Proof 4 MATH-311 Applied Statistics 4 MATH-422 Geometry 4 MATH-423 Real Analysis 4 INPHYS-241 University Physics I 4 Select three of the following: 12	Core Courses				
MATH-181 Comp Tools for Problem Solving 4	MATH-141	Introductory Statistics	4		
MATH-211Calculus I4MATH-212Calculus II4MATH-235Discrete Math With Proof4MATH-335Linear Algebra4MATH-311Applied Statistics4MATH-421Abstract Algebra4MATH-422Geometry4MATH-423Real Analysis4INPHYS-241University4Physics I12Select three of the following:12MATH-312Differential Equations	MATH-181	Comp Tools for Problem Solving	4		
MATH-212Calculus II4MATH-235Discrete Math With Proof4MATH-335Linear Algebra4MATH-341Applied Statistics4MATH-421Abstract Algebra4MATH-422Geometry4MATH-423Real Analysis4INPHYS-241University Physics I4Select three of the following:12MATH-312Differential EquationsMATH-328Nath ModelingMATH-319Differential EquationsMATH-320ProbabilityMATH-321Differential EquationsMATH-322ProbabilityMATH-323ProbabilityMATH-324ProbabilityMATH-325Data Analysis for ScientistsRelated Minor	MATH-211	Calculus I	4		
MATH-235Discrete Math With Proof4MATH-335Linear Algebra4MATH-335Linear Algebra4MATH-341Applied Statistics4MATH-421Abstract Algebra4MATH-422Geometry4MATH-423Real Analysis4MATH-423Real Analysis4INPHYS-241University Physics I4Select three of the following:12	MATH-212	Calculus II	4		
MATH-335Linear Algebra4MATH-341Applied Statistics4MATH-421Abstract Algebra4MATH-422Geometry4MATH-423Real Analysis4MATH-423Real Analysis4INPHYS-241University Physics I4Select three of the following:12MATH-311Vector CalculusMATH-312Differential EquationsMATH-342ProbabilityMATH-381Math ModelingSelect one of the following:4ISCS-210Python ProgrammingIIPHYS-342Data Analysis for ScientistsRelated Minor	MATH-235	Discrete Math With Proof	4		
MATH-341Applied Statistics4MATH-421Abstract Algebra4MATH-422Geometry4MATH-423Real Analysis4MATH-423Real Analysis4INPHYS-241University Physics I4Select three of the following:12	MATH-335	Linear Algebra	4		
MATH-421Abstract Algebra4MATH-422Geometry4MATH-423Real Analysis4MATH-423Real Analysis4INPHYS-241University Physics I4Select three of the following:12	MATH-341	Applied Statistics	4		
MATH-422Geometry4MATH-423Real Analysis4INPHYS-241University Physics I4Select three of the following:12MATH-311Vector CalculusMATH-312Differential EquationsMATH-342ProbabilityMATH-381Math ModelingSelect one of the following:4ISCS-210Python ProgrammingIIPHYS-342Data Analysis for ScientistsRelated Minor20-28Minor in Biology, Chemistry, Computer Science, Data Analytics, Economics, Management, Physics or another related field approved by the Mathematics Department; the Statistics Minor cannot be used to fulfill this requirement.Total Credits80-88	MATH-421	Abstract Algebra	4		
MATH-423Real Analysis4INPHYS-241University Physics I4Select three of the following:12MATH-311Vector CalculusMATH-312Differential EquationsMATH-342ProbabilityMATH-381Math ModelingSelect one of the following:4ISCS-210Python ProgrammingIIPHYS-342Data Analysis for ScientistsRelated Minor	MATH-422	Geometry	4		
INPHYS-241University Physics I4Select three of the following:12MATH-311Vector CalculusMATH-312Differential EquationsMATH-342ProbabilityMATH-381Math ModelingSelect one of the following:4ISCS-210Python ProgrammingIIPHYS-342Data Analysis for ScientistsRelated Minor	MATH-423	Real Analysis	4		
Select three of the following: 12 MATH-311 Vector Calculus MATH-312 Differential Equations	INPHYS-241	University Physics I	4		
MATH-311Vector CalculusMATH-312Differential EquationsMATH-312Differential EquationsMATH-312ProbabilityMATH-342ProbabilityMATH-381Math ModelingMATH-381Math ModelingSelect one of the following:4ISCS-210Python ProgrammingIIPHYS-342Data Analysis for 	Select three of the	he following:	12		
MATH-312Differential EquationsMATH-342ProbabilityMATH-341Math ModelingMATH-381Math ModelingSelect one of the following:4ISCS-210Python ProgrammingIIPHYS-342Data Analysis for ScientistsRelated Minor	MATH-311	Vector Calculus			
MATH-342ProbabilityMATH-381Math ModelingSelect one of the following:4ISCS-210PythonProgramming	MATH-312	Differential Equations			
MATH-381Math ModelingSelect one of the following:4ISCS-210Python ProgrammingIIPHYS-342Data Analysis for ScientistsRelated Minor	MATH-342	Probability			
Select one of the following: 4 ISCS-210 Python Programming	MATH-381	Math Modeling			
ISCS-210 Python Programming	Select one of the following:		4		
IIPHYS-342 Data Analysis for Scientists	ISCS-210	Python Programming			
Related MinorMinor in Biology, Chemistry,20-28Computer Science, Data Analytics,Economics, Management, Physicsor another related field approved bythe Mathematics Department; theStatistics Minor cannot be used tofulfill this requirement.Total Credits80-88	IIPHYS-342	Data Analysis for Scientists			
Minor in Biology, Chemistry, 20-28 Computer Science, Data Analytics, Economics, Management, Physics or another related field approved by the Mathematics Department; the Statistics Minor cannot be used to fulfill this requirement. Total Credits 80-88	Related Minor				
Computer Science, Data Analytics, Economics, Management, Physics or another related field approved by the Mathematics Department; the Statistics Minor cannot be used to fulfill this requirement. Total Credits 80-88	Minor in Biology, Chemistry,		20-28		
Economics, Management, Physics or another related field approved by the Mathematics Department; the Statistics Minor cannot be used to fulfill this requirement. Total Credits 80-88	Computer Science, Data Analytics,				
the Mathematics Department; the Statistics Minor cannot be used to fulfill this requirement. Total Credits 80-88	Economics, Man	agement, Physics			
Statistics Minor cannot be used to fulfill this requirement. Total Credits 80-88	the Methometics Department: the				
fulfill this requirement. Total Credits 80-88	Statistics Minor cannot be used to				
Total Credits 80-88	fulfill this require	ement.			
	Total Credits		80-88		

Electives

Select courses to reach a total of 120 credits for the degree.

Degree Requirements

120 credits 40 credits at the upper-level