BS MATHEMATICS-DATA ANALYSIS CONCENTRATION

Degree Requirements

Students should refer to their DegreeWorks degree audit in their Web for Students account for more information regarding their degree requirements.

Code	Title	Hours
Major Requirements		
General Education Requirements (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		42
Mathematics Core Courses:		
MATH 2413	Calculus I [1,2]	4
MATH 2414	Calculus II	4
MATH 2415	Calculus III	4
MATH 2305	Discrete Mathematics	3
MATH 2318	Linear Algebra	3
MATH 2320	Differential Equations	3
MATH 357	Probability and Statistics using R	3
MATH 415	Applied Numerical Analysis	3
MATH 430	Mathematical Modeling	3
MATH 450	Combinatorics and Graph Theory	3
MATH 493	Capstone in Mathematics (EL)	3
Data Analysis Concentration:		
MATH 1342	Elementary Statistical Methods [2]	3
MATH 358	Regression Analysis	3
MATH 432	Discrete and Continuous Modeling	3
COSC 1315	Introduction to Computer Science	3
CS 310	Analysis of Algorithms	3
CS 332	C++ Programming	3
CS 355	Python Programming	3
CS 361	Database Systems and Design	3
Upper Division Electives (300-400 level)		**21**
Electives (as needed to meet minimum degree requirements including 54 semester credits of upper division)		
Minimum Hours for Degree		**120**

1 Calculus 1 prerequisites (if any) will be determined by the College of CBET using established readiness indicators.
2 Satisfies Core Curriculum

Note: A minimum of 54 upper division hours (300 and 400 level courses) are required for this degree. Resident credit totaling 25% of the hours is required for the degree. A minimum GPA of 2.0 is required in three areas for graduation: Overall GPA, Institutional GPA, and Major GPA.

Four Year Plan

Students should refer to their DegreeWorks degree audit in their Web for Students account for more information regarding their degree requirements.

First Year

Code	Title	Hours
Fall		
PSCI 2305	U.S. Government and Politics	3
ENGL 1301	Composition I [minimum grade of 'C' required]	3
MATH 2413	Calculus I	4
Life and Physical Sciences Core Curriculum Requirement (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		3
UNIV 1100	University Foundations	1
Fall total semester credit hours		**14**

Spring		
PSCI 2306	State and Local Government	3
ENGL 1302	Composition II	3
MATH 2414	Calculus II	4
MATH 1342	Elementary Statistical Methods	3
Life and Physical Sciences Core Curriculum Requirement (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		3
Spring total semester credit hours		**16**
First Year Total Semester Credit Hours		**30**

Second Year

Code	Title	Hours
Fall		
MATH 2415	Calculus III	4
MATH 2318	Linear Algebra	3
HIST 1301	United States History I	3
Creative Arts Core Curriculum Requirement (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		3
Language, Philosophy and Culture Core Curriculum Requirement (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		3
Fall total semester credit hours		**16**
Spring		
MATH 2305	Discrete Mathematics	3
COSC 1315	Introduction to Computer Science	3
MATH 2320	Differential Equations	3
HIST 1302	United States History II	3
CS 332	C++ Programming	3
Spring total semester credit hours		**15**
Second year Total Semester Credit Hours		**31**

Third Year

Code	Title	Hours
Fall		
MATH 431	Internship in Mathematics	3
MATH 450	Combinatorics and Graph Theory	3
SPCH 1315	Public Speaking	3
or COMM 1307	Introduction to Mass Communication	
or COMM 1311	Introduction to Communication Studies	
Social and Behavioral Science Core Curriculum Requirement (http://catalog.tamut.edu/academic-information/university-core-curriculum/)		3
Upper Division Elective (300-400 level)		3
Elective - Upper or Lower Division as needed to meet upper division and overall requirement		
Fall Total Semester Credit Hours		**15**
Spring		
MATH 357	Probability and Statistics using R	3
CS 310	Analysis of Algorithms	3
CS 361	Database Systems and Design	3
Upper Division Elective (300-400 level)		3
Upper Division Elective (300-400 level)		3
Spring total semester credit hours		**15**
Third Year Total Semester Credit Hours		**30**

Fourth Year

Code	Title	Hours
Fall		
MATH 430	Mathematical Modeling	3
CS 355	Python Programming	3
Upper Division Elective (300-400 level)		3
Upper Division Elective (300-400 level)		3
Elective - Upper or Lower Division as needed to meet upper division and overall requirement		2
Fall total semester credit hours		**14**
Spring		
MATH 358	Regression Analysis	3
MATH 415	Applied Numerical Analysis	3
MATH 493	Capstone in Mathematics (EL)	3
Upper Division Elective (300-400 level)		3
Upper Division Elective (300-400 level)		3
Spring total semester credit hours		**15**
Fourth Year Total Semester Credit Hours		**29**
Minimum Hours for Degree		**120**

Note: A minimum of 54 upper division hours (300 and 400 level courses) are required for this degree. Resident credit totaling 25% of the hours is required for the degree. A minimum GPA of 2.0 is required in three areas for graduation: Overall GPA, Institutional GPA, and Major GPA.