STATISTICS - 5-YEAR BACHELOR OF SCIENCE AND MASTER OF SCIENCE IN STATISTICAL DATA SCIENCE

Program Requirements

The following is a suggested schedule that includes the required courses for the combined BS in Statistics /MS in Statistical Data Science. It is recognized that many students will change the sequence and number of courses taken in any semester. Deviations from the prescribed course sequence, however, should be made with care to ensure that prerequisites for all courses are met.

First Year

HoursENGL 104Composition and Rhetoric3MATH 171Calculus I4STAT 182Foundations of Statistics1Select one of the Following:4ASTR 111Overview of Modern Astronomy4BIOL 111Introductory Biology I1BIOL 112Introductory Biology II1CHEM 119Fundamentals of Chemistry I1PHYS 206Newtonian Mechanics for Engineering and Science and Physics of Motion Laboratory for the Sciences3PHYS 207Electricity and Magnetism for Engineering and Science and Electricity and Magnetism Laboratory for the Sciences3American history (http://catalog.tamu.edu/undergraduate/ general-information/university-core-curriculum/#american- history)5Spring14MATH 172Calculus II4Science 110Programming I4CSCE 110Programming I4CSCE 120Program Design and Concepts or Introduction to Program Design and CSCE 120Forgam Design and Concepts or Introduction to Program Design and CSCE 120CSCE 206Structured Programming in C	Fall		Semester
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	BIOL 111		

CHEM 119	Fundamentals of Chemistry I	
CHEM 120	Fundamentals of Chemistry II	
PHYS 206 & PHYS 226	Newtonian Mechanics for Engineering and Science and Physics of Motion Laboratory for the	
PHYS 207 & PHYS 227	Sciences Electricity and Magnetism for Engineering and Science	
	and Electricity and Magnetism Laboratory for the Sciences	
	(http://catalog.tamu.edu/undergraduate/ on/university-core-curriculum/#american-	3
	Semester Credit Hours	15
Second Year Fall		
MATH 221	Several Variable Calculus ¹	4
POLS 206	American National Government	3
STAT 211	Principles of Statistics I ¹	3
Select one of the	-	3
COMM 203	Public Speaking	
COMM 205	Communication for Technical Professions	
COMM 243	Argumentation and Debate	
undergraduate/g	sciences (http://catalog.tamu.edu/ eneral-information/university-core- physical-sciences)	3
	Semester Credit Hours	16
Spring		
MATH 304 or MATH 323	Linear Algebra ¹ or Linear Algebra	3
POLS 207	State and Local Government	3
STAT 212	Principles of Statistics II ¹	3
Select one of the	-	3-4
CSCE 110	Programming I	
CSCE 111	Introduction to Computer Science Concepts and Programming	
CSCE 120 or CSCE 121	Program Design and Concepts or Introduction to Program Design and	
CSCE 206	Concepts Structured Programming in C	
	Structured Programming in C p://catalog.tamu.edu/undergraduate/	3
• •	on/university-core-curriculum/#creative-	5
	Semester Credit Hours	15
Third Year Fall		
STAT 404	Statistical Computing	3
STAT 414	Mathematical Statistics I	3
undergraduate/g	ophy and culture (http://catalog.tamu.edu/ eneral-information/university-core- juage-philosophy-culture)	3
Mathematics elec	ctive ²	3
Outoido opopializ		
	ation elective ³	3

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Spring

	Semester Credit Hours	15
General electiv	e	6
Outside specialization elective ³		3
STAT 415	Mathematical Statistics II	3
STAT 408	Introduction to Linear Models	3

Fourth Year

Fall

	Total Semester Credit Hours	150
	Semester Credit Hours	14
Graduate course	work ⁷	12
STAT 692	Statistical Consulting ⁴	2
Spring		
	Semester Credit Hours	15
Graduate course	work ⁷	15
Fall		
Fifth Year		
	Semester Credit Hours	15
General elective		6
Outside specializ	zation elective ³	3
Statistics electiv	3	
or STAT 483	or Interdisciplinary Data Analytics Practicum	
STAT 482	Statistics Capstone	3
Spring		10
	Semester Credit Hours	15
Outside specializ		3
	Statistics elective ⁵	3
undergraduate/g	vioral sciences (http://catalog.tamu.edu/ general-information/university-core- sial-behavioral-sciences)	3
Graduate course	work ⁷	3
STAT 406	Design and Analysis of Experiments	3
STAT 406	Design and Analysis of Experiments	3

¹ Must make a grade of C or better.

- ² Select from ISEN 320, ISEN 340, ISEN 350, ISEN 355; MATH 300, MATH 302, MATH 308, MATH 409, MATH 410, MATH 417 or MATH 437, MATH 442, MATH 446, MATH 447, MATH 469, MATH 470.
- ³ Students must take 12 hours in an outside specialization area upon approval by a departmental advisor. At least 6 hours must be upper-level hours.
- ⁴ Courses to be used towards both the BS in Statistics and MS degree in Statistical Data Science.
- ⁵ Select from ISEN 320, ISEN 340, ISEN 355; MATH 300, MATH 302, MATH 308, MATH 409, MATH 410, MATH 417 or MATH 437, MATH 442, MATH 446, MATH 447, MATH 469, MATH 470; STAT 315, STAT 335/CSCE 320, STAT 407, STAT 421, STAT 424/MATH 424, STAT 426, STAT 436, STAT 438, STAT 445, STAT 446, STAT 459, STAT 484, STAT 485, STAT 489, STAT 491.
- ⁶ Select from STAT 315, STAT 335/CSCE 320, STAT 407, STAT 421, STAT 424/MATH 424, STAT 426, STAT 436, STAT 438, STAT 445, STAT 446, STAT 459, STAT 484, STAT 485, STAT 489, STAT 491.
- ⁷ 32 hours for a non-thesis option. Graduate hours must be taken from 600 level STAT courses not including STAT 601, STAT 651, or STAT 652. Students are required to take two semester hours of STAT 692. For

additional information concerning this and other requirements of the Master's program including the Master's diagnostic examination, reference the Master of Science in Statistical Data Science (http:// catalog.tamu.edu/graduate/colleges-schools-interdisciplinary/artsand-sciences/statistics/statistical-data-science-ms/) graduate catalog page.

Graduation requirements include a requirement for 3 hours of International and Cultural Diversity courses and 3 hours of Cultural Discourse courses. A course satisfying a Core category, a college/ department requirement, or a general elective can be used to satisfy this requirement.

Students will not be permitted to receive credit for both the 400- and 600-level versions of certain courses because the content and learning outcomes are too similar (e.g.STAT 404/STAT 604, STAT 408/STAT 608, STAT 407/STAT 607, STAT 426/STAT 626, STAT 436/STAT 636, STAT 438/STAT 638, STAT 445/STAT 645, STAT 446/STAT 646, STAT 459/STAT 659).

The program includes a total of 152 hours which up to 2 hours may be applied toward both the Bachelor of Science in Statistics and the nonthesis option Master of Science in Statistical Data Science.