Rev. 11/2013

College of Science
Bachelor of Science in **Statistics**
Check sheet for students graduating in calendar year **2016**

CORE REQUIREMENTS (52 Credits)

Complete all following courses in Statistics, Math, Computer Science, English

STAT 3005*	Statistical Methods (Pre: MATH 1206)	(3)( )
STAT 3006*	Statistical Methods (Pre: 3005)	(3)( )
STAT 3094*	Introduction to Programming in SAS (Pre: 3005)	(3)( )
STAT 3104*	Probability and Distributions (Pre: 3005, MATH 1206)	(3)( )
STAT 4004*	Methods Statistical Computing (Pre: 4105, 4214)	(3)( )
STAT 4024*	Communication in Statistics (Pre: 3006, 4204)	(3)( )
STAT 4105*	Theoretical Statistics (Pre: MATH 2224)	(3)( )
STAT 4106*	Theoretical Statistics (Pre: 4105 with C- or better, MATH 2224)	(3)( )
STAT 4204*	Experimental Designs (Pre: 3006)	(3)( )
STAT 4214*	Methods of Regression Analysis (Pre: 3006)	(3)( )
STAT 4584*	Advanced Calculus for Statistics (Pre: MATH 2224)	(3)( )
Or MATH 3224*	Advanced Calculus (Pre: MATH 2224, 3034[5])	
MATH 1114	Elementary Linear Algebra	(2)( )
MATH 1205[1]	Calculus	(3)( )
MATH 1206[1]	Calculus (Pre: MATH 1205)	(3)( )
MATH 1224	Vector Geometry (Pre: MATH 1205)	(2)( )
MATH 2224	Multivariable Calculus (Pre: MATH 1206)	(3)( )
CS 1044[2]	Introduction to Programming in C	(3)( )
Or CS 1054[2]	Introduction to Programming in Java	
Or CS 1064[2]	Introduction to Programming in Python	
Or CS 1114	Introduction to Software Design	
ENGL 3764	Technical Writing (Pre: Junior Standing)	(3)( )

ELECTIVE REQUIREMENTS (9 Credits)

Complete three courses from the list below

STAT 3504*	Nonparametric Statistics (Pre: 3006)	(3)( )
STAT 3654*	Introductory Data Analytics and Visualization (Pre: CMDA 2006 or equivalent)	(3)( )
STAT 4364*	Introduction to Statistical Genomics (Pre: 3006, MATH 1206, CS 1044 or 1054 or 1114)	(3)( )
STAT 4444*	Applied Bayesian Statistics (Pre: 3006, 3104, MATH 2224)	(3)( )
STAT 4504*	Applied Multivariate Analysis (Pre: 3006)	(3)( )
STAT 4514*	Contingency Table Analysis (Pre: 3006)	(3)( )
STAT 4524*	Sample Survey Methods (Pre: 3006)	(3)( )
STAT 4534*	Applied Time Series (Pre: 3006)	(3)( )
STAT 4654*	Intermediate Data Analytics and Machine Learning (Pre: CMDA 2006 or equivalent)	(3)( )
STAT 4664*	Computational Intensive Stochastic Modeling (Pre: CMDA 2006 or equivalent)	(3)( )
STAT 4804*[3]	Elementary Econometrics (Pre: 3005, AAEC 1006)	(3)( )
STAT 4964*[4]	Field Study[4]	(3)( )
Or STAT 4994*[4]	Undergraduate Research[4]	
MATH 3054*[5]	Programming for Math Problem Solving (Co: MATH 2214)	(3)( )
MATH 4454*	Applied Mathematical Modeling (Pre: Math 2214)	(3)( )
ISE 4404*	Statistical Quality Control (Pre: 4105, 4706, ISE 3414)	(3)( )

* Courses for computing "in-major GPA." Also included: additional STAT, MATH, & CS courses at 3000 or 4000-level and ISE courses at 3400 and 4400-level.

1 MATH 1205/1206 satisfy the CLE requirement for Area 5.

2 For transfer students from Computer Science, CS 1705, Introduction To Object-Oriented Programming, can substitute for either CS 1044 or CS 1054.

3 For Economic majors or minors, ECON 4304, Introduction to Econometric Methods, can substitute for STAT 4804.

4 A maximum of 3 credits from either 4964, Field Study (for internship or other summer experience), or STAT 4994, Undergraduate Research, may count as a Statistics elective with prior approval from the department.

5 Students must be earning a Double Major or Dual Degree in Mathematics to enroll in this course.

Prerequisites: There are no hidden prerequisites for the required courses listed above.

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Progress Toward Degree (two conditions are required for continuation in the major):

(1) Upon having attempted 72 semester credits (including transfer, AP, advanced standing, credit by examination, course withdrawal) majors must have completed the following courses with grades of C⁻ or better: STAT 3005, 3006; MATH 1205, 1206, 1114, 1224, 2224, and not have taken any MATH or STAT designated course for the degree more than twice, including attempts ending in course withdrawal.

(2) Upon having attempted 90 semester credits, students must have an in-major GPA of 2.0 or better.

Graduation Requirements: 120 credit hours are required for graduation. These credits must include the courses required for the major (see above section). Additionally, students who have not completed 3 years of a single foreign language in High School must complete 6 semester hours of one foreign language at the college level; these credits ***do not count*** toward the 120 hours required to graduate. Students who have completed 2 years of a single foreign language in high school are required to successfully complete the second semester (1106) of a foreign language at the college level and these credits **do** count toward the required 120 hours. To graduate, a student must have at least a 2.0 in-major GPA and overall GPA. **All required courses in STAT, MATH, CS, and ISE must be passed with a grade of C ⁻ or better.** If 120 credit hours are reached and a student does not meet the GPA requirement, the student must take additional in-major courses to raise the in-major GPA to a 2.0.

Requirements for the College and University Curriculum for Liberal Education (CLE)

Consult the University Undergraduate Course Catalogue or the Curriculum for Liberal Education Guide at http://www.cle.prov.vt.edu/ for approved courses.

Area 1
Writing & Discourse (6)

_____ (3)( )
_____ (3)( )

Area 2
Ideas, Cultural Traditions, & Values (6)

_____ (3)( )
_____ (3)( )

Area 3
Society & Human Behavior (6)

_____ (3)( )
_____ (3)( )

Area 4
Scientific Reasoning & Discovery (6)

_____ (3)( )
_____ (3)( )

Area 6
Creativity & Aesthetic Experience (3)

_____ (3)( )

Area 7
Critical Issues in a Global Context (3)

_____ (3)( )

Free Electives (29)

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