University of South Carolina

Major Map: Data Science
Bachelor of Science (B.S.)
McCausland College of Arts and Sciences
Bulletin Year: 2026-2027

This course plan is a recommended sequence for this major. Courses designated as critical (!) may have a deadline for completion and/or affect time to graduation. Please see the Program Notes section for details regarding "critical courses" for this particular Program of Study.

Critical	Course Subject and Title	Credit Hours	Min. Grade[1]	Major GPA[2]	Code	Prerequisites	Notes
Semester One (16-17 Credit Hours)							
!	ENGL 101 Critical Reading and Composition	3	C		CC-CMW		
	MATH 141 Calculus 1[3]	4	C		CC-ARP	C or better in MATH 112/115/116 or placement through the MAP	
	STAT 515 Statistical Methods I[4] *or* STAT 509 Statistics for Engineers	3	C		PR	C or better in MATH 112/115/122 or 141; or both C or better in STAT 110 or higher and in MATH 111; or placement through the MAP *(STAT 515)*; C or higher in MATH 112, MATH 115, MATH 142 *(STAT 509)*	
	Foreign Language[5] *or* other Carolina Core Req.[6]	3-4			CC-GFL		
	UNIV 101 The Student in the University *or* Carolina Core Requirement[6]	3			PR/CC		
Semester Two (16 Credit Hours)							
!	ENGL 102 Rhetoric and Composition	3	C		CC-CMW CC-INF	C or better in ENGL 101	
	MATH 142 Calculus II	4	C		CC-ARP	C or better in MATH 141	
	STAT 516 Stat. Methods II	3	C		MR	C or better in STAT 515, 509, 512 or equiv.	
	Carolina Core Requirement[6]	3			CC		
	Foreign Language[5] *or* other Carolina Core Req.[6]	3			CC-GFL		
Semester Three (15-16 Credit Hours)							
	MATH 241 Vector Calculus	3	C		CR	C or better in MATH 142	
	STAT 530 Applied Multivariate Stat. & Data Mining *or* CSCE/STAT 587 Big Data Analytics	3	C		MR	See Bulletin Listing	
	CSCE 106 Scientific Applications Programming	3	C		CR	C or better in MATH 111 or higher (or by MAP score into MATH 115 or higher)	
	Foreign Language[5] *or* Carolina Core Req.[6]	3			CR/CC		
	Carolina Core Requirement[6]	3-4			CC		
Semester Four (16 Credit Hours)							
	MATH 344 Applied Linear Algebra *or* MATH 544 Linear Algebra	3	C		PR	C or better in MATH 142 *(MATH 344)*; C or better in MATH 241 & 300 *(MATH 544)*	
	MATH 344L Applied Linear Algebra Lab	1	C		PR	C or better or concurrent enrollment in MATH 344 *or* 544	
	STAT 542 Computing for Data Science	3	C		MR CC-INT	C or better in STAT 301, 509, 515, or equiv.	
	ISCI 215 Ethics in the Era of Big Data *or* ITEC 101 Thriving in the Tech Age *or* PHIL 325 Engineering Ethics *or* any CC-VSR[7]	3	C		CC-VSR		
	Optional Minor[8] *or* Elective[9]	3	C *(minor)*		PR		
	History[10]	3			CR		
Semester Five (15-16 Credit Hours)							
	MATH 374 Discrete Structures *or* MATH 574 Discrete Mathematics I	3	C		PR	C or better in both MATH 142 & either CSCE 106 or 146 *(MATH 374)*; C or better in MATH 300 *(MATH 574)*	
	CSCE 567 Visualization Tools	3	C		MR	CSCE 145, 106 or 207	
	Optional Minor[8] *or* Elective[9]	3	C *(minor)*		PR		
	Carolina Core Requirement[6]	3-4			CC		
	Social Science	3			CR		
Semester Six (15 Credit Hours)							
	MATH/STAT 511 Probability *or* MATH 528 Math. Found. of DS & Machine Learning *or* MATH 529 Intro. to Deep Neural Networks *or* MATH 572 Math. Foundation of Network Sci.	3	C		MR	See Bulletin Listing	
	STAT 531/CSCE 588 Advanced Machine Learning with Implementation	3	C		MR	C or better in CSCE 106 & in STAT 530 or STAT/CSCE 587 & in MATH 241, 328, 344 or 544	
	Optional Minor[8] *or* Elective[9]	3	C *(minor)*		PR		
	Carolina Core Requirement[6] *or* Elective[9]	3			CC/PR		
	Carolina Core Requirement[6] *or* Elective[9]	3			CC/PR		
Semester Seven (12 Credit Hours)							
	Data Science Major Elective[11]	3	C		MR		
	ENGL 363 Introduction to Professional Writing *or* ENGL 462 Technical Writing *or* ENGL 463 Business Writing[12]	3	C		CR	C or better in ENGL 101 & 102	
	Optional Minor[8] *or* Elective[9]	3	C *(minor)*		PR		
	Optional Minor[8] *or* Elective[9]	3	C *(minor)*		PR		

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Semester Eight (13 Credit Hours)					
Data Science Major Elective[11]	3	C		MR	
Optional Minor[8] or Elective[9]	3	C (minor)		PR	
Elective[9]	3			PR	
Elective[9]	3			PR	
Elective[9]	1			PR	

Graduation Requirements Summary

Minimum Total Hours	Minimum Major Requirements Hours	College & Program Requirements Hours	Carolina Core Hours	Minimum Institutional GPA
120	24	50-62	34-46	2.000

1. Regardless of individual course grades, students must maintain a minimum 2.000 cumulative GPA.
2. Some colleges require a minimum GPA for major courses. Courses indicated in this column are included in the major GPA for this program of study.
3. Students who place into MATH 115 should take that in their first semester and take MATH 141 in the second semester. Students who place into MATH 111 should take that in their first semester, MATH 115 in their second semester, and MATH 141 in the summer or in their third semester.
4. Students who do not satisfy the prerequisites for STAT 515 should take STAT 201, 205, or 206 as an elective in the first semester (if they meet the prerequisites for one of them and don't already have credit for any of them) and STAT 515 in the second semester. Students who do not satisfy the prerequisites for any of STAT 201, 205, 206, or 515 should take STAT 110 as an elective in their first semester and STAT 515 in the second.
5. Students in the McCausland College of Arts and Sciences are required to demonstrate proficiency in one foreign language equivalent to the 122 course through course credit or the corresponding foreign language placement score.
6. The Carolina Core provides the common core of knowledge, skill and academic experience for all Carolina undergraduate students.
7. **Ethics in Data Science:** If ISCI 215 or ITEC 101 or PHIL 325 were not taken to fulfill the Carolina Core VSR requirement with a grade of C or better, then one of the following must be taken in place of an elective: CSCE 390, 581; CYBR 392; ISCI 215, 315, 415; ITEC 101; PHIL 323, 325, 326.
8. This major does not require a cognate or minor. An optional minor may be added to a student's program of study. A minor is intended to develop a coherent basic preparation in a second area of study. Courses applied toward general education requirements cannot be counted toward the minor. No course may satisfy both major and minor requirements. All minor courses must be passed with a grade of C or higher. At least half of the courses in the minor must be completed in residence at the University. A list of minor programs of study can be found at Programs A-Z. An optional additional major may also be added to a student's program of study. Additional majors must include all major courses as well as any prescribed courses noted (*) in the bulletin. Prescribed courses noted in the bulletin may be shared with Carolina Core, College requirements, and Program requirements in the primary program.
9. No courses of a remedial, developmental, skill-acquiring, or vocational nature may apply as credit toward degrees in the McCausland College of Arts and Sciences. The McCausland College of Arts and Sciences allows the use of the Pass-Fail option on elective courses. Further clarification on inapplicable courses can be obtained from the McCausland College of Arts and Sciences.
10. The McCausland College of Arts and Sciences requires one U.S. History and one non-U.S. History course, both of which must be chosen from the approved Carolina Core GHS courses. Whichever is not fulfilled through the Carolina Core GHS requirement must be fulfilled through this college requirement.
11. Select two courses from the following list or from any of STAT 530, CSCE/STAT 587, MATH/STAT 511, MATH 528, MATH 529 or MATH 572 that were not taken as Major Courses: **CSCE** 556, 569, 580, CSCE/STAT 582, CSCE 585; **MATH** 524; **STAT** 512, 517, 519, 535, 540, 541, STAT/BIOL 588.
12. A student who has passed MGMT 250 with a grade of C or higher may use another 3-hour Fine Arts/Humanities Course to satisfy this requirement.

Program Notes:
- Courses identified as "critical" must be completed in the student's first 60 semester hours of work in order for these courses to be credited toward graduation.
- All undergraduate students must take a 3-credit course or its equivalent with a passing grade that covers the founding documents. This course may fulfill any requirement in the program of study. Courses that meet this requirement are listed in the academic bulletin.
- To be retained in the program, a student must obtain a grade of C or higher in at most two attempts in all mathematics, computer science, and statistics courses required for graduation.
- The last 30 credit hours toward your degree must be earned in residence at the University of South Carolina-Columbia.

University Requirements: Bachelor's degree-seeking students must meet Carolina Core (general education) requirements. For more information regarding these requirements, please visit the Carolina Core page on the University website.

Codes:			
CC	Carolina Core	**CC-INF**	Carolina Core – Information Literacy
CC-AIU	Carolina Core-Aesthetic and Interpretive Understanding	**CC-INT**	Carolina Core – Integrative Course
CC-ARP	Carolina Core-Analytical Reasoning and Problem-Solving	**CC-SCI**	Carolina Core – Scientific Literacy
CC-CMS	Carolina Core-Effective, Engaged, and Persuasive Communication: Spoken Component	**CC-VSR**	Carolina Core – Values, Ethics, and Social Responsibility
CC-CMW	Effective, Engaged, and Persuasive Communication: Written Component	**CR**	College Requirement
CC-GFL	Carolina Core-Global Citizenship and Multicultural Understanding: Foreign Language	**MR**	Major Requirement
CC-GHS	Carolina Core – Historical Thinking	**PR**	Program Requirement
CC-GSS	Carolina Core – Social Sciences		

Disclaimer: Major maps are only a suggested or recommended sequence of courses required in a program of study. Please contact your academic advisor for assistance in the application of specific coursework to a program of study and course selection and planning for upcoming semesters.