

# CYBER INTELLIGENCE, B.S.

## Learning Outcomes

1. Cyber Intelligence majors will apply digital data analysis tools to evaluate and solve cybersecurity problems.
2. Cyber Intelligence majors will identify and describe the psychological factors that influence humans' relationship to and response to cyber and digital information.
3. Cyber Intelligence majors will apply historical, political, global, and cultural contexts to solve problems.
4. Cyber Intelligence majors will be able to explain and apply ethical concepts in response to concrete situations.
5. Cyber intelligence majors will identify and explain legal concepts relevant to cyber challenges.
6. Cyber Intelligence majors will be able to respond to cyber challenges in ways that are socially appropriate and culturally sensitive.

## Admissions

### Entrance Requirements

New freshmen who meet University admissions standards are eligible for admission to degree programs offered by the college. A student who wishes to enter the College of Arts and Sciences from another college on the Columbia campus must be in good standing and have a cumulative GPA of 2.00 or higher. A student who wishes to enter the College of Arts and Sciences from another UofSC campus must fulfill one of the following requirements:

1. Be in good standing, meet the admission requirements for a baccalaureate degree on the Columbia campus, and have a cumulative GPA of 2.00 or higher.
2. Be in good standing and have completed 30 semester hours with a GPA of 2.00 or higher on a UofSC campus.

Some programs in the College of Arts and Sciences have special admission requirements established by the department or committee that supervises the specific degree program, for example, Cardiovascular Technology, Biological Sciences, Chemistry, Biochemistry and Molecular Biology, Economics, Environmental Science, the Bachelor of Arts in Interdisciplinary Studies, and the Bachelor of Science in Interdisciplinary Studies. These requirements are listed in the sections of this bulletin that describe department and special degree programs.

## Degree Requirements (120 Hours)

### Program of Study

Requirements	Credit Hours
1. Carolina Core	34-46
2. College Requirements	15-18
3. Program Requirements	14-28
4. Major Requirements	43

### Founding Documents Requirement

All undergraduate students must take a 3-credit course or its equivalent with a passing grade in the subject areas of History, Political Science, or African American Studies that covers the founding documents including the United State Constitution, the Declaration of Independence, the Emancipation Proclamation and one or more documents that are foundational to the African American Freedom struggle, and a minimum

of five essays from the Federalist papers. This course may count as a requirement in any part of the program of study including the Carolina Core, the major, minor or cognate, or as a general elective. Courses that meet this requirement are listed here (<https://academicbulletins.sc.edu/undergraduate/founding-document-courses/>).

### 1. Carolina Core Requirements (34-46 hours)

#### CMW – Effective, Engaged, and Persuasive Communication: Written (6 hours)

*Must be passed with a grade of C or higher.*

- ENGL 101\*
- ENGL 102\*

#### ARP – Analytical Reasoning and Problem Solving (8 hours)

*Must be passed with a grade of C or higher.*

- MATH 141\*
- MATH 142\*

#### SCI – Scientific Literacy (8 hours)

- two 4-credit hour CC-SCI laboratory science courses (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

#### GFL – Global Citizenship and Multicultural Understanding: Foreign Language (0-6 hours)

Demonstration of proficiency in one foreign language equivalent to the minimal passing grade on the exit examination in the 122 course is required. Students can demonstrate this proficiency by successfully completing Phase II of the Proficiency Test or by successfully completing the 122 course, including the exit exam administered as part of that course.

- CC-GFL courses (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

*It is strongly recommended that students continuing the study of a foreign language begin college-level study of that language in their first semester and continue in that language until their particular foreign language requirement is completed.*

#### GHS – Global Citizenship and Multicultural Understanding: Historical Thinking (3 hours)

- any CC-GHS course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

#### GSS – Global Citizenship and Multicultural Understanding: Social Sciences (3 hours)

*Must be passed with a grade of C or higher*

- PSYC 101\*

#### AIU – Aesthetic and Interpretive Understanding (3 hours)

- any CC-AIU course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

## CMS – Effective, Engaged, and Persuasive Communication: Spoken Component <sup>1</sup> (0-3 hours)

- SPCH 213\*

## INF – Information Literacy <sup>1</sup> (0-3 hours)

- any overlay or stand-alone CC-INF course (<https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/>)

## VSR – Values, Ethics, and Social Responsibility (3 hours)

- POLI 201\*

<sup>1</sup> Carolina Core Stand Alone or Overlay Eligible Requirements – Overlay-approved courses offer students the option of meeting two Carolina Core components in a single course. A maximum of two overlays is allowed. The total Carolina Core credit hours must add up to a minimum of 31 hours. Some programs may have a higher number of minimum Carolina Core hours due to specified requirements.

## 2. College Requirements (15-18 hours)

### Foreign Language (0-3 hours)

- only if needed to meet 122-level proficiency

### Analytical Reasoning (6 hours)

*Must be passed with a grade of C or higher*

- STAT 509\* or STAT 515\*
- GEOG 105\*

### History (3 hours)

The College of Arts and Sciences requires one additional GHS course beyond the Carolina Core GHS requirement.

- If the Carolina Core GHS requirement is fulfilled by a **U.S. history** course, the College of Arts and Sciences history requirement must be fulfilled by a **non-U.S. history** course.
- If the Carolina Core GHS requirement is fulfilled by a **non-U.S. history** course, the College of Arts and Sciences history requirement must be fulfilled by a **U.S. history** course.

Please select the College of Arts and Sciences history requirement from the approved list of U.S. and non-U.S. history courses (<https://academicbulletins.sc.edu/undergraduate/arts-sciences/history-requirement/>).

### Social Science and Fine Arts or Humanities (6 hours)

*Must be passed with a grade of C or higher*

- **Social Science (3 hours)**
  - Choose 1 of the following to fulfill the Social Science requirement:
    - POLI 101\*
    - GEOG 121\*
    - GEOG 210\*
- **Fine Arts/Humanities (3 Hours)**
  - A Bachelor of Science from the College of Arts and Sciences requires one 3-hour Fine Arts/Humanities Course (<https://academicbulletins.sc.edu/undergraduate/arts-sciences/courses-acceptable-fine-arts-humanities/>)

Note: Students may use a 200-level foreign language course, if needed, to fulfill the 3 hours of Fine Arts or Humanities requirement.

## 3. Program Requirements (14-28 hours)

### Supporting Courses (14-17 hours)

Course	Title	Credits
CSCE 145	Algorithmic Design I (*) <sup>2</sup>	4
CSCE 146	Algorithmic Design II (*) <sup>2</sup>	4
CSCE 201	Introduction to Computer Security (*) <sup>2</sup>	3
	or ITEC 293 Cybersecurity Operations	
Foreign Language <sup>1</sup>		3-6
<b>Total Credit Hours</b>		<b>14-17</b>

<sup>1</sup> Students in the Cyber Intelligence major must complete at least 3 hours of foreign language at the 300-level.

<sup>2</sup> Must be passed with a grade of C or higher

### Cognate or Minor (0-18 hours)

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.

A list of minor programs of study can be found at Programs A-Z (<https://academicbulletins.sc.edu/undergraduate/programs-az/>).

### Electives (0-14 hours)

120 (or 128) degree applicable credits are required to complete any degree at UofSC. After the cognate, minor or second major is complete, any additional credits needed to reach 120 (or 128) total credits can be fulfilled by electives. No courses of a remedial, developmental, skill-acquiring, or vocational nature may apply as credit toward degrees in the College of Arts and Sciences. The 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 College of Arts and Sciences.

## 4. Major Requirements (43 hours)

*Must be passed with a grade of C or higher.*

Selection of major courses must include at least one Carolina Core Integrative course: CRJU 577, POLI 315, POLI 451, POLI 504, PSYC 410, PSYC 430 or PSYC 440.

### Major Courses (43 hours)

Course	Title	Credits
<b>Digital Data Analysis</b>		
CSCE 522	Information Security Principles	3

MATH 344 & 344L	Applied Linear Algebra and Applied Linear Algebra Lab	4
MATH 374	Discrete Structures	3
STAT/CSCE 587 or STAT 530	Big Data Analytics Applied Multivariate Statistics and Data Mining	3
Select one of the following:		3
ITEC 493	Information Technology Security for Managers	
MATH 528	Mathematical Foundation of Data Science and Machine Learning	
MATH 572	Mathematical Foundation of Network Science	
MATH 587/ CSCE 557	Introduction to Cryptography	
STAT 516	Statistical Methods II	
<b>Law and Public Policy</b>		
Select two of the following:		6
POLI 315	International Relations	
POLI 342	National Security Policies of the United States	
POLI 417	Theories of War in International Relations	
POLI 420	International Law	
POLI 421	Law and Contemporary International Problems	
POLI 433	Economic Aspects of International Politics	
POLI 442	Globalization and Security	
POLI 450	Constitutional Law I: Institutional Powers	
POLI 451	Constitutional Law II: Civil Liberties	
GEOG 515	Political Geography	
<b>Ethics</b>		
Select one of the following:		3
PHIL 320	Ethics	
POLI 504	Politics and Ethics	
<b>Psychology</b>		
Select one from the following:		3
PSYC 410	Behavioral and Mental Disorders	
PSYC 430	Survey of Social Psychology	
PSYC 440	Survey of Personality	
<b>Domestic and Global Cyberchallenges</b>		
Select two of the following:		6
CRJU 424	Criminal Justice Intelligence	
CRJU 440	Homeland Security and Terrorism	
CRJU 512	Information-Based Management in Criminal Justice	
CRJU 577	Law and Criminal Justice Policy	
CRJU 582	Computer Applications in Criminal Justice	
HIST 397	Evolution of Warfare II	
HIST 468	American Military Experience	
<b>Tools for Information Security</b>		
GEOG 345	Interpretation of Aerial Photographs	3
GEOG 363	Geographic Information Systems	3
Select one of the following:		3
GEOG 551	Principles of Remote Sensing	
GEOG 563	Advanced Geographic Information Systems	

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**Total Credit Hours** **43**

## Major Map

A major map is a layout of required courses in a given program of study, including critical courses and suggested course sequences to ensure a clear path to graduation.

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.

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