**CYBER INTELLIGENCE, B.S.**

**Learning Outcomes**

- Cyber Intelligence majors will apply digital data analysis tools to evaluate and solve cybersecurity problems.
- Cyber Intelligence majors will identify and describe the psychological factors that influence humans’ relationship to and response to cyber and digital information.
- Cyber Intelligence majors will apply historical, political, global, and cultural contexts to solve problems.
- Cyber Intelligence majors will be able to explain and apply ethical concepts in response to concrete situations.
- Cyber intelligence majors will identify and explain legal concepts relevant to cyber challenges.
- 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**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Carolina Core</td>
<td>34-46</td>
</tr>
<tr>
<td>2. College Requirements</td>
<td>15-18</td>
</tr>
<tr>
<td>3. Program Requirements</td>
<td>14-28</td>
</tr>
<tr>
<td>4. Major Requirements</td>
<td>43</td>
</tr>
</tbody>
</table>

**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 States 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. 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**

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

- ENGL 101
- ENGL 102

**ARP – Analytical Reasoning and Problem Solving**

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

- MATH 141 (https://academicbulletins.sc.edu/search/?P=MATH\_20141)
- MATH 142 (https://academicbulletins.sc.edu/search/?P=MATH\_20142)

**SCI – Scientific Literacy**

*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**

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**

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

**GSS – Global Citizenship and Multicultural Understanding: Social Sciences**

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

- PSYC 101

**AIU – Aesthetic and Interpretive Understanding**

*any CC-AIU course (https://academicbulletins.sc.edu/undergraduate/carolina-core-courses/)*
Accordingly, please select one of the following:

- **GHS requirement must be fulfilled through this college requirement.**
- **U.S. History course.** Whichever is not fulfilled through the Carolina Core
- The College of Arts and Sciences requires one U.S. History and one non-History (3 hours)
- Must be passed with a grade of C or higher

Analytical Reasoning (6 hours)

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

- STAT 205
- GEOG 105

History (3 hours)

The College of Arts and Sciences requires one U.S. History and one non-U.S. History course. Whichever is not fulfilled through the Carolina Core GHS requirement must be fulfilled through this college requirement. Accordingly, please select one of the following:

- One Carolina Core GHS-approved course (primarily focused on U.S. History: HIST 111 (HIST %20111), HIST 112 (HIST %20112), HIST 214 (HIST %20214), or another GHS-approved course determined by the College of Arts and Science to fit this geographic category. **OR**
- One Carolina Core GHS-approved course primarily focused on non-U.S. History: HIST 101 (HIST %20101), HIST 102 (HIST %20102), HIST 104 (HIST %20104), HIST 105 (HIST %20105), HIST 106 (HIST %20106), HIST 108 (HIST %20108), HIST 109 (HIST %20280), FAMS 300 (FAMS %20300), or another GHS-approved course determined by the College of Arts and Sciences to fit this geographic category.

### 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 205 or STAT 515
- GEOG 105

**History** (3 hours)

The College of Arts and Sciences requires one U.S. History and one non-U.S. History course. Whichever is not fulfilled through the Carolina Core GHS requirement must be fulfilled through this college requirement. Accordingly, please select one of the following:

- One Carolina Core GHS-approved course (primarily focused on U.S. History: HIST 111 (HIST %20111), HIST 112 (HIST %20112), HIST 214 (HIST %20214), or another GHS-approved course determined by the College of Arts and Science to fit this geographic category. **OR**
- One Carolina Core GHS-approved course primarily focused on non-U.S. History: HIST 101 (HIST %20101), HIST 102 (HIST %20102), HIST 104 (HIST %20104), HIST 105 (HIST %20105), HIST 106 (HIST %20106), HIST 108 (HIST %20108), HIST 109 (HIST %20280), FAMS 300 (FAMS %20300), or another GHS-approved course determined by the College of Arts and Sciences to fit this geographic category.

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

**Supporting Courses (14-17 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE 145</td>
<td>Algorithmic Design I (Must be passed with a grade of C or higher)</td>
<td>4</td>
</tr>
<tr>
<td>CSCE 146</td>
<td>Algorithmic Design II (Must be passed with a grade of C or higher)</td>
<td>4</td>
</tr>
<tr>
<td>CSCE 201</td>
<td>Introduction to Computer Security (Must be passed with a grade of C or higher) or ITEC 293 Cybersecurity Operations</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language</td>
<td></td>
<td>3-6</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 14-17

**Electives (0-14 hours)**

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.**

**Major Courses (43 hours)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE 522</td>
<td>Information Security Principles</td>
<td>3</td>
</tr>
<tr>
<td>MATH 344 &amp; 344L</td>
<td>Applied Linear Algebra and Applied Linear Algebra Lab</td>
<td>4</td>
</tr>
<tr>
<td>MATH 374</td>
<td>Discrete Structures</td>
<td>3</td>
</tr>
<tr>
<td>STAT/CSC 587 or STAT 530</td>
<td>Big Data Analytics</td>
<td>3</td>
</tr>
<tr>
<td>CSCE 557</td>
<td>Mathematical Foundation of Data Science and Information Technology Security for Managers</td>
<td>3</td>
</tr>
<tr>
<td>ITEC 493</td>
<td>Information Technology Security for Managers</td>
<td>3</td>
</tr>
<tr>
<td>MATH 528</td>
<td>Mathematical Foundation of Network Science</td>
<td>3</td>
</tr>
<tr>
<td>MATH 572</td>
<td>Mathematical Foundation of Data Science and Machine Learning</td>
<td>3</td>
</tr>
<tr>
<td>MATH 587/ CSCE 557</td>
<td>Introduction to Cryptography</td>
<td>3</td>
</tr>
<tr>
<td>STAT 516</td>
<td>Statistical Methods II</td>
<td>3</td>
</tr>
<tr>
<td>Cybersecurity Operations</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>POLI 315</td>
<td>International Relations</td>
<td>6</td>
</tr>
</tbody>
</table>

Select one of the following:

- ITIE 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

Select two of the following:

- POLI 315 International Relations

- Digital Data Analysis
- Information Security Principles
- Applied Linear Algebra
- and Applied Linear Algebra Lab
- Discrete Structures
- Big Data Analytics
- Applied Multivariate Statistics and Data Mining
- Information Technology Security for Managers
- Mathematical Foundation of Data Science and Machine Learning
- Mathematical Foundation of Network Science
- Introduction to Cryptography
- Statistical Methods II
- 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
POLI 451  Constitutional Law
GEOG 515  Political Geography

Ethics
Select one of the following: 3
PHIL 320  Ethics
POLI 504  Politics and Ethics

Psychology
Select one from the following: 3
PSYC 410  Behavioral and Mental Disorders
PSYC 430  Survey of Social Psychology
PSYC 440  Survey of Personality

Domestic and Global Cyberchallenges
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

Tools for Information Security
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

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.

Cyber Intelligence, B.S. (https://sc.edu/about/offices_and_divisions/advising/documents/major_maps/2021-2022/2021_cyberintelligence_map.pdf)