

# B.S. in Cyber Intelligence and Security

## Degree Requirements

The Bachelor of Science degree in Cyber Intelligence and Security requires successful completion of a minimum of 120 credit hours and is normally completed in eight semesters. Students choose one of three options as a part of their senior capstone - either a project, a thesis, or internship/co-op program. Some courses may require prerequisite subject knowledge or particular class standing. Course descriptions should be reviewed prior to registration to ensure proper placement.

The National Security Agency (NSA) and the Department of Homeland Security (DHS) jointly sponsor the National Centers of Academic Excellence in Cyber Defense (CAE-CD) program, and have designated the Prescott Campus as a NSA/DHS CAE-CD institution with its degree programs in Cyber Intelligence and Security meeting their stringent criteria.

Embry-Riddle is a sponsor and mentor for the National Cyber Patriot program and a member of the National CyberWatch Network.

In order to be awarded this degree, a student is required to complete a minimum of 80% of the core in residence or transfer those credits from institutions approved by the Department Chair.

Students should follow the suggested course of study--taking 200, 300, and 400 level courses in sequence--unless otherwise approved by the Department Chair. This will provide the student with the greatest chance of success.

## Program Requirements

### General Education

Embry-Riddle degree programs require students to complete a minimum of 36 hours of General Education coursework. For a full description of Embry-Riddle General Education guidelines, please see the General Education section of this catalog.

Students may choose other classes outside of their requirements, but doing so can result in the student having to complete more than the degree's 120 credit hours. This will result in additional **time and cost** to the student.

Communication Theory and Skills	9
Computer Science/Information Technology	3
Mathematics	6
Physical and Life Sciences (Natural Sciences)	6
Humanities and Social Sciences	12
3 hours of Lower-Level Humanities	
3 hours of Lower-Level Social Science	
3 hours of Lower-Level or Upper-Level Humanities or Social Science	
3 hours of Upper-Level Humanities or Social Science	
<b>Total Credits</b>	<b>36</b>

### Cyber Intelligence and Security Core (89 Credits)

The following course of study outlines the quickest and most cost-efficient route for students to earn their B.S. in Cyber Intelligence and Security. Students are encouraged to follow the course of study to ensure they complete all program required courses and their prerequisites within four years.

Courses in the core with a # will satisfy your general education requirements.

ACC 210	Financial Accounting *	3
ACC 329	Forensic Accounting and Fraud Examination *	3
BA 201	Principles of Management	3
CI 120	Introduction to Cyber Security Majors	3
CI 201	Introduction to Linux, Unix, Windows, and Scripting	3
CI 320	Ethical Hacker - Pen Testing *	3
CI 330	Software Security	3
CI 340	Database System Security	3
CI 410	Malware Analysis **	3
CI 460	Big Data Analytics and Machine Learning	3
COM 122	English Composition #	3
COM 219	Speech #	3
COM 223	Intelligence Writing #	3
CS 118	Fundamentals of Computer Programming #	3
CS 125	Computer Science I	4
CS 213	Introduction to Computer Networks *	3
CS 304	Introduction to Computer Forensics *	3
CS 315	Data Structures and Analysis of Algorithms *	3
CS 420	Operating Systems *	3
General Education - Humanities Lower-Level Elective #		3
General Education - Humanities or Social Science Lower-Level Elective #		3
General Education - Humanities or Social Science Upper-Level Elective #		3
General Education - Natural Science Elective (One must include a lab) #		7
General Education - Social Science Lower-Level Elective #		3
MA 111	Pre-Calculus for Aviation #	3
MA 112	Applied Calculus for Aviation #	3
MA 225	Introduction to Discrete Structures	3
MA 314	Applied Linear Algebra & Statistics **	3

### Intelligence and Security Concentration (21 Credits)

CI 310	Intelligence, Surveillance and Reconnaissance **	3
CI 311	Securing Computer Networks **	3
CI 450	Computer Forensics II **	3
CS 303	Cryptography and Network Security **	3
CS 432	Information and Computer Security **	3
SIS 210	Security Fundamentals	3
SIS 315	Studies in Global Intelligence I	3

### Senior Capstone (3 Credits)

#### Choose one of the following:

CI 475	Cyber Senior Thesis **	3
CI 490	Cyber Capstone Project **	3
CECIS 497	Senior Capstone Option	3

### Open Electives (7 Credits)

Open Electives	7
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<b>Total Credits</b>	<b>120</b>
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\* Offered in Fall Only

\*\* Offered in Spring Only

# General Education Course

All Army ROTC students are required to complete SS 321 - U.S. Military History 1900-Present (3 credits) in order to commission.