

# B.S. DEGREE IN COMPUTER SCIENCE WITH CYBER SECURITY

## 82 HOURS

A graduate with a Bachelor of Science degree in Computer Science with Cyber Security will:

1. Be able to demonstrate understanding of and the ability to apply core computer science principles, knowledge, and skills to solve problems using computers.
2. Be able to apply a Christian worldview in the practice of computer science.
3. Be prepared for a career and/or vocation using computer science, especially in the cyber security field.

Students must complete a minimum of 122 hours including the major, core, and minor if required. Elective hours may be needed to reach 122 hours.

### 24 HOURS LOWER DIVISION

CMSC-1113 Programming I  
 CMSC-1123 Programming II  
 CMSC-1313 Software Engineering I: Introduction  
 CMSC-2133 Object-Oriented Software Engineering  
 CMSC-2213 Internet Application Development  
 CMSC-2233 Data Structures and Algorithm Analysis  
 CMSC-2313 Software Engineering II: Practices  
 CMSC-2413 Assembly Language

### 21 HOURS UPPER DIVISION

CMSC-3313 Software Engineering III: Ethics  
 CMSC-3443 Computer Organization and Architecture  
 CMSC-4123 Software Engineering IV: Tools  
 CMSC-4243 Software Engineering V: Projects  
 CMSC-4323 Database Systems  
 CMSC-4413 Operating Systems  
 CMSC-4513 Programming Languages

### 9 HOURS UPPER DIVISION CHOSEN FROM

Take any upper-division CMSC course not already taken.

### 3 HOURS COMMUNICATION CHOSEN FROM

COMM-3113 Business and Professional Communication  
 ENGL-3493 Technical Writing

### 6 HOURS MATHEMATICS

MATH-1623 Introduction to Discrete Mathematics  
 MATH-2913 Statistical Methods

### 15 HOURS CYBER SECURITY

CENG-4213 Network Engineering  
 CMSC-3633 Introduction to Cyber Security  
 CMSC-4643 Network Security  
 CMSC-4653 Cloud Architecture and Security  
 CMSC-4663 Network Forensics

### 2 HOURS LOWER DIVISION COMPUTER SCIENCE TEAM EXPERIENCE

CMSC-2011 Computer Science Team Experience I  
 CMSC-2011 Computer Science Team Experience I

### 2 HOURS UPPER DIVISION COMPUTER SCIENCE TEAM EXPERIENCE

CMSC-4011 Computer Science Team Experience II  
 CMSC-4011 Computer Science Team Experience II

# UNIVERSITY CORE CURRICULUM

## B.S. - 51 HOURS - COURSES MAY NOT BE REPEATED WITHIN CORE

### COMMUNICATION, 9 HOURS

COMM-1213: Oral Communication  
 ENGL-1113: English Composition I  
 ENGL-1213: English Composition II

### MATHEMATICS, 3 HOURS

MATH-1623: Introduction to Discrete Mathematics

### REQUIRED BIBLE, 6 HOURS

BIBL-1023: Foundations: Introduction to the Good Life  
 BIBL-1103: Story: Introduction to Christian Worldview

### BIBLE ELECTIVES, 3 HOURS

#### CAPSTONE, 3 HOURS

BIBL-4533: Bible Capstone

### POLITICAL SCIENCE, 3 HOURS

POLS-2113: Introduction to American Government

### AMERICAN HISTORY, 3 HOURS

HIST-2213: History of the U.S. to 1877  
 HIST-2223: History of the U.S. Since 1877

### GREAT WORKS, 3 HOURS

ARTS-2013: Survey of Visual Culture  
 ARTS-2423: History of Photography and Motion Pictures  
 ENGL-2213: Perspectives in Literature  
 MATH-2123: The History of Mathematics  
 MUSC-2013: Music Appreciation  
 MUSC-2023: Jazz Appreciation  
 MUSC-3213: Perspectives in World Music

### SCIENCE, 6 HOURS

One course must include a lab

### PSYC, SOCIAL SCIENCES, FINE ARTS, OR FOREIGN LANGUAGE, 3 HOURS

3 hours from these areas: Fine Arts, Family Science, French, German, History, Japanese, Music, Political Science, Psychology, or Spanish

### LIBERAL ARTS, 9 HOURS

9 hours from any liberal arts area

For more information on how to apply study abroad trips to the core, see page 25.