

College of Arts and Science

Dr. Fernando Arzola Jr., Associate Dean

Division of Mathematics and Sciences

COMPUTER SCIENCE MAJOR - B.S.

Primary Faculty, Rockland: Dr. David Ahn

The Computer Science major is designed to prepare students to become accomplished professionals and good stewards in technology related fields. The major offers a unique opportunity for students to achieve an understanding of Computer Science, Computer Information Systems, Information Technology, and Web Media, combined with a firm Biblical foundation that will allow graduates to further their education in graduate studies and fill key positions in technology related fields.

Program Admission Requirements

Students can declare Computer Science as their major at any time. However, it is important that students who apply for admission to the Computer Science program have the motivation and ability to understand and effectively use computer technologies. In addition to the general admission requirements listed in the catalog, Computer Science majors must apply for admission to the Computer Science degree program by the end of their sophomore year. Admission to the Computer Science program requires the following:

1. Submission of departmental application.
2. Evidence of satisfactory grade point average (minimum requirements: overall GPA of 2.5, GPA of 2.5 in major courses).
3. Professor recommendation.

In addition, all students must be prepared to take junior and senior level classes at the Rockland campus or through independent studies, as needed. Students that want to study Computer Science but do not wish to be admitted to the Computer Science degree program are recommended to pursue an interdisciplinary major, or a Computer Science minor.

120 credit hours, distributed as follows, are required for the Bachelor of Science degree:

Liberal Arts and Science Core Component.....35*

^Computer Science Majors take MAT 236 Calculus as the mathematics elective.

Foreign Language6

Bible and Ministry Minor Curriculum 15

Major Field Component (61 credits)

CSC 101 - Introduction to Computers II	3
CSC 112 - Introduction to Programming I	3
CSC 201 - Introduction to Programming II	3
CSC 210 - Computer Hardware Organization	3
CSC 242 – Webpage Design	3
CSC 311 – Data Structures and Algorithms.....	3
CSC 312 - Database Concepts	3
CSC 345 – Advanced Programming	3
CSC 411 – Software Engineering.....	3
CSC 441 - Data Communications and Networks.....	3
CSC 442 - Operating Systems	3
CSC 470 - Senior Seminar	3
MAT 237 – Calculus II.....	3
MAT 345 – Discrete Mathematics	3
MAT Elective (MAT 238, 310 or 330).....	3
Lab Science Component.....	4
CSC-Electives	12

Computer Science Major

Miscellaneous Component (3 credits)

Miscellaneous electives 3

Concentrations

In addition to general studies in Computer Science, the student has the option of concentrating in a particular area of interest within the B.S. in Computer Science degree.

Information Technology and Web Science (12 Credits)

CSC 340 - Web Programming
 CSC 341 – Management Information Systems
 CSC 444 - E-Commerce
 CSC 445 - Network Security

Cyber Security (12 Credits)

CSC 341- Management Information Systems
 CSC 445 – Network Security
 CSC 447 – Network Design and Implementation
 CSC 460 - Special Topics in Computer Science

Computer Animation and Game Design (12 Credits)

CSC 243 - Computer Arts
 CSC 245 - Computer Graphics and Animation
 CSC 347- Advanced Computer Arts
 CSC 448- Game Design
 CSC 347 - Advanced Computer Arts

Computer Science Major Suggested Program Plan

FIRST YEAR: Fall

PMN 101-Intro to Spiritual Form. 2
 INT 112-Found. for Excellence 2
 CSC 104-Intro. to Computers II. 3
 ENG 101-College Writing I 3
 HIS 113-Hist. of World Civ. I 3
 MAT-Elective 3

SECOND YEAR: Fall

ENG 201 or 202-Global Lit. I or II 3
 CSC 201-Intro. to Program II 3
 CSC 242-Web Page Design* 3
 PHI 101-Intro. to Philosophy 3
 Analytical Elective 3
 Elective 3

THIRD YEAR: Fall

BIB 301or 302-Biblical Doc I or II 3
 CSC 312-Database Concepts 3
 SOC 347-Cont American Soc 3
 IS Management Elective 3
 CSC-Elective 3

FOURTH YEAR: Fall

CSC 441-Data Comm. & Net. 3
 CSC 470-Senior Seminar 3
 CSC-Elective 3
 IS Management Elective 3
 Elective 3

FIRST YEAR: Spring

BIB 102-Old Testament Lit. 3
 CSC 112-Intro. to Prgrmg I 3
 ENG 102-College Writing II 3
 HIS 114-Hist. of World Civ. II 3
 Elective 3
 PMN 201-Nyack Heritage 1
 INT 101-Info Literacy 1

SECOND YEAR: Spring

BIB 201-New Testament Lit. 3
 CSC 210-Comp Hrdware Org... 3
 Laboratory Science 4
 Social Science Elective 3
 Elective 3

THIRD YEAR: Spring

BIB-Elective 3
 CSC/BUS 341 MIS** 3
 CSC-Elective 3
 Analytical Elective..... 3
 IS Management Elective 3

FOURTH YEAR: Spring

BIB 401-Christian Worldview ... 3
 CSC 442-Operating Systems ... 3
 CSC-Elective 3
 Electives..... 4

* *Optional but recommended for Web Media concentration. The CIS concentration may take a miscellaneous elective in place of this. The general studies in CS may take either a miscellaneous elective or a CSC elective in place of this.*

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