## COMPUTER SCIENCE (2+2)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>COSC 336</td>
<td>DATA STRUCTURES AND ALGORITHM ANALYSIS</td>
<td>4</td>
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<tr>
<td>COSC 350</td>
<td>DATA COMMUNICATIONS AND NETWORKING</td>
<td>3</td>
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<tr>
<td>COSC 418</td>
<td>ETHICAL AND SOCIETAL CONCERNS OF COMPUTER SCIENTISTS</td>
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<td>COSC 439</td>
<td>OPERATING SYSTEMS</td>
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<td>PROGRAMMING LANGUAGES: DESIGN &amp; IMPLEMENTATION</td>
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<td>COSC 457</td>
<td>DATABASE MANAGEMENT SYSTEMS</td>
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**Group A Electives**

Select two of the following: 6

- COSC 415  COMPILER DESIGN
- COSC 417  INTRODUCTION TO THE THEORY OF COMPUTING
- COSC 459  COMPUTER SIMULATION & MODELING
- COSC 461  ARTIFICIAL INTELLIGENCE
- COSC 483  DESIGN & ANALYSIS ALGORITHMS

**Group B Electives**

Select two of the following: 6

- COSC 412  SOFTWARE ENGINEERING
- COSC 431  SELECTED TOPICS COMPUTER SCIENCE
- COSC 471  COMPUTER GRAPHICS
- COSC 484  WEB-BASED PROGRAM

**General Requirement**

COMM 131  PUBLIC SPEAKING 3

**Required Science Courses**

Select one of the following: 4

- ASTR 161  THE SKY AND THE SOLAR SYSTEM
- BIOL 200 & 200L  INTRODUCTION TO CELLULAR BIOLOGY AND GENETICS [LECTURE] and INTRODUCTION TO CELLULAR BIOLOGY AND GENETICS [LAB]
- BIOL 202  INTRODUCTION TO ECOLOGY AND EVOLUTION
- BIOL 205  GENERAL BOTANY
- BIOL 207  GENERAL ZOOLOGY
- CHEM 131 & 131L  GENERAL CHEMISTRY I LECTURE and GENERAL CHEMISTRY I LABORATORY
- CHEM 132 & 132L  GENERAL CHEMISTRY II LECTURE and GENERAL CHEMISTRY II LABORATORY
- CHEM 210  ANALYTICAL CHEMISTRY
- CHEM 331  ORGANIC CHEMISTRY I
- GEOL 121  PHYSICAL GEOLOGY
- PHYS 241  GENERAL PHYSICS I CALCULUS-BASED
- PHYS 242  GENERAL PHYSICS II CALCULUS-BASED
- PHYS 243  GENERAL PHYSICS III

**Total Units** 41

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## Computer Science with Security Track (2+2)

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**Required Security Track Courses**

- COSC 440  OPERATING SYSTEMS SECURITY 3
- COSC 450  NETWORK SECURITY 3
- COSC 458  APPLICATION SOFTWARE SECURITY 3
- COSC 481  CASE STUDIES IN COMPUTER SECURITY 3

**Required Math Course**

MATH 314  INTRODUCTION TO CRYPTOGRAPHY 3

**General Requirement**

COMM 131  PUBLIC SPEAKING 3

**Required Science Course**

Select one of the following: 4

- ASTR 161  THE SKY AND THE SOLAR SYSTEM
- BIOL 200 & 200L  INTRODUCTION TO CELLULAR BIOLOGY AND GENETICS [LECTURE] and INTRODUCTION TO CELLULAR BIOLOGY AND GENETICS [LAB]
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**Total Units** 41