

# COMPUTER SCIENCE AND INFORMATION SYSTEMS—COMPUTER SCIENCE OPTION (CT.CISC)

## CERTIFICATE OF ACHIEVEMENT

**Program Outcomes:** Upon successful completion of this program a student will be able to:

- accurately communicate their work in a technical and non-technical context.
- design and construct significant computer application(s) using current programming languages, computer architectures, and operating systems.
- describe the organization and operation of a computer architecture with respect to numerical representation and computations, digital logic, and computer components.
- demonstrate the ability to evaluate algorithms, select from a range of possible options, provide justification for that selection, and implement the algorithm in a programming context.

### Required Major Courses (19 units)

- |   |     |
|---|-----|
| <input type="checkbox"/> CSS-1 – Introduction to Computer Science and Programming | 3.0 |
| <input type="checkbox"/> CSS-2A – Object Oriented Programming                     | 4.0 |
| <input type="checkbox"/> CSS-2B – Data Structures Algorithms                      | 4.0 |
| <input type="checkbox"/> CSS-3 – Computer Architecture and Assembly Language      | 4.0 |
| <input type="checkbox"/> CSS-7 – Discrete Structures                              | 4.0 |

### Major Electives (Complete 8 units)

- |  |     |
|--|-----|
| <input type="checkbox"/> CSS-120A – Introduction to Networks             | 4.0 |
| <input type="checkbox"/> CSS-122 – Computer Security Principles          | 4.0 |
| <input type="checkbox"/> CSS-125 – Storage Management and Virtualization | 4.0 |
| <input type="checkbox"/> MAT-3B – Analytic Geometry and Calculus II      | 4.0 |

### Other Required Courses

- |  |     |
|--|-----|
| <input type="checkbox"/> ENG-101* – Intermediate Composition and Reading | 3.0 |
| <b>OR</b>  |     |
| ESL-101* – Academic Writing & Reading II                                 | 5.0 |
| <input type="checkbox"/> MAT-123** – Intermediate Algebra                | 5.0 |

**TOTAL: 27 UNITS**

\*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.

\*\*Completion of MAT-123 or any higher level math class fulfills this requirement.

### GAINFUL EMPLOYMENT INFORMATION:

See the certificate program cost and the employment outlook for graduates by clicking the link below:  
<http://www.hartnell.edu/gainful-employment-certificate-programs-0>

### FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

<https://www.hartnell.edu/students/fa/net-price-calculator.html>