



## COMPUTER SCIENCE

### What YOU will learn:

Your major in computer science will encompass enough software experience to prepare you to develop the compilers and operating systems of the future, enough hardware experience to design the next generation computer chips in Silicon Valley, and enough theoretical studies to advance into research in academia. By the end of the first year, you will be building three-tier software applications with database back ends and GUI front ends. You will be designing the circuitry of processors using sophisticated prototyping boards by the end of your second year.

Over half of your course work involves computer science software and hardware, mathematics, and the natural sciences. The program leaves plenty of time and flexibility for a focus in one of four areas including artificial intelligence, foundations, informatics, networking & high-end computing; and a minor in Mathematics requires only one course in addition to those required for the major. Imagine yourself in elective courses such as Computer Organization, Embedded Systems, Programming Language Concepts, Software Engineering, Operating Systems Principles, Database Systems, High-performance Computing and many more!

### Career opportunities YOU will have:

A major in computer science at Nebraska means joining one of the fastest growing and well paying fields in the nation! Computer science graduates readily find employment as internet programmers, web information retrieval systems designers, game and animation programmers, scientific programmers, high-speed processor specialists, electronic commerce specialists, and engineers of enterprise-scale software systems. Employment of recent Nebraska graduates includes:

- Consultant, IBM
- Game Programmer Co-op, Vicarious Visions
- iPhone Application Developer, Independent Contractor
- Mobile App Developer, Sandhills Publishing
- Principal Software Engineer, Spring Source
- Programmer, Nebraska Heart Hospital
- Software Developer, Nebraska Global
- Software Development Engineer, Microsoft
- Software Engineer, Amazon
- Software Engineer, IBM
- Velocity Software Engineer, Cerner Corporation
- Web Application Developer, Speedway Motors

### Why NEBRASKA for Computer Science?

There has never been a better time to be a computer science major at Nebraska! Average starting salaries for our graduates are around \$60,000 with 100% of those in the job market having been offered a full-time position prior to graduation and 84% participating in one or more internships.

Extend your classroom experiences by engaging in undergraduate research in the Holland Computer Center, Nebraska Intelligent MoBILE Unmanned Systems (NIMBUS) lab, the lab for Empirically-based Software Quality Research and Development (ESQuaReD), the Constraint Systems Lab; or work alongside faculty on any of their research projects.

Picture yourself designing a research project similar to these current student projects: *Operationalizing Automatic Poem Identification in Archival Newspapers: Research Issues and Solution Engineering* or *VITA-MathDay*. Connect with the Department and your peers by joining any of our numerous student organizations: Game Developers Club, Association for Computing Machinery, Association for Women in Computing, Institute of Electrical & Electronics Engineers, and Society of Women Engineers.



# COLLEGE OF ARTS AND SCIENCES

## COMPUTER SCIENCE

	COURSE NAME	HOURS
<b>FIRST Semester</b>	CSCE 155A: Computer Science I (ACE 3)	3
	MATH 106: Calculus I (CDR B)	5
	ACE 1: Written texts/research & knowledge skills	3
	Language Prerequisite - 101 Level (Elective)	5
	CSCE 10: Introduction to CSE	0
	<b>Total Hours</b>	<b>16</b>

	COURSE NAME	HOURS	
<b>SECOND Semester</b>	CSCE 156: Computer Science II	4	
	CSCE 235: Introduction to Discrete Structures	3	
	MATH 107: Calculus II (CDR F)	4	
	Language Prerequisite - 102 Level (Elective)	5	
	<b>Total Hours</b>	<b>16</b>	

<b>THIRD Semester</b>	CSCE 310: Data Structures and Algorithms	3
	MATH 208: Calculus III	4
	CSCE 251: Unix Programming Environment	1
	CDR A	3
	Language Requirement - 201 Level (CDR E)	3
	<b>Total Hours</b>	<b>14</b>

<b>FOURTH Semester</b>	CSCE 230: Computer Organization (ACE 8 with CSCE 486)	4
	MATH 314: Linear Algebra	3
	STAT 380: Statistics and Applications	3
	ACE 2	3
	Language Requirement - 202 Level (CDR E)	3
	<b>Total Hours</b>	<b>16</b>

<b>FIFTH Semester</b>	CSCE 322: Programming Language Concepts	3
	CSCE 361: Software Engineering	3
	Science Requirement (CDR BL)	4
	ACE 5: Humanities	3
	ACE 6: Social Sciences	3
	<b>Total Hours</b>	<b>16</b>

<b>SIXTH Semester</b>	CSCE Technical Elective 300 or 400 Level	3
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	Science Requirement (ACE 4)	4
	Elective/Minor/Secondary Major/Science/Pre-Professional	3
	CDR C: Humanities	3
	<b>Total Hours</b>	<b>16</b>

<b>SEVENTH Semester</b>	CSCE Depth Course - CSCE 428 (Theory) or 351 (Systems)	3
	CSCE Technical Elective 300 or 400 Level	3
	CSCE 486: Computer Science Professional Development (ACE 8 with CSCE 230)	3
	CDR D: Social Sciences	3
	ACE 7: Fine Arts	3
	<b>Total Hours</b>	<b>15</b>

<b>EIGHTH Semester</b>	CSCE Depth Course - CSCE 451 (Systems) or CSCE 423 (Theory)	3	
	CSCE 487: Computer Science Design Project (ACE 10)	3	
	ACE 9: Global awareness & human diversity	3	
	Science Requirement	4	
	<b>Total Hours</b>	<b>13</b>	

**DISCLAIMER:** This document represents a sample 4-year plan for degree completion with a major of interest in the College of Arts and Sciences. Actual course selection and sequence may vary and should be discussed individually with an Academic Advisor at the college and department level.