Software Engineering

Contact Information
Bonnie Schillinger, department chair
bonnie.schillinger@ndscs.edu
701-671-2496
Horton Hall 227/NDSCS-Fargo 138

Delivery Methods
Face-to-Face: Fargo
Online: All Classes Combination

Software engineers have extensive knowledge of programming languages, software development, and computer operating systems as they apply engineering principles to software creation. They create or adapt applications for businesses and organizations by analyzing the end user's needs.

Formal education and real-world experience form a good basis for the development of a capable software engineer. This curriculum will enlarge student’s skill sets and knowledge basis which will assist in the designing, building, installing, and maintaining of applications or programs.

For students wishing to pursue a bachelor’s degree at a four-year college or university, please see the Computer Science or Management Information Systems Liberal Arts transfer curriculum plans listed in the Liberal Arts section of this catalog.

Facilities
NDSCS has hardware and networking labs. Each of these labs has current equipment and software.

All Information and Communications Technology students are required to purchase laptop computers. These laptops give students adequate computer access to complete projects and assignments given in class.

Instruction
The instructors for this program have formal educational training, industry training and certifications, and work experience in Information Technology. Laboratory time is scheduled into each student’s program to enable them to receive individual attention and hands-on computer experience.

NOTE: This program requires the purchase of a notebook computer. The cost will be approximately $1,500 with several purchase or lease options available. For further information, call the Information Technology Department at 701-671-3333.

Admission Requirements*
The applicants must be high school graduates or equivalent. Helpful courses to prepare for this curriculum are keyboarding, Internet classes, and any publication type class.

Required minimum placement scores:

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<th>ACT</th>
<th>ACCUPLACER</th>
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<tbody>
<tr>
<td>Composite – 17</td>
<td>Reading Comp – 85</td>
<td>NEXT GENERATION Reading – 256</td>
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<tr>
<td>WritePlacer – 5</td>
<td>Writing – 250</td>
<td>QAS – 225</td>
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<tr>
<td>Elementary Algebra – 25</td>
<td>Arithmetic – 51</td>
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Or transfer equivalencies will apply as appropriate

Course Code | Course Title                   | Credits |
-------------|--------------------------------|---------|
CIS 180     | HTML and CSS                   | 3       |
CIS 183     | Social Media                   | 3       |
CIS 188     | Application Design             | 3       |
CIS 191     | First Year Seminar             | 1       |
CIS 197     | Internship                     | 2-3     |
CIS 279     | Security Awareness and Policy  | 1       |
CSCI 102    | Fundamentals of CyberLaw       | 3       |
CSCI 133    | Database Concepts              | 3       |
CSCI 134    | Database Design and Management | 3       |
CSCI 135    | Web Programming                | 3       |
CSCI 160    | Computer Science I             | 4       |
CSCI 161    | Computer Science II            | 4       |
CSCI 162    | Web Application Programming    | 3       |
CSCI 230    | Web Database I (ASP/PHP)       | 3       |
CSCI 231    | Web Database II                | 3       |
CSCI 263    | Computer Science III           | 3       |
ENGL 110    | English Composition I          | 3       |
ENGL/COMM  | Elective                       | 3       |
FYE 101     | Science of Success             | 1       |
MATH 103    | College Algebra                | 3       |
MATH 104    | Finite Math                    | 3       |
PHIL 210    | Ethics                         | 3       |
Social and Behavioral Science, Political Science, Humanities and History Elective(s) 3
Wellness Elective(s) 2

Total Required Credits for Associate 66-67

*Program Admission Requirements are subject to revision. Please check the department or program website under Program Admission Requirements for current information.

Award

Upon successful completion of the required courses for the degree, students will be awarded an Associate in Applied Science degree in Information and Communications Technology with an emphasis in Software Engineering.

Revised: May 2021

NORTH DAKOTA STATE COLLEGE OF SCIENCE

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