

# Information and Communications Technology (Software Engineering)

## Degree Type

Associate in Applied Science

## Contact Information

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## 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 either an HP EliteBook or ZBOOK laptop or equivalent. Please refer to the NDSCS website for specifications. For further information, contact the NDSCS ITS Department at 701-671-3333 option 5.

## 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.

**Please Note:** Students are placed into English, math and reading courses based on ACT, ACCUPLACER or other nationally recognized tests. Please see [www.ndscs.edu/current-students/student-success/test-center](http://www.ndscs.edu/current-students/student-success/test-center) for the NDSCS Course Placement Policy and testing information. Students may be on an extended plan of study pending their course placement.

*\*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.

## Required Courses

Course Code	Title	Credits
CIS 180	HTML and CSS	3
CIS 183	Social Media Marketing	3
CIS 188	Application Design	3
CIS 191	First Year Seminar	1
	CIS 197 Internship or CIS 285 Web Technologies	1-3
CIS 279	Security Awareness and Policy	1
CSCI 102	Fundamentals of CyberLaw	3
CSCI 133	Database Concepts I (SQL)	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	3
CSCI 231	Web Database II	3
CSCI 263	Computer Science III	3
ENGL 110	College Composition I	3
	ENGL/COMM Elective (3 credits)	3
FYE 101	Science of Success	1
MATH 103	College Algebra	3
MATH 104	Finite Mathematics	3
PHIL 215	Contemporary Moral Issues	3
	Social and Behavioral Science, Political Science, Humanities and History Elective(s) (3 credits)	3
	Wellness Elective(s) (2 credits)	2
<b>Total Required Credits</b>		<b>65-67</b>