Computer Science

Department Information

- **Department Location:**
  Quentin Burdick Building
- **Department Phone:**
  701-231-8568
- **Department Web Site:**
  www.ndsu.edu/cs/
- **Degrees Offered:**
  B.S.; B.A.
- **Official Program Curriculum:**
  bulletin.ndsu.edu/undergraduate/program-curriculum/computer-science/

Computer Science Major

The computer science undergraduate programs, based on recommendations of the Association for Computing Machinery, consist of a core of courses required for majors and a large selection of service courses and advanced courses. A grade of 'C' or better is required in all Computer Science courses. In the core, students are offered an opportunity to study concepts, applications, and implementation techniques that provide a broad practical base for both further study and a career in computing. Through a variety of service courses, every student in the university is provided an opportunity to develop computer literacy or competency. Through advanced undergraduate and graduate courses, students are offered an opportunity for in-depth study of such topics as artificial intelligence, programming languages, mobile applications, computer networks, security, information assurance, office automation, bioinformatics, software development, data mining, and data base management systems. Students are encouraged to choose elective courses from related areas including business, economics, engineering, mathematics, operations research, and statistics.

After completing part of their studies, students will find many opportunities to work part time as a research assistant to a scientist on campus, or as an intern with a local business, applying what they have learned in the classroom. Cooperative education opportunities starting in the junior year are available.

The B.A. concentrates on web development. Students receive an applied grounding in application design, web development, and deployment.

The B.S. program provides the widest exposure to computing with emphasis on high level languages, software development and advanced mathematical concepts.

Top students are encouraged to inquire about the 4+1 program providing a fast track through graduate school resulting in combined Bachelor's and Master's Degrees.

Computer Science Minor

A minor in Computer Science requires at least 17 semester hours of select computer science courses. A grade of 'C' or better is required in all courses applied toward the computer science minor.

Plans of Study

Please note this is a sample plan of study and not an official curriculum. Actual student schedules for each semester will vary depending on start year, education goals, applicable transfer credit, and course availability. Students are encouraged to work with their academic advisor on a regular basis to review degree progress and customize an individual plan of study.

B.S. Calculus Ready 4-Year Plan

Freshman			
Fall	**Credits**	**Spring**	**Credits**
CSCI 160	4	CSCI 161	4
CSCI 189	1	MATH 166	4
MATH 165	4	ENGL 120	3
Gen Ed Science/Tech and Lab	4	Gen Ed Science/Tech	3
ENGL 110	4	Gen Ed HUM/FA and Glob Perspectives	3
	17		17

Sophomore			
Fall	**Credits**	**Spring**	**Credits**
CSCI 213	3	CSCI 313	3
CSCI 222	3	CSCI 336	3
COMM 110	3	Gen Ed SOC/Beh Sci and Cult Diversity	3
Gen Ed SOC/BehSci	3	Gen Ed Wellness	2-3
Gen Ed Science/Tech	3	Elective	3
	15		14-15
Junior			
Fall	**Credits**	**Spring**	**Credits**
CSCI 372	3	CSCI 467	3
STAT 367	3	STAT 368	3
CSCI 366	3	CSCI 374	3
Gen Ed HUM/FA	3	ENGL 321 or 324	3
CSCI Elective I	3	Elective	3
	15		15
Senior			
Fall	**Credits**	**Spring**	**Credits**
CSCI 489	3	CSCI 415	3
CSCI 474	3	CSCI 445	3
CSCI elective II	3	CSCI Elective III	3
Additional Elective	3	Additional Elective	6
	12		15

Total Credits: 120-121

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B.S. Preparatory Mathematics Course Required

Freshman					
Fall	**Credits**	**Spring**	**Credits**		
CSCI 189	1	CSCI 160	4		
CSCI 122 or 159	3	ENGL 120	3		
ENGL 110 or 120	4-3	Gen Ed Science/Tech	3		
Gen Ed Science and Tech	4	Pre-Calculus course	3		
Pre-Calculus course per placement	3				
	15-14		13		
Sophomore					
Fall	**Credits**	**Spring**	**Credits**	**Summer**	**Credits**
CSCI 161	4	COMM 110	3	CSCI 213	3
MATH 165	4	MATH 166	4		
Gen Ed Science/Tech	3	Gen Ed Soc/Beh Sci and Glob Persp	3		
Gen Ed Soc/Beh Sci	3	Gen Ed Hum/FineArt and Cult Div	3		

	Credits		Credits
Gen Ed Wellness	2		
	16		13	3

Junior

Fall	Credits	Spring	Credits
CSCI 222	3	CSCI 313	3
CSCI 366	3	CSCI 336	3
STAT 367	3	CSCI 374	3
CSCI 372	3	STAT 368	3
Gen Ed Hum/FineArt	3		
	15		12

Senior

Fall	Credits	Spring	Credits
CSCI Elective I	3	CSCI Elective III	3
CSCI Elective II	3	CSCI 445	3
CSCI 474	3	CSCI 415	3
CSCI 489	3	CSCI 467	3
ENGL 321 or 324	3	Elective	6
	15		18

Total Credits: 120-119

Please note this is a sample plan of study and not an official curriculum. Actual student schedules for each semester will vary depending on start year, education goals, applicable transfer credit, and course availability. Students are encouraged to work with their academic advisor on a regular basis to review degree progress and customize an individual plan of study.

B.A. Plan of Study

First Year

Fall	Credits	Spring	Credits
CSCI 189	1	ENGL 120	3
CSCI 159	3	CSCI 160	4
MATH 105	3	MATH 146	4
CSCI 114	3	First Year Language 102	4
ENGL 110	4		
First Year Language 101	4		
	18		15

Second Year

Fall	Credits	Spring	Credits
CSCI 161	4	COMM 110	3
COMM 260	3	CSCI 222	3
Second Year Language 201	3	CSCI 371	3
Gen Ed Soc/Beh Sci	3	Second Year Language 202	3
	13		12

Third Year

Fall	Credits	Spring	Credits
CSCI 213	3	CSCI 313	3
STAT 330	3	STAT 331	2
COMM 261	3	ENGL 321 or 324	3
Gen Ed Wellness	2	Gen Ed Science	3

Gen Ed Science and Tech/Lab	4	Gen Ed Soc/Beh Sci	3
	15		14
Fourth Year			
Fall	**Credits**	**Spring**	**Credits**
CSCI 366	3	CSCI 445	3
CSCI 489	3	Elective (#300 or higher)	3
CSCI 488	3	Gen Ed	6
Elective (#300 or higher)	3	Elective	3
Elective	6		
	18		15

Total Credits: 120