

Cybersecurity

Department Information

- **Department Web Site:**
<https://www.ndsu.edu/cs/>
- **Credential Offered:**
B.S.; UG Certificate
- **Program Overview:**
catalog.ndsu.edu/programs-study/undergraduate/cybersecurity/ (<http://catalog.ndsu.edu/programs-study/undergraduate/cybersecurity/>)

Degree Requirements

Major: Cybersecurity

Degree Type: Bachelor of Science (B.S.)

Minimum Degree Credits to Graduate: 120

University Degree Requirements

1. Satisfactory completion of all requirements of the curriculum in which one is enrolled.
2. Earn a minimum total of 120 credits in approved coursework. Some academic programs exceed this minimum.
3. Satisfactory completion of the general education requirements as specified by the university.
4. A minimum institutional GPA of 2.00 based on work taken at NDSU.
5. At least 30 credits must be NDSU resident credits. Resident credits include credits registered and paid for at NDSU.
6. At least 36 credits presented for graduation must be in courses numbered 300 or higher.
7. Students presenting transfer credit must meet the NDSU residence credits and the minimum upper level credit. Of the 30 credits earned in residence, a minimum of 15 semester credits must be in courses numbered 300 or above, and 15 semester credits must be in the student's curricula for their declared major.

For complete information, please refer to the Degree and Graduation Requirements (<http://catalog.ndsu.edu/past-bulletin-archive/2023-24/academic-policies/undergraduate-policies/degree-and-graduation/>) section of this Bulletin.

University General Education Requirements

Code	Title	Credits
Communication (C)		12
ENGL 110	College Composition I	
ENGL 120	College Composition II	
COMM 110	Fundamentals of Public Speaking	
Upper Division Writing [†]		
Quantitative Reasoning (R) [†]		3
Science and Technology (S) [†]		10
Humanities and Fine Arts (A) [†]		6
Social and Behavioral Sciences (B) [†]		6
Wellness (W) [†]		2
Cultural Diversity (D) ^{**†}		
Global Perspectives (G) ^{**†}		
Total Credits		39

*

May be satisfied by completing courses in another General Education category.

†

General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review major requirements to determine if specific courses can also satisfy these general education categories.

- A list of university approved general education courses and administrative policies are available here (<http://catalog.ndsu.edu/past-bulletin-archive/2023-24/academic-policies/undergraduate-policies/general-education/#genedcoursestext>).

Major Requirements

Code	Title	Credits
CSCI 105	Introduction to Cybersecurity	3
CSCI 159	Computer Science Problem Solving	3
CSCI 160	Computer Science I	4
CSCI 161	Computer Science II	4
CSCI 222	Discrete Mathematics	3
CSCI 277	Introduction to UNIX	3
CSCI 366	Database Systems	3
CSCI 371	Web Scripting Languages	3
CSCI 374	Computer Organization and Architecture	3
CSCI 403	Defensive Network Security	3
CSCI 404	Ethical Hacking	3
CSCI 405	Principles of Cybersecurity	3
CSCI 408	Malware Detection, Analysis and Threat Mechanisms	3
CSCI 409	Cybersecurity Law and Policy	3
CSCI 410	Computer Crime and Forensics	3
CSCI 411	Secure Software Development	2
CSCI 429	Network Applications and Environments	3
CSCI 445	Software Projects Capstone	3
CSCI 474	Operating Systems Concepts	3
ENGL 321 or ENGL 324	Writing in the Technical Professions Writing in the Sciences	3
MATH 146 or MATH 165	Applied Calculus I Calculus I	4
STAT 367 or STAT 330	Probability Introductory Statistics	3
STAT 368 or STAT 331	Statistics Regression Analysis	3
Select 6 credits of Cyber Electives from the following:		6
CSCI 213	Modern Software Development	
CSCI 412	Mobile Software Engineering	
CSCI 462	Mobile and Wireless Networks	
CSCI 706	Data-Driven Security (with department permission)	
EMGT 150	Dealing with Terrorism, Cybersecurity and Other Emerging Threats	
EMGT 435	Issues in Homeland Security and Emergency Management	
MATH 473	Cryptology	
Total Credits		77

Certificate Requirements

Cybersecurity

Required Credits: 9

Required Courses

Code	Title	Credits
CSCI 403 or CSCI 405	Defensive Network Security Principles of Cybersecurity	3
CSCI 404	Ethical Hacking	3
Select one course from the following:		3
CSCI 277	Introduction to UNIX	
CSCI 403	Defensive Network Security (if not used above)	

CSCI 405	Principles of Cybersecurity (if not used above)
CSCI 409	Cybersecurity Law and Policy
CSCI 410	Computer Crime and Forensics
CSCI 469	Network Security
CSCI 473	Foundations of the Digital Enterprise

Total Credits**9**