

# Information Technology Major

## Major Requirements

Degree Type: B.S.  
Minimum Credits Required: 120

### University Degree Requirements

For complete details on these and other university degree requirements, refer to the Degree and Graduation Requirements (<https://catalog.ndsu.edu/academic-policies/undergraduate-policies/degree-and-graduation/>) section in the University Catalog.

1. Minimum of 120 semester credits (some programs may exceed this minimum).
2. Complete the University General Education requirements.
3. Minimum institutional GPA of 2.00 based on work taken at NDSU.
4. Minimum of 30 credits in resident at NDSU.
5. Minimum of 36 upper level credits (courses numbered 300 or higher).
6. Students with transfer credit must meet the NDSU 30 credits in residence (#4). Of these 30 credits in residence, a minimum of 15 credits must be in courses numbered 300 or above, and 15 credits must be in the student's declared major curricula.

### University General Education Requirements

A list of university approved general education courses along with the administrative policies governing the requirement and the categories is available here (<https://catalog.ndsu.edu/academic-policies/undergraduate-policies/general-education/>).

| Code                                       | Title | Credits   |
|--------------------------------------------|-------|-----------|
| Category C: Communication                  |       | 12        |
| Category R: Quantitative Reasoning         |       | 3         |
| Category S: Science and Technology         |       | 10        |
| Category A: Humanities and Fine Arts       |       | 6         |
| Category B: Social and Behavioral Sciences |       | 6         |
| Category W: Wellness                       |       | 2         |
| Category D: Cultural Diversity             |       |           |
| Category G: Global Perspectives            |       |           |
| Category L: Digital Literacy               |       |           |
| <b>Total Credits</b>                       |       | <b>39</b> |

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| Code                     | Title                                       | Credits |
|--------------------------|---------------------------------------------|---------|
| <b>Core Requirements</b> |                                             |         |
| CSCI 105                 | Introduction to Cybersecurity               | 3       |
| CSCI 159                 | Computer Science Problem Solving            | 3       |
| CSCI 177                 | Introduction to Information Technology      | 3       |
| CSCI 213                 | Modern Software Development                 | 3       |
| CSCI 222                 | Discrete Mathematics                        | 3       |
| CSCI 277                 | Introduction to UNIX                        | 3       |
| CSCI 305                 | Principles of Cybersecurity                 | 3       |
| CSCI 312                 | Survey of Programming Languages             | 3       |
| or CSCI 372              | Comparative Programming Languages           |         |
| CSCI 313                 | Software Development with Frameworks        | 3       |
| CSCI 359                 | Networking                                  | 3       |
| CSCI 366                 | Database Systems                            | 3       |
| CSCI 371                 | Web Scripting Languages                     | 3       |
| CSCI 374                 | Computer Organization and Architecture      | 3       |
| CSCI 377                 | Information Technology                      | 3       |
| CSCI 397                 | (or any 300 or 400 level IT or CS elective) | 3       |

|                                                            |                                       |              |
|------------------------------------------------------------|---------------------------------------|--------------|
| CSCI 445                                                   | Software Projects Capstone            | 3            |
| CSCI 450                                                   | Cloud Computing                       | 3            |
| CSCI 474                                                   | Operating Systems Concepts            | 3            |
| CSCI 489                                                   | Social Implications of Computers      | 3            |
| MATH 105                                                   | Trigonometry                          | 3            |
| STAT 330                                                   | Introductory Statistics               | 3            |
| Select one of the following sequences:                     |                                       | 8 or 9       |
| Sequence One:                                              |                                       |              |
| CSCI 227                                                   | Computing Fundamentals in Python I    |              |
| CSCI 228                                                   | Computing Fundamentals in Python II   |              |
| CSCI 229                                                   | Computing Fundamentals in Python III  |              |
| Sequence Two:                                              |                                       |              |
| CSCI 160                                                   | Computer Science I                    |              |
| CSCI 161                                                   | Computer Science II                   |              |
| Technical Electives - Select 2 courses from the following: |                                       | 6            |
| CSCI 410                                                   | Cybersecurity Forensics               |              |
| CSCI 422                                                   | Fundamentals of Data Engineering      |              |
| CSCI 473                                                   | Foundations of the Digital Enterprise |              |
| CSCI 476                                                   | Cloud Systems Administration          |              |
| CSCI 488                                                   | Human-Computer Interaction            |              |
| <b>Total Credits</b>                                       |                                       | <b>77-78</b> |