# Applied Computer Science, Bachelor of Science Degree

Offered by Department of Cyber Systems (http://catalog.unl.edu/undergraduate/departments-programs/cyber-systems)

### General Studies

**Foundational Core (Written, Math, Oral, Democracy)**

- **Foundational Core courses** (http://catalog.unl.edu/undergraduate/general-studies/general-studies-courses)
  - **MATH 115** Calculus I with Analytic Geometry
  - **Portal**
    - Select one course numbered 188 (http://catalog.unl.edu/undergraduate/general-studies/general-studies-courses/portal-course)

**Distribution**

- **ENG 101** Introduction of Academic Writing
- **Aesthetics** (http://catalog.unl.edu/undergraduate/general-studies/general-studies-courses/aesthetics)
- **Humanities** (http://catalog.unl.edu/undergraduate/general-studies/general-studies-courses/humanities)
- **Social Sciences** (http://catalog.unl.edu/undergraduate/general-studies/general-studies-courses/social-sciences)
- **Natural Sciences** (http://catalog.unl.edu/undergraduate/general-studies/general-studies-courses/natural-sciences)

**Analytical and Quantitative Thought** (http://catalog.unl.edu/undergraduate/general-studies/general-studies-courses/analytical-quantitative-thought)

Including:

- **CYBR 103** Computer Science I: Java for Software Development
- **CYBR 101** Computer Science I: Python for Analytics
- **CYBR 102** Computer Science I: C for Security

**Wellness** (http://catalog.unl.edu/undergraduate/general-studies/general-studies-courses/wellness)

**Capstone**

- Select one course numbered 388 (http://catalog.unl.edu/undergraduate/general-studies/general-studies-courses/capstone-course)

**BS Science-related course requirements**

- Select one of the following:
  - **STAT 241** Elementary Statistics
  - **STAT 345** Applied Statistics I
  - **STAT 441** Probability and Statistics

### Major Option

**Computer Science Core Requirements**

- **CYBR 150** Computer Science II: Object Oriented Programming
- **CYBR 180** Discrete Structures
- **CYBR 301** Computer Organization
- **CYBR 330** Algorithms and Data Structures
- **CYBR 401** Operating Systems
- **CYBR 404** Software Engineering
- **CYBR 407** Introduction to Automata, Formal Languages, and Computability
- **CYBR 408** Principles of Programming Languages
- **CYBR 441** Artificial Intelligence
- **CYBR 495** Cyber Systems Capstone

**Computer Science Electives**

Select 6 credit hours of the following with advisor approval:

- **CYBR 300-CYBR 499**

### Minor or 2nd Major

Complete all required courses

### Unrestricted electives

Needed to reach 120 credit hour minimum

Total Credit Hours

All courses in this major require a minimum grade of "C". In this option, prerequisites are fulfilled when the prerequisite courses have been passed with a "C" or above.

### Total Credit Hours

1. Students without sufficient preparation will also need to take the following courses, increasing the total credit hours needed:
   - MATH 102
   - MATH 103

2. A minor or second major is required for a complete degree program. The number of required electives needed to reach 120 total credit hours overall will depend upon the specific program chosen.

3. Except CYBR 388. Take no more than 3 credit hours from CYBR 475, CYBR 494, CYBR 499.