INFORMATION TECHNOLOGY, BACHELOR OF SCIENCE

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

Code | Title | Credit Hours
--- | --- | ---

**General Studies**

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

Foundational Core courses (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses)

Including:

- MATH 102 College Algebra 1
- Portal

Select one course numbered 188 (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/portal-course)

**Distribution**

- ENG 101 Introduction of Academic Writing 3

*If ENG 101 is taken as a prerequisite for ENG 102 then only 24 additional hours are required to meet the 27 credit hour minimum in the Distribution Area of General Studies*

Aesthetics (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/aesthetics) 3

Humanities (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/humanities) 6

Social Sciences (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/social-sciences) 6

Natural Sciences (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/natural-sciences) 7

Analytical and Quantitative Thought (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/analytical-quantitative-thought) 4

Including:

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

Wellness (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/wellness) 0

**Capstone**

Select one course numbered 388 (http://catalog.unk.edu/undergraduate/general-studies/general-studies-courses/capstone-course) 3

**BS Science-related course requirements**

- STAT 241 Elementary Statistics 1 3
- Select one of the following: 3-5
  - MATH 115 Calculus I with Analytic Geometry 1
  - MATH 123 Applied Calculus 1

**Major Option**

Complete all required courses 36

**Minor or 2nd Major**

Complete all required courses 24

Unrestricted electives

Needed to reach 120 credit hour minimum 4-6

**Total Credit Hours**

120

*A grade of "C" or above is required for all courses in this Option. In this option, prerequisites are fulfilled when the prerequisite courses have been passed with a "C" or above.*

### Information Technology Core Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CYBR 150</td>
<td>Computer Science II: Object Oriented Programming</td>
<td>3</td>
</tr>
<tr>
<td>CYBR 180</td>
<td>Discrete Structures</td>
<td>3</td>
</tr>
<tr>
<td>CYBR 223</td>
<td>Information Technology Infrastructure</td>
<td>3</td>
</tr>
<tr>
<td>CYBR 335</td>
<td>Fundamentals of Networking &amp; Systems</td>
<td>3</td>
</tr>
<tr>
<td>CYBR 381</td>
<td>Systems Analysis and Design I</td>
<td>3</td>
</tr>
<tr>
<td>CYBR 405</td>
<td>Human Computer Interactive Application Development</td>
<td>3</td>
</tr>
<tr>
<td>CYBR 425</td>
<td>Database Systems</td>
<td>3</td>
</tr>
<tr>
<td>CYBR 458</td>
<td>Computer Security</td>
<td>3</td>
</tr>
<tr>
<td>CYBR 495</td>
<td>Cyber Systems Capstone</td>
<td>3</td>
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</tbody>
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### Information Technology Electives

Select 9 credit hours of the following:

**System Administration & Networking Options:**

- CYBR 340 Information Networking Preceptorial
- CYBR 345 Intricacies of Advanced Networks & Systems
- CYBR 448 System Administration
- CYBR 460 Virtualization Essentials

**Web Development Options:**

- CYBR 406 Enterprise Application Development
- CYBR 418 E-Commerce Information Systems
- JMC 300 Website Design
- JMC 304 Interactive Media Design

**Data Analytics Options:**

- CYBR 306 Introduction to Predictive Modeling
- CYBR 350 Predictive Modeling II
- CYBR 410 Big Data I
- CYBR 411 Big Data II

**General IT Options:**

- CYBR 300-CYBR 499 3

**Total Credit Hours**

36

1. Students with sufficient preparation may enter the mathematics program at a higher level, reducing the total credit hours needed.
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.