INFORMATION NETWORKING AND TELECOMMUNICATIONS COMPREHENSIVE, BACHELOR OF SCIENCE

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

All College of Business and Technology Graduation Requirements (http://catalog.unk.edu/undergraduate/departments-programs/cyber-systems/) must be fulfilled.

### Code | Title | Credit Hours
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#### General Studies

**Foundational Requirements (LOPERs 1-4)**

Including:

- **LOPER 4**: Mathematics, Statistics and Quantitative Reasoning
  - MATH 102  College Algebra

**Broad Knowledge Requirements (LOPERs 5-8)**

Including:

- **LOPER 7**: Social Science
  - CJUS 101  Introduction to Criminal Justice

**Dispositional Requirements (LOPERs 9-10)**

**Wellness (LOPER 11) Optional**

**BS Science-related course requirements**

- MATH 103  Plane Trigonometry
  - or MATH 123  Applied Calculus I
  - or STAT 241  Elementary Statistics

**Major Option**

Complete all required courses

**Unrestricted electives**

Needed to reach 120 credit hour minimum

**Total Credit Hours**

Students must earn a minimum 2.5 cumulative GPA in the core courses, including any emphasis areas required.

### Major Option

**Information Networking and Telecommunications Core Requirements**

Take one of the following:

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

Take one of the following:

- ITEC 130  Technology Today
  - or CYBR 182  Software Productivity Tools
  - or CYBR 190  Data Analytics Mathematical Modeling

Take all of the following:

- IE 220  Electricity/Electronics
- CYBR 251  Linux Programming Environment
- CYBR 335  Fundamentals of Networking & Systems
- CYBR 340  Information Networking Preceptorial
- CYBR 345  Intricacies of Advanced Networks & Systems
- CYBR 430  Defending & Protecting Cyber Systems
- CYBR 435  Reverse Engineering: Thinking like an Adversary
- CYBR 460  Virtualization Essentials

**Information Networking and Telecommunications Management Core Requirements**

- CYBR 490  Information Networking Law and Public Policy
- CYBR 495  Cyber Systems Capstone

Select 9 hours from the following:

- CYBR 302  Principles of Management Information Systems
- CYBR 381  Systems Analysis and Design I
- CYBR 448  System Administration II
- ITEC 308  Industrial Management
- ITEC 408  Leadership in Business and Technology
- or MGT 409  Leadership: Skills, Applications, Research

**Information Networking and Telecommunications Support Track Requirements**

- Select one of the following support tracks:
  - Cyber Investigations
  - Web and Scripting
  - Business and Entrepreneurship
  - Tailored Option

**Internship Requirement**

- CYBR 475  Internship in Cyber Systems

**Total Credit Hours**

**Cyber Investigations**

**Code | Title | Credit Hours**
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Take all of the following:

- CJUS 350  Organized Crime
- CJUS 353  Crime Prevention and Security

Select 9 hours from the following:

- CJUS 230  The Police Service
- CJUS 321  Technology in Criminal Justice
- CJUS 360  Sex Crimes
- CJUS 390  Criminal Investigation
- CJUS 476  Terrorism and Crisis Negotiations
- CJUS 490  Advanced Criminal and Crime Scene Investigations (CSI)

**Total Credit Hours**

15
## Web and Scripting

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>JMC 112</td>
<td>Communication Software</td>
<td>3</td>
</tr>
<tr>
<td>JMC 300</td>
<td>Website Design</td>
<td>3</td>
</tr>
<tr>
<td>JMC 304</td>
<td>Interactive Media Design</td>
<td>3</td>
</tr>
<tr>
<td>JMC 401</td>
<td>Web Site Design II</td>
<td>3</td>
</tr>
<tr>
<td>JMC 402</td>
<td>CMS - WordPress</td>
<td>3</td>
</tr>
<tr>
<td>JMC 300-JMC 499 with the permission of instructor</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>CYBR 300 – CYBR 499, with permission of instructor</td>
<td>3</td>
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</tbody>
</table>

Total Credit Hours 15

## Business and Entrepreneurship

<table>
<thead>
<tr>
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<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>MKT 300</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MGT 400</td>
<td>Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>MGT 401</td>
<td>Small Business Management</td>
<td>3</td>
</tr>
<tr>
<td>ACCT 413</td>
<td>Entrepreneurial Law</td>
<td>3</td>
</tr>
<tr>
<td>MKT 460</td>
<td>Strategic Product Management</td>
<td>3</td>
</tr>
<tr>
<td>SPCH 445</td>
<td>Diffusion of Innovations</td>
<td>3</td>
</tr>
<tr>
<td>CYBR 300 – CYBR 499, with permission of instructor</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours 15

## Tailored Option

Select 15 credit hours of courses approved by the Department Chair following consultation between the student and the academic advisor. Courses are to be selected during the first year of declaring the major.

Total Credit Hours 15

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1. Students with sufficient preparation may enter the mathematics program at a higher level, reducing the total credit hours needed.
2. Designated courses with the appropriate content may be approved to satisfy one of the Broad Knowledge requirements plus LOPER 9 or Broad Knowledge plus LOPER 10. Courses may be approved to satisfy LOPER 9 or LOPER 10 alone. (Courses satisfying LOPER 9 or LOPER 10 alone must be 3 credit hours.) Students applying this option will need to take additional hours in other categories to meet the required GS hours.
3. Before registering for the internship, students must have Junior class standing and a 2.5 cumulative GPA in core courses including any emphasis areas required.
4. Except CYBR 388. Take no more than 6 credit hours from CYBR 475, CYBR 494, CYBR 499.