

# Master of Science – Cybersecurity

## 2025-2026

REQUIREMENTS	SUGGESTED SEQUENCES																																												
<p>In addition to the requirements listed in the Graduate Admission section, candidates must satisfy all of the following:</p> <ol style="list-style-type: none"> <li><b>Grade point average of 3.0 (B)</b> from all undergraduate coursework.</li> <li><b>Resume</b> detailing work experiences and accomplishments.</li> <li><b>Personal statement</b> of career goals and background experiences, including an explanation of how this program will help achieve educational and professional objectives.</li> <li><b>Recommendations:</b> Two professional or academic recommendations received online, addressing the candidate's potential for graduate study completion. You will provide the emails of two references, and they will be sent a link to fill out their online recommendation.</li> </ol> <p style="text-align: center;"><b><u>Degree Requirements</u></b></p> <p>All candidates for the degree must complete 33 credits, as indicated:</p> <p style="text-align: center;"><b>Foundation Requirements (3 credits)</b></p> <ul style="list-style-type: none"> <li>CIS 500 Fundamentals of Software Practice</li> </ul> <p style="text-align: center;"><b>Core Requirements (21 credits)</b></p> <ul style="list-style-type: none"> <li>CIS 518 Secure Software Engineering</li> <li>CIS 555 Applied Cryptography</li> <li>CIS 615 Information Security Principles</li> <li>CIS 616 Data Security and Privacy</li> <li>CIS 617 Digital Forensics and Investigations</li> <li>CIS 619 Data Analytics for Cybersecurity</li> <li>CIS 654 Computer Networking</li> </ul> <p style="text-align: center;"><b>Elective Requirements (3 - 6 credits)</b></p> <p>The number of electives needed depends on the capstone option. Approved electives:</p> <ul style="list-style-type: none"> <li>CIS 553: Ethical Hacking</li> <li>CIS 635: Knowledge Discovery and Data Mining</li> <li>CIS 655: Cloud Applications Development</li> <li>CIS 656: Distributed Systems</li> <li>CIS 677: High-Performance Computing</li> <li>CIS 678: Machine Learning</li> <li>AI 501: Introduction to Artificial Intelligence</li> <li>AI 502: Generative Artificial Intelligence</li> <li>AI 520: Trustworthy AI</li> </ul> <p style="text-align: center;"><b>Capstone Requirements (3 or 6 credits)</b></p> <p>Each candidate must complete either the project course or the thesis sequence. Please contact the graduate program director one semester prior to starting any of these.</p> <p>Project course:</p> <ul style="list-style-type: none"> <li>CIS 693 Master's Project</li> </ul> <p>Thesis sequence:</p> <ul style="list-style-type: none"> <li>CIS 690 Thesis Research Preparation</li> <li>CIS 695 Master's Thesis</li> </ul>	<p>Two suggested course sequences are provided below. These are suggestions only – work with your advisor to design a schedule to fit your specific needs.</p> <p style="text-align: center;"><b>*Students starting in Fall*</b></p> <p style="text-align: center;"><b><u>First Year</u></b></p> <p><u>Fall</u></p> <table> <tr> <td>CIS 500</td> <td>Fundamentals of Software Practice</td> </tr> <tr> <td>CIS 615</td> <td>Information Security Principles</td> </tr> <tr> <td>CIS 616</td> <td>Data Security and Privacy</td> </tr> </table> <p><u>Winter</u></p> <table> <tr> <td>CIS 555</td> <td>Applied Cryptography</td> </tr> <tr> <td>CIS 617</td> <td>Digital Forensics and Investigations</td> </tr> <tr> <td>CIS 654</td> <td>Computer Networking</td> </tr> </table> <p style="text-align: center;"><b><u>Second Year</u></b></p> <p><u>Fall</u></p> <table> <tr> <td>CIS 518</td> <td>Secure Software Engineering</td> </tr> <tr> <td>CIS 619</td> <td>Data Analytics for Cybersecurity</td> </tr> <tr> <td>Elective or CIS 690</td> <td></td> </tr> </table> <p><u>Winter</u></p> <table> <tr> <td>CIS 69X</td> <td>Master's Project or Thesis</td> </tr> <tr> <td>Elective</td> <td></td> </tr> </table> <p style="text-align: center;"><b>*Students starting in Winter*</b></p> <p style="text-align: center;"><b><u>First Year</u></b></p> <p><u>Winter</u></p> <table> <tr> <td>CIS 500</td> <td>Fundamentals of Software Practice</td> </tr> <tr> <td>CIS 615</td> <td>Information Security Principles</td> </tr> <tr> <td>CIS 616</td> <td>Data Security and Privacy</td> </tr> </table> <p><u>Fall</u></p> <table> <tr> <td>CIS 518</td> <td>Secure Software Engineering</td> </tr> <tr> <td>CIS 619</td> <td>Data Analytics for Cybersecurity</td> </tr> <tr> <td>CIS 654</td> <td>Computer Networking</td> </tr> </table> <p style="text-align: center;"><b><u>Second Year</u></b></p> <p><u>Winter</u></p> <table> <tr> <td>CIS 555</td> <td>Applied Cryptography</td> </tr> <tr> <td>CIS 617</td> <td>Digital Forensics and Investigations</td> </tr> <tr> <td>Elective or CIS 690</td> <td></td> </tr> </table> <p><u>Fall</u></p> <table> <tr> <td>CIS 69X</td> <td>Master's Project or Thesis</td> </tr> <tr> <td>Elective</td> <td></td> </tr> </table>	CIS 500	Fundamentals of Software Practice	CIS 615	Information Security Principles	CIS 616	Data Security and Privacy	CIS 555	Applied Cryptography	CIS 617	Digital Forensics and Investigations	CIS 654	Computer Networking	CIS 518	Secure Software Engineering	CIS 619	Data Analytics for Cybersecurity	Elective or CIS 690		CIS 69X	Master's Project or Thesis	Elective		CIS 500	Fundamentals of Software Practice	CIS 615	Information Security Principles	CIS 616	Data Security and Privacy	CIS 518	Secure Software Engineering	CIS 619	Data Analytics for Cybersecurity	CIS 654	Computer Networking	CIS 555	Applied Cryptography	CIS 617	Digital Forensics and Investigations	Elective or CIS 690		CIS 69X	Master's Project or Thesis	Elective	
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