

# CYBER DEFENSE, MASTER OF SCIENCE (MS)

**Required Core**—this coursework provides core knowledge in the areas of cybersecurity research methods, advanced computer and information security, and advanced network security, engineering, and research methods.

CYBR 515	RESEARCH METHODS AND COLLOQUIUM	4
CYBR 525	ADVANCED COMPUTER AND INFORMATION SECURITY	4
CYBR 535	ADVANCED NETWORK SECURITY	4

**Electives**—choose four courses—at least three must be at the 500-level **16**

Note: This coursework provides the student an opportunity to take courses specialized to their particular area(s) of interest. Any 400-level or non-CYBR course must be approved by the CYBR graduate coordinator or the student's graduate committee chair. The course CYBR 539 may each apply more than once, provided distinct topics are studied.

CYBR 533	ADVANCED NETWORKING CONCEPTS	
CYBR 537	SECURE CODING	
CYBR 539	TOPICS IN CYBERSECURITY	
CYBR 555	DIGITAL FORENSICS AND CYBERCRIME	
CYBR 563	APPLIED CRYPTOGRAPHY	
CYBR 570	REVERSE ENGINEERING	
CYBR 599	DIRECTED STUDY	

**Thesis or Project - A Minimum of 12 Credits are Required** **12**

Note: The student is expected to expand their knowledge with a published thesis or to apply their knowledge to a significant project. Projects may be work-related. The thesis or project is defended in a final oral examination of the student's work.

CYBR 600	THESIS	
	or CYBR 601 RESEARCH REPORT	

**Total Credits** **40**

**Students who earn an MS in Cyber Defense from EWU should be able to:**

- demonstrate cybersecurity principles in the securing of networks and software systems;
- possess an advanced understanding of core cybersecurity knowledge;
- use advanced cybersecurity skills in securing of networks and the development of software systems.