Examines the techniques and technologies for penetration of networks, detection of attacks, and the prevention of attacks. This course addresses the techniques, technologies, and methodologies used by cyber intruders.

**Prerequisites:** IT 238 and IT 351  
**Credits:** 4

This course identifies the major components of the cyber-attack/defense arena to include coverage of the wide range of cyber-attacks and defenses available today. The course will also address tools and procedures to simulate an attack on an adversary, as well as how to thwart attacks of this nature. The course discusses the implications societally, socially, legally, and technologically, of cyber-attacks on an entity. Finally, the course addresses reconstitution and robustness capabilities designed to enable U.S. systems to continue to function once they have suffered cyber damage.

**Assessments**

- Rubric-based assignments, projects, and/or exams.
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**Students will be able to . . .**

- Assess the major components of the cyber-attack/defense domain.
- Investigate cyber deterrence capabilities.
- Investigate reconstitution and robustness capabilities designed to enable U.S. systems to continue to function once they have suffered cyber damage.
Assess tools and procedures to include hardware and/or software to simulate an attack on an adversary.

Generate a simulation of an attack on an adversary using current tools and procedures including hardware and/or software.

Evaluate the implications societally, socially, legally, and technologically, of cyber-attacks on an entity.

Rubric-based assignments, projects, and/or exams.

Hands-on exercises.

Oral presentation and/or research paper and/or discussion.

Specific course faculty and materials will vary by quarter. Current information can be found on my.cwu.edu. ITAM classes are often offered in online, hybrid or traditional formats. Visit my.cwu.edu for more details or contact our office at ITAMInfo@cwu.edu.

University Policy on Academic Integrity

Academic Integrity is a standard set for this course. Students are expected to complete all of their coursework and assignments using their original words and ideas and will properly cite the words and ideas of others. Students are also expected to be honest in their interactions with the instructor. A student found to have not upheld these expectations is subject to failing this course and shall be subject to disciplinary action or sanction. The University catalog defines the term “academic dishonesty” in all its forms including, but not limited to:

- cheating on tests;

If you have a disability that may prevent you from meeting course requirements, contact the instructor immediately to file a Student Disability Statement and to develop an Accommodation Plan. Course requirements will not be waived but reasonable accommodations will be developed to help you meet the requirements. You are expected to work with the instructor and the CWU Disability Support Specialist to develop and implement a reasonable Accommodation Plan. For more information please visit: www.cwu.edu/disability-support/
• copying from another student’s test paper;
• using materials during a test not authorized by the person giving the test;
• collaboration with any other person during a test without authority;
• knowingly obtaining, using, buying, selling, transporting, or soliciting in whole or in part the contents of an un-administered test or information about an un-administered test; bribing any other person to obtain an un-administered test or information about an un-administered test; substitution for another student or permitting any other person to substitute for oneself to take a test; plagiarism” which shall mean the appropriation of any other person’s work and the unacknowledged incorporation of that work in one’s own work offered for credit;
• "Collusion" which shall mean the unauthorized collaboration with any other person in preparing work offered for credit.

The TurnItIn feature of Canvas helps students learn to use sources and citations appropriately. TurnItIn matches the material in student papers against material on the Internet and in our database of CWU papers. Representing the words or ideas of someone else as your own is a violation of the CWU Student Conduct Code and a serious infraction in this course. If you have questions about appropriate ways to include the words or ideas of other people in your papers, contact the instructor. Papers submitted to TurnItIn are added to the database of papers. Your instructor has the option of what papers and assignments may be submitted and/or randomly submitted to TurnItIn.

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