Meeting Times

Lecture via Zoom

Wednesday, 6:00 PM - 10:00 PM EST
Fort Bragg is the host

If meeting times change due to bad weather or other unforeseen circumstances, each student will have input on the make-up day.

Contact Information

Instructor: Dr. Crystal D Williams

Email: cwilliams71@webster.edu
Phone: (910) 446-9241

The best means of contact is via email.

Description

This course focuses on the analysis and management of information and information systems security including processes, technology, and facilities.

Requisites

ITM 5000

Objectives

1. Explain information systems security and its effect on people and businesses.
2. Describe how malicious attacks, threats, and vulnerabilities impact an IT infrastructure.
3. Explain the role of access controls in an IT infrastructure.
4. Explain the role of IT operations, administration, and security policies.
5. Explain the importance of security audits, testing, and monitoring in an IT infrastructure.
6. Describe the principles of risk management, common response techniques, and issues related to recovery of IT systems.
7. Explain how businesses apply cryptography in maintaining information security.
8. Describe networking principles and security mechanisms.
9. Apply information security standards and U.S. compliance laws to real-world applications in both the private and public sector.
10. Describe information systems security educational opportunities and professional certifications.

Outcomes

After completing this course, students will:
• *know and explain the important technical and management* terminology, concepts, principles, techniques, and theories related to the technical aspects of information and communications security management.

• be able to *effectively apply important technical and management* concepts, principles, practices, techniques, and theories needed to critically analyze an organization’s information and communications security requirements.

• be able to *effectively apply important technical and management* concepts, principles, practices, techniques, and theories needed to design and recommend appropriate security solutions.

• be able to *effectively apply important technical and management* concepts, principles, practices, techniques, and theories needed to manage the implementation and on-going administration of *recommended security solutions*.

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**Required Textbook**

**Fundamentals of Information Systems Security**

*Author: Kim & Solomon*

*Publisher: Jones & Bartlett*

*Edition: 3rd*

*ISBN: 978-1284116458*

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**Deliverables**

**Assignments: Weekly Assignments**

Submit as one file.

*Due: The Tuesday before the next class no later than 11:59 pm or as posted.*

**Labs: Weekly Labs**

Submit as one file.

*Due: The Tuesday before the next class no later than 11:59 pm or as posted.*

**Project: Project Part 1**

*Due: Tuesday of Week 3 no later than 11:59 pm or as posted.*

**Project: Project Part 2**

*Due: Tuesday of Week 6 no later than 11:59 pm or as posted.*

**Project: Project Part 3**

*Due: Tuesday of Week 9 no later than 11:59 pm or as posted.*

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**Evaluation**

**Breakdown**

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<thead>
<tr>
<th>Grade</th>
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<td>B+</td>
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## Criteria

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<td>15</td>
<td>135</td>
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<td>Participation</td>
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<td>20</td>
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<td>Quizzes</td>
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<td>15</td>
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<td>Weekly Assignments</td>
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<td>Weekly Labs</td>
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<td>Project</td>
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## Schedule

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<tr>
<th>Week</th>
<th>Topic</th>
<th>Notes</th>
<th>Assignment(s)</th>
<th>Lab(s)</th>
<th>Quiz:</th>
<th>Project:</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>Chapter 1: Information Systems Security &amp; Chapter 2: The Internet of</td>
<td>Assignment(s): Match Risk(s)/Threat Solutions</td>
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<td>Assignment(s): Match Risk(s)/Threat Solutions</td>
<td>Lab(s): Performing Reconnaissance and Probing Using Common Tools</td>
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<td>Quiz: Quiz 1</td>
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<td>Week 2</td>
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<td>Chapter 4: The Drivers of the Information Security Business</td>
<td>Lab(s): Performing Vulnerability Analysis</td>
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<td>Project: Project Part 2: Gap Analysis Plan and Risk Assessment</td>
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| Week 3     | Chapter 5: Access Controls, Chapter 6: Security Operations and Management & Chapter 7: Auditing, Testing, and Monitoring | Assignment(s):- Remote Access Control Policy Definition  
- Enhance an Existing IT Security Policy Framework  
- Create an Internet and Email Acceptable Use Policy  
- Define a Comprehensive Acceptable Use Policy  
- Testing and Monitoring Security Controls  
Lab(s):- Enabling Windows Active Directory and User Access Controls  
- Using Group Policy Objects and Microsoft baseline Analyzer for Change Control  
- Performing Packet Capture and traffic Analysis  
Quiz: Quiz 3  
Project: None |
| Week 4     | Chapter 8: Risk, Response, and Recovery & Chapter 9: Cryptography     | Assignment(s):- Match Risk and Response Descriptions  
- Quantitative and Qualitative Risk Assessment Analysis  
- Select Appropriate Encryption Algorithms  
- Design an Encryption Strategy  
Lab(s): Implementing a Business Continuity Plan (BCP)  
Quiz: Quiz 4  
Project: None |
| Week 5     | ONLINE Midterm Exam                                                   | The midterm exam will be administered online and is due by the end of the scheduled class session. More details will be given in class prior to the exam. |
| Week 6     | Chapter 10: Networks and telecommunications & Chapter 11: Malicious Code and Activity | Assignment(s):- Network Hardening  
- Network Security Applications and Countermeasures  
- List Phases of Attack  
- Summary Report on a Malicious Code Attack  
Lab(s): Performing a Web Site and Database Attack by Exploiting Identified Vulnerabilities  
Quiz: Quiz 5  
Project: None |
Course Policies

Attendance & Class Participation

Students are required to attend class and participate in the course via discussion or other means. Should an absence occur, adequate notice needs to be provided to the instructor. Students with excessive absences (as defined in the school policy) will not receive a grade for the course.

Preparation

Students are required to be prepared for class by reading the assigned material prior to class. Please ask questions about material of which you are uncertain. Students are required to be present and prepared to participate. Participation involves the ability to answer questions and participate in scenarios concerning the assigned reading material and topics. Preparation for class is IMPERATIVE.

Examinations

You will complete one (2) exams in this course; a midterm and final exam. The exams will consist of multiple choice questions, true and false, short answer / fill in the blank, and short essays. The midterm exam will be online during the Week 5 class. The mid-term exam will open at noon and close at 11:59 pm of the exam day. The final exam will be online during the Week 9 class. The final exam will open at noon and close at 11:59 pm of the exam day. You are allowed to use your book, notes and the Internet for the exams. Make up examinations will be administered on a case by case basis.

Quizzes
There will be a quiz each week of class with the exception of the weeks of the mid-term and final exams (total of seven (7) quizzes). Quizzes will be released weekly, the night after each class and will be due the Sunday prior to the next class - due dates will be posted. **Quizzes cannot be made up.**

**Assignments**

Students will complete multiple written assignments. Each assignment will relate to the topics being covered at the time of the assignment. All assignments should be in APA format. Minimum page requirements will be posted with each assignment. Minimum page requirements do not include the title page and reference page. **Students are expected to attempt each assignment.**

**Current Events**

Each student is required to stay abreast of current topics in the Information Technology (IT) field. **Students will be asked to provide a current event at the beginning of each class.** To assist students in creating a diverse selection of resources for pertinent industry news, current event resources will be discussed in class.

**Institutional Policies**

**Academic Policies**

Academic policies provide students with important rights and responsibilities. Students are expected to familiarize themselves with all academic policies that apply to them. Academic policies for undergraduate students can be found in the Undergraduate Studies Catalog; graduate students should review the Graduate Studies Catalog.

**Undergraduate Studies Catalog**

The Undergraduate Studies Catalog contains academic policies that apply to all undergraduate students. The academic policies and information section of the catalog contains important information related to attendance, conduct, academic honesty, grades, and more. If you are an undergraduate student, please review the catalog each academic year. The current Undergraduate Studies Catalog is at:


**Graduate Studies Catalog**

The Graduate Studies Catalog contains academic policies that apply to all graduate students. The academic policies section of the catalog contains important information related to conduct, academic honesty, grades, and more. If you are a graduate student, please review the catalog each academic year. The current Graduate Studies Catalog is at:

[http://www.webster.edu/catalog/current/graduate-catalog/](http://www.webster.edu/catalog/current/graduate-catalog/)

**Grading**

The Grades section of the academic catalog outlines the various grading systems courses may use, including the information about the final grade reported for this class.

**Undergraduate**

[http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html#grading](http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html#grading)

**Graduate**

[http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html#grades](http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html#grades)

**Incomplete**
There are important policies that govern grades of Incomplete (I), including the circumstances under which Incomplete grades are granted, deadlines for completion, and consequences should the remaining course work not be completed. It is the responsibility of a student who requests an Incomplete to ensure that he/she understands and follows the policies.

**Grade Appeals**

Instructors are responsible for assigning grades, and student should discuss grade issues with the instructor. Policies and procedures for appealing grades are available in the appropriate catalog.

**Academic Honesty Policy**

Webster University is committed to academic excellence. As part of our Statement of Ethics, we strive to preserve academic honor and integrity by repudiating all forms of academic and intellectual dishonesty, including cheating, plagiarism and all other forms of academic dishonesty. Academic dishonesty is unacceptable and is subject to a disciplinary response. Students are encouraged to talk to instructors about any questions they may have regarding how to properly credit others’ work, including paraphrasing, quoting, and citation formatting. The university reserves the right to utilize electronic databases, such as Turnitin.com, to assist faculty and students with their academic work.

The University’s Academic Honesty Policy is published in academic catalogs:

**Undergraduate**

[http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html](http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html)

**Graduate**

[http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html](http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html)

As a part of the University commitment to academic excellence, the Academic Resource Center provides student resources to become better acquainted with academic honesty and the tools to prevent plagiarism in its many forms:

[http://www.webster.edu/arc/plagiarism_prevention/](http://www.webster.edu/arc/plagiarism_prevention/)

**Statement of Ethics**

Webster University strives to be a center of academic excellence. The University makes every effort to ensure the following:

- The opportunity for students to learn and inquire freely
- The protection of intellectual freedom and the rights of professors to teach
- The advancement of knowledge through scholarly pursuits and relevant dialogue

To review Webster University's statement of ethics, see the Undergraduate Studies Catalog and the Graduate and Studies Catalog:

**Undergraduate**

[http://www.webster.edu/catalog/current/undergraduate-catalog/overview.html#ethics](http://www.webster.edu/catalog/current/undergraduate-catalog/overview.html#ethics)

**Graduate**

[http://www.webster.edu/catalog/current/graduate-catalog/ethics.html](http://www.webster.edu/catalog/current/graduate-catalog/ethics.html)

**Contact Hours for this Course**

It is essential that all classes meet for the full instructional time as scheduled. A class cannot be shortened in length. If a class session is cancelled for any reason, the content must be covered at another time.

**Important Academic Resources**

[Academic Accommodations](http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html)
Webster University makes every effort to accommodate individuals with academic/learning, health, physical and psychological disabilities. To obtain accommodations, students must identify themselves and provide documentation from a qualified professional or agency to the appropriate campus designee or the Academic ADA Coordinator at the main campus. The Academic ADA Coordinator may be reached at 314-246-7700 or disability@webster.edu.

If you have already identified as a student with a documented disability and are entitled to classroom or testing accommodations, please inform the instructor of the accommodations you will require for this class at the beginning of the course.

**Academic Resource Center**

Additional support and resources may be accessed through the Academic Resource Center (ARC). Support and resources include academic counseling, accommodations, assistive technology, peer tutoring, plagiarism prevention, testing center services, and writing coaching. Visit [www.webster.edu/arc](http://www.webster.edu/arc) or Loretto Hall 40 on the main campus for more information.

**Student Success Portal**

Webster University’s Student Success Portal, powered by Starfish, is a communications tool to connect students with faculty members and campus support services. It allows faculty and staff members to communicate with you regarding academic achievements as well as areas where support may be helpful. You may use the portal to contact faculty and staff members for assistance and to arrange meetings. Activity in the portal will be communicated to your Webster University email account. The Student Success Portal is available via your course home page in WorldClassRoom or via Connections. Learn more about the Student Success Portal at [http://www.webster.edu/success/students.html](http://www.webster.edu/success/students.html).

**University Library**

Webster University Library is dedicated to supporting the research needs and intellectual pursuits of students throughout the University’s worldwide network. Resources include print and electronic books, journal articles, online databases, DVDs and streaming video, CDs and streaming music, datasets, and other specialized information. Services include providing materials at no cost and research help for basic questions to in-depth exploration of resources. The gateway to all of these resources and services is [http://library.webster.edu](http://library.webster.edu). For support navigating the library’s resources, see [http://libanswers.webster.edu/](http://libanswers.webster.edu/) for the many ways to contact library staff.

**Drops and Withdrawals**

Drop and withdrawal policies dictate processes for students who wish to unenroll from a course. Students must take proactive steps to unenroll; informing the instructor is not sufficient, nor is failing to attend. In the early days of the term or semester, students may DROP a course with no notation on their student record. After the DROP deadline, students may WITHDRAW from a course; in the case of a WITHDRAW, a grade of W appears on the student record. After the WITHDRAW deadline, students may not unenroll from a course. Policies and a calendar of deadlines for DROP and WITHDRAW are at:

**Undergraduate**


**Graduate**

[http://www.webster.edu/catalog/current/graduate-catalog/enrollment.html](http://www.webster.edu/catalog/current/graduate-catalog/enrollment.html)

**Academic Calendar** - [http://www.webster.edu/academics/academic-calendar/](http://www.webster.edu/academics/academic-calendar/)

Current tuition rates, policies, and procedures, including details of pro-rated tuition refunds, are available in the “Tuition, Fees, and Refunds” section of Webster’s Academic Catalogs:

**Undergraduate**


**Graduate**
Student Handbook and Other Important Policies

Student handbook and other non-academic policies may apply to you and may impact your experience in this class. Such policies include the student code of conduct, privacy, technology and communications, and more. Please review the handbook each year and be aware of policies that apply to you. The handbook is available at:

http://www.webster.edu/student-handbook/

Sexual Assault, Harassment, and Other Sexual Offenses

Webster University makes every effort to educate the community to prevent sexual assault, harassment, and other sexual offenses from occurring, and is committed to providing support to those affected when this behavior does occur. To access information and resources or to review the Policy on Sexual Assault, Harassment, and Other Sexual Offenses, visit:

http://www.webster.edu/sexual-misconduct/

Research on Human Subjects

The Webster University Institutional Review Committee (IRB) is responsible for the review of all research on human subjects. The IRB process applies to all Webster University faculty, staff, and students and must be completed prior to any contact with human subjects. For more information on the IRB, visit:

http://www.webster.edu/irb/index.html

Course Evaluations

At the end of this course, you will have the opportunity to provide feedback about your experience. Your input is extremely valuable to the university, your instructor, and the department that offers this course. Please provide your honest and thoughtful evaluation, as it helps the university to provide the best experience possible for all of its students.

Important Technology Information

Connections Accounts

Webster University provides all students, faculty, and staff with a University email account through Connections. Students are expected to activate their Connections account and regularly check incoming University email. Students may choose to have their University email forwarded to an alternate email address. Connections account holders can call the Help Desk (314-246-5995 or toll free at 1-866-435-7270) for assistance with this setup. Instructions are also provided on the Information Technology website at:

http://www.webster.edu/technology/service-desk/

WorldClassRoom

WorldClassRoom is Webster’s Learning Content Management System (LMS). Your instructor may use WorldClassRoom to deliver important information, to hold class activities, to communicate grades and feedback, and more. WorldClassRoom is available using your Connections ID at:

https://worldclassroom.webster.edu/

Webster Alerts

Webster Alerts is the University’s preferred emergency mass notification service, available free to current students, faculty and staff at all US campuses. By registering a valid cell phone number and email address, you will receive urgent campus text, voice mail and email communications. Valuable information concerning a range of incidents affecting you - from weather-related campus closures, class delays and cancellations, to more serious or life-threatening events - are immediately and simultaneously delivered through multiple communication channels. To register for Webster Alerts, visit:

http://www.webster.edu/technology/services/webster-alerts/
This course meets via Zoom. Fort Bragg is the host for the course.