

Introduction to Cybersecurity

CSSS-5000

S1 2021 Section JA 3 Credits 01/04/2021 to 03/05/2021 Modified 11/22/2020

Meeting Times

Tuesdays

5:30pm-9:30pm

Melbourne Campus (and / or via WebNet or Zoom)

Contact Information

Adjunct Full Professor: Eric Provost, MS, MFS, CPP

Email: ericprovost94@webster.edu

Phone: 407-913-6739

Office hours 1 hour prior to class meetings or by appointment.

Description

This requisite course is designed to provide the student an overview of the major core areas of study they will encounter throughout this program. Introduction of computer system architectures, vulnerabilities, critical infrastructures, the growing threat of social networks, intelligence and counter intelligence, international laws, security policies, privacy and information liability, cyber attacks and counter cyber attacks, encryption, risk assessment, cybersecurity forensics including data gathering and recovery, and a forward look at future cyber technology developments.

Requisites

There is no requisite course for CSSS 5000. However, this is a technical degree and there is an implied assumption the student works in information technology or has a generalized knowledge of information technology concepts.

Outcomes

The student will:

- Summarize and demonstrate an understanding and working knowledge of cybersecurity management terms and phraseology.
- Acquire and differentiate a broad understanding of the cybersecurity environment, computer, information and communication system operating principles and general applications of cybersecurity management.
- Classify and differentiate a basic working knowledge of cybersecurity awareness and threats.
- Describe the roles, responsibilities, and tools of a cybersecurity manager.
- Inventory and analyze the basic knowledge of critical infrastructures and potential threats and impacts.
- Summarize and discuss an understanding of the basics of the Comprehensive National Cybersecurity Initiative (CNCI).
- Explain the evolving environment of cybersecurity international law, national law enforcement, and organizational security measures and counter measures.

- Classify future trends in cybersecurity issues facing public and private enterprises.
- Produce graduate level research papers and compose oral presentations.
- Demonstrate skills in the use of common graduate program technologies – PowerPoint, Internet, Library Resources, e-Reserves, Connections and Turnitin.

Required Textbook

Principles of Information Security

Author: Whitman, Mattord

Publisher: Cengage Learning

Edition: 6th

ISBN: 978-1337102063

Materials

SUPPLEMENTAL READINGS: In this course there will be a number of shorter, additional readings and videos, identified and provided in advance. All materials will be available in electronic "Canvas" course files.

Purchase or Rent textbooks

Students attending the Melbourne Campus can purchase/rent their textbooks by phone or going online. The preferred ordering method is online at www.websterbookstore.com (<http://www.websterbookstore.com/>). Required information for ordering - course number and section number e.g. BUSN 5200/W1.

Buyback Information

The bookstore buys books daily. The best time to sell textbooks back is prior to finals or immediately following finals.

Webster University Online/Metro Fulfillment Center

Follett Bookstore

314.962.3741

10am-5pm (Monday-Friday)

Deliverables

Mid-Term and Final Exam: Examinations will be in essay format and are "take-home" (open-book) exams. Exams are given at the end of designated class sessions and due before the beginning of the next class session.

Research Paper / Presentation: The research paper and presentation required for this course constitute 30% of the overall grade, and should draw students' attention and effort accordingly. The paper / presentation should reflect graduate-level effort and ability; and both should comply with Webster and APA formatting. A sample Webster research paper is provided. Compliance is especially required for the proper quotation and citation of sources.

Webster's on-line library is excellent, and has subscriptions to many databases, including cybersecurity-specific databases, where real research (as opposed to Google searches) can be conducted. Accessing these data bases will be covered the first week.

Recommended topics will be provided, but not required if another one is accepted by the instructor. All topics will be submitted and

approved by the instructor no later than the 4th class meeting. Topics should be broad enough, yet focused enough, to yield a comprehensive review of the approved subject within a minimum of 10, maximum of 15, pages in the body of the paper—exclusive of title, abstract, and references/bibliography. A paper achieving minimum length will be accepted for turn-in, but not necessarily yield a maximum possible grade. Papers should be more than “information papers;” and should identify a relevant cybersecurity issue, explain impacts, and provide recommendations.

Obviously, cybersecurity (and all other) papers submitted to Webster must be written at the unclassified, “open-source” level. Although papers will not be further shared without consent of the student, permission should be obtained if students use information obtained from their organizations of employment—if the paper contains proprietary information, identifies vulnerabilities, etc.

The presentation, given to the class on the 8th week—a summary of your paper--should utilize one or more audio/visual aids, document the issue and findings, and “defend” your position / recommendations as if presented in a management / executive forum.

Papers are required to be presented in electronic format, and will be subject to "Turnitin" and/ or other methods to validate the originality of effort.

✓ Evaluation

Participation: 10% Possible points: 100

Mid-Term Exam: 30% Possible points: 300

Final Exam: 30% Possible points: 300

Research Paper: 20% Possible points: 200

Presentation: 10% Possible points: 100

Total possible points: 1,000

Letter Grade	Numerical Score
A	96-100% (4.0)
A-	91-95% (3.67)
B+	87-90% (3.33)
B	82-86% (3.0)
B-	78-81% (2.67)
C	70-77% (2.0)
F	69 & below (0)

I	Incomplete (0)
W	Withdraw
WF	Withdraw/Failed

Schedule

When	Topic	Notes
05 Jan Week #1	Introduction	<ol style="list-style-type: none"> 1. Introductions, course overview and expectations. 2. Term Paper Requirements: Format, Topic, Research, Presentation. 3. Overview Video.
12 Jan Week #2	Chapters 1, 2	<ol style="list-style-type: none"> 1. Cyberspace and Cybersecurity: A History. 2. The Evolving Cyber Environment and the Need for Security.
19 Jan Week #3	Chapter 3	Legal, ethical, and professional issues.
26 Jan Week #4	Chapter 3 and provided materials.	<ol style="list-style-type: none"> 1. Cyber "War:" What constitutes war. 2. Receive and review for Mid-term Exam (take-home due week #5). 3. Term paper topic submitted to/approved by instructor.
02 Feb Week #5	Review Chapters 1-3 and provided materials.	<ol style="list-style-type: none"> 1. Completion and Submission of Mid-Term Exam. 2. Review of second-half of the course. 3. Guest speaker or special topic.
09 Feb Week #6	Chapters 6-9	Security Technologies, Physical Security.
16 Feb Week #7	Chapter 11	Security and Personnel - the Human Element.
23 Feb Week #8	Term papers and presentations.	<ol style="list-style-type: none"> 1. Student submissions and formal presentations of term papers. 2. Receive and review for Final Exam (take-home due week #9). 3. PLEASE COMPLETE ONLINE COURSE EVALUATION!
02 Mar Week #9	Review Chapters 6-9, 11	<ol style="list-style-type: none"> 1. Completion and Submission of Final Exam. 2. Course Evaluation. 3. Course Wrap-up.

* Course Policies

Attendance and incomplete work: Attendance is expected for the full duration of all class periods. Strive to be on time. For WebNet / Zoom students, this means being logged in, present, and active by both audio and visual means. When illness, work requirements, military/government-directed service, or emergency circumstances require tardiness, absence, or early departure--this should be communicated, when possible, in advance. Absences are neither "excused" or "unexcused" but can be mitigated based on circumstance and advance communication.

"Mitigate" means "make less severe, serious, or painful." However, if you are not in class, you cannot participate, and it will still affect your attendance / participation grade.

Unmitigated absences, tardiness, or early departures for the equivalent of two or more class periods can result in a full letter grade drop, from that which otherwise earned.

Late work receives reduced credit and must be made up by end of our final class meeting.

A grade of "incomplete" is awarded only in extraordinary circumstances. If awarded, "incomplete" work will be accepted within the terms of a "contract" between student and Professor, and within 30 days of the completion of the regular term.

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:

<http://www.webster.edu/catalog/current/undergraduate-catalog/> (<http://www.webster.edu/catalog/current/undergraduate-catalog/>)

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

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 (<mailto: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

<http://www.webster.edu/catalog/current/undergraduate-catalog/enrollment.html>
(<http://www.webster.edu/catalog/current/undergraduate-catalog/enrollment.html>)

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

<http://www.webster.edu/catalog/current/undergraduate-catalog/tuition.html>
(<http://www.webster.edu/catalog/current/undergraduate-catalog/tuition.html>)

Graduate

<http://www.webster.edu/catalog/current/graduate-catalog/tuition.html> (<http://www.webster.edu/catalog/current/graduate-catalog/tuition.html>)

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/> (<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/> (<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> (<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/> (<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/> (<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:

Campus Information
