Computer Science Department

Special Topics: Introduction to Applied Cybersecurity
CSC 5991 Section 902 CRN 16540
Fall 2017
Room 143, Advanced Technology Education Center (ATEC)
14601 East Twelve Mile Road, Warren, MI 48088
(http://maps.wayne.edu/view/#atec)
Fridays: September 1, 2017 – Friday, October 20, 2017
11:30 am – 5:00 pm

Faculty Contact Information
Name: Richard Schott
Office address: 146 ATEC
Office hours: by appointment
Phone: 313-881-9484
Email: dp8198@Wayne.edu
Please include “CSC5991-1709-902” in the subject line.

Course Description
This course addresses the broad range of industry best practices, knowledge, and skills expected of an IT security manager or officer. Students will learn both the theory and the requirements for practical implementation of core security concepts, practices, monitoring, and compliance.

Students will also learn to identify and maintain cost-effective security controls that are closely aligned with business requirements and industry standards.

The goal of this course is to prepare the student to take the Mile2 CISSO exam. The student is expected to spend substantial time studying all class materials, and to be actively engaged in all aspects of the class.

Credit Hours
Three (3) Credit Hours

Prerequisite(s)
CSC2200 and CSC2201, both with a grade of “C” or better, or Graduate standing, or Instructor approval

Co-requisite(s)
None
Text Book
There is no textbook for this course. Students will be given individual Mile2.com accounts, which will provide access to all necessary materials.

Optional Materials
(This book covers essentially the same content as this class. This book may be helpful as an alternate presentation of the content.)

Computer Programs
No specific computer programs are required. Basic familiarity with Windows and Unix/Linux operating systems and common applications are recommended for class lectures and discussions.

Course Contents
The course will cover the following topic areas (dates are tentative and subject to change):

Sep 01   ATEC Overview and Policies
         Review Syllabus and Class Policies
         Risk Management
         Security Management
         Identity Management

Sep 05   Last day to drop with 100% tuition cancellation

Sep 08   Access Controls
         Security Models
         Operational Security

Sep 12   Last day to drop with no grade reported (no refund)

Sep 15   Symmetric Cryptography and Hashing
         Asymmetric Cryptography and PKI

Sep 22   Midterm Exam

Sep 29   Network Connections
         Network Protocols and Devices
         Telephony, VPNs, and Wireless

Oct 03   Last day to withdraw

Oct 06   Security Architecture
         Software Development and Security
         Database Security
         Malware and Software Attacks

Oct 13   Business Continuity
         Disaster Recovery
         Incident Management
         Physical Security

Oct 20   Final Exam
Course Learning Objectives

The course learning objectives are skills and abilities students should have acquired by the end of the course. Upon successful completion of this class, the student will be able to:

<table>
<thead>
<tr>
<th>#</th>
<th>CSC 5991-005 Course learning Objectives</th>
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<tbody>
<tr>
<td>1</td>
<td>Understand core concepts of information security.</td>
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<tr>
<td>2</td>
<td>Comprehend current and emerging security risks to organizations.</td>
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<td>3</td>
<td>Design and recommend security controls to minimize risk.</td>
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<tr>
<td>4</td>
<td>Demonstrate knowledge and skills needed to take the Mile2.com C(ISO certification exam.</td>
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Assessment:

- Participation: 25%
- Assignments: 25%
- Midterm Exam: 25%
- Final Exam: 25%

Grading Scale:

- A: 93-100
- A-: 90-92
- B+: 85-89
- B: 80-84
- B-: 75-79
- C+: 70-74
- C: 65-69
- C-: 60-64
- F: 0-60

The instructor reserves the right to modify the grading scale, based on the instructor's assessment of the difficulty of the course material.

Grading Policies

- Students are expected to attend all class sessions.
- Students are expected to discuss and analyze the topics presented in class and in assignments.
- Students that attend all sessions and regularly contribute to discussion and analysis will receive full participation scores.
- The midterm exam shall cover all material presented prior to the midterm exam.
- The final exam shall be the Mile2.com C(ISO certification exam. It will cover all material in the course, and will be held on the last scheduled day of class.
Religious Holidays

Because of the extraordinary variety of religious affiliations of the University student body and staff, the Academic Calendar makes no provisions for religious holidays. However, it is University policy to respect the faith and religious obligations of the individual. Students with classes or examinations that conflict with their religious observances are expected to notify their instructors well in advance so that mutually agreeable alternatives may be worked out.

Student Disabilities Services

If you have a documented disability that requires accommodations, you will need to register with Student Disability Services for coordination of your academic accommodations. The Student Disability Services (SDS) office is located in the Adamany Undergraduate Library. The SDS telephone number is 313-577-1851 or 313-202-4216 (Videophone use only). Once your accommodation is in place, someone can meet with you privately to discuss your special needs. Student Disability Services' mission is to assist the university in creating an accessible community where students with disabilities have an equal opportunity to fully participate in their educational experience at Wayne State University.

Students who are registered with Student Disability Services and who are eligible for alternate testing accommodations such as extended test time and/or a distraction-reduced environment should present the required test permit to the professor at least one week in advance of the exam. Federal law requires that a student registered with SDS is entitled to the reasonable accommodations specified in the student’s accommodation letter, which might include allowing the student to take the final exam on a day different than the rest of the class.

Academic Dishonesty

Academic dishonesty means any activity that tends to compromise the academic integrity of the institution or subvert the education process. All forms of academic misbehavior are prohibited at Wayne State University, as outlined in the Student Code of Conduct (http://www.doso.wayne.edu/student-conduct-services.html). Students who commit or assist in committing dishonest acts are subject to downgrading (to a failing grade for the test, paper, or other course-related activity in question, or for the entire course) and/or additional sanctions as described in the Student Code of Conduct.

- **Cheating:** Intentionally using or attempting to use, or intentionally providing or attempting to provide, unauthorized materials, information or assistance in any academic exercise. Examples include:
  - copying from another student’s test paper;
  - allowing another student to copy from a test paper;
  - using unauthorized material such as a "cheat sheet" during an exam.

- **Fabrication:** Intentional and unauthorized falsification of any information or citation. Examples include:
  - citation of information not taken from the source indicated;
• listing sources in a bibliography not used in a research paper.
• **Plagiarism:** To take and use another’s words or ideas as one’s own. Examples include:
  ▪ failure to use appropriate referencing when using the words or ideas of other persons;
  ▪ altering the language, paraphrasing, omitting, rearranging, or forming new combinations of words in an attempt to make the thoughts of another appear as your own.
• **Other forms of academic misbehavior include, but are not limited to:**
  ▪ unauthorized use of resources, or any attempt to limit another student’s access to educational resources, or any attempt to alter equipment so as to lead to an incorrect answer for subsequent users;
  ▪ enlisting the assistance of a substitute in the taking of examinations;
  ▪ violating course rules as defined in the course syllabus or other written information provided to the student;
  ▪ selling, buying or stealing all or part of an un-administered test or answers to the test;
  ▪ changing or altering a grade on a test or other academic grade records.

**Course Drops and Withdrawals**

Students who drop this class on or before September 5, 2017, can receive 100% tuition and course fee cancellation. September 12, 2017 is the last day to drop this class with no grade reported. After September 12, 2017, there is no tuition or course fee cancellation.

Students who wish to withdraw from the class can initiate a withdrawal request on Pipeline. You will receive a transcript notation of WP (passing), WF (failing), or WN (no graded work) at the time of withdrawal. No withdrawals can be initiated after the end of the tenth week. Students enrolled in the 10th week and beyond will receive a grade. Because withdrawing from courses may have negative academic and financial consequences, students considering course withdrawal should make sure they fully understand all the consequences before taking this step. More information on this can be found at [http://reg.wayne.edu/pdf-policies/students.pdf](http://reg.wayne.edu/pdf-policies/students.pdf).

**Student Services**

The Academic Success Center (1600 Undergraduate Library) assists students with content in select courses and in strengthening study skills. Visit [www.success.wayne.edu](http://www.success.wayne.edu) for schedules and information on study skills workshops, tutoring and supplemental instruction (primarily in 1000 and 2000 level courses).

The Writing Center is located on the 2nd floor of the Undergraduate Library and provides individual tutoring consultations free of charge. Visit [http://clasweb.clas.wayne.edu/](http://clasweb.clas.wayne.edu/) writing to obtain information on tutors, appointments, and the type of help they can provide.

**Restriction on Recording Class Presentations**

Students need prior written permission from the instructor before recording any portion of this class. If permission is granted, the audio and/or video recording is to be used only for the student's personal instructional use. Such recordings are not intended for a wider public
audience, such as postings to the internet or sharing with others. Students registered with Student Disabilities Services (SDS) who wish to record class materials must present their specific accommodation to the instructor, who will subsequently comply with the request unless there is some specific reason why s/he cannot, such as discussion of confidential or protected information.