

IT430 Computer and Network Security Course Policy, Spring AY19 IT430 Computer and Network Security

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Coordinator: Visiting Professor Michael Oehler, x3-6807, oehler@usna.edu

<u>Course Description</u>: This course is an introduction to the theoretical and practical facets of computer and network security to include: Department of Defense (DoD)/Department of the Navy (DoN) policies and directives, trusted systems, access mediation, cryptography, Public Key Infrastructure (PKI), Information Warfare (IW), and database security. Laboratory work will include student exercises demonstrating cybersecurity concepts.

Credits: 2-2-3

Learning Objectives:

- 1. Understand and implement best practices of computer and network security
- 2. Analyze network security vulnerabilities and apply appropriate defensive mechanisms
- 3. Understand cryptographic principles and their use in computer and network security
- 4. Analyze ethical, legal, social and professional issues relevant to cybersecurity
- 5. Understand the security issues and responsibilities of freely available hacker tools

Student Outcomes:

Graduates of the program will have an ability to:

- 1. <u>Analysis</u>. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
- 2. <u>Implementation</u>. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
- 3. Communication. Communicate effectively in a variety of professional contexts.
- 4. <u>Ethics</u>. Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.
- 5. Teamwork. Function effectively as a member or leader of a team engaged in activities appropriate to

the program's discipline.

CS-6. <u>Theory</u>. Apply computer science theory and software development fundamentals to produce computing-based solutions.

IT-6. <u>Requirements</u>. Identify and analyze user needs and to take them into account in the selection, creation, integration, evaluation, and administration of computing based systems.

<u>Textbook(s)</u>: Recommended: Computer Security: Principles and Practice, 3rd Edition, Stallings

<u>Extra Instruction</u>: Extra instruction (EI) is strongly encouraged and should be scheduled by email with the instructor. EI is not a substitute lecture; students should come prepared with specific questions or problems.

Collaboration: The guidance in the Honor Concept of the Brigade of Midshipmen and the

Computer Science Department Honor Policy must be followed at all times. See

http://www.usna.edu/CS/resources/honor.php.

Specific instructions for this course:

• Homework: Collaboration is prohibited

• Labs: Initial collaboration is permitted. See statement below

• Quizzes and Exams: Collaboration is prohibited

All collaboration and outside sources should always be cited. The same rules apply for giving and receiving assistance. If you are unsure whether a certain kind of assistance or collaboration is permitted, you should assume it is not, work individually, and seek clarification from your instructor.

<u>Classroom Conduct</u>: The section leader will record attendance and bring the class to attention at the beginning and end of each class. If the instructor is late more than 5 minutes, the section leader will keep the class in place and report to the Computer Science department office. If the instructor is absent, the section leader will direct the class. Drinks are permitted, but they must be in reclosable containers. Food, alcohol, smoking, smokeless tobacco products, and electronic cigarettes are all prohibited. Cell phones must be silent during class.

<u>Late Policy</u>: Penalties for late submission of graded work may vary among courses or from semester to semester, but they will be the same for all sections of a given course. For *this* course:

- Late homework is not accepted
- Late quizzes and exams will not be accepted
- Late labs may be turned in up to 7 days passed their due date for up to 50% credit

Grading:

| | 6 weeks | 12 weeks | 16 weeks | Final |
|----------|---------|----------|----------|-------|
| Homework | 10% | 10% | 10% | 10% |
| Labs | 40% | 40% | 40% | 30% |
| Quizzes | 10% | 10% | 10% | 10% |
| Exams | 40% | 40% | 40% | 40% |
| Project | | | | 10% |
| Total | 100% | 100% | 100% | 100% |