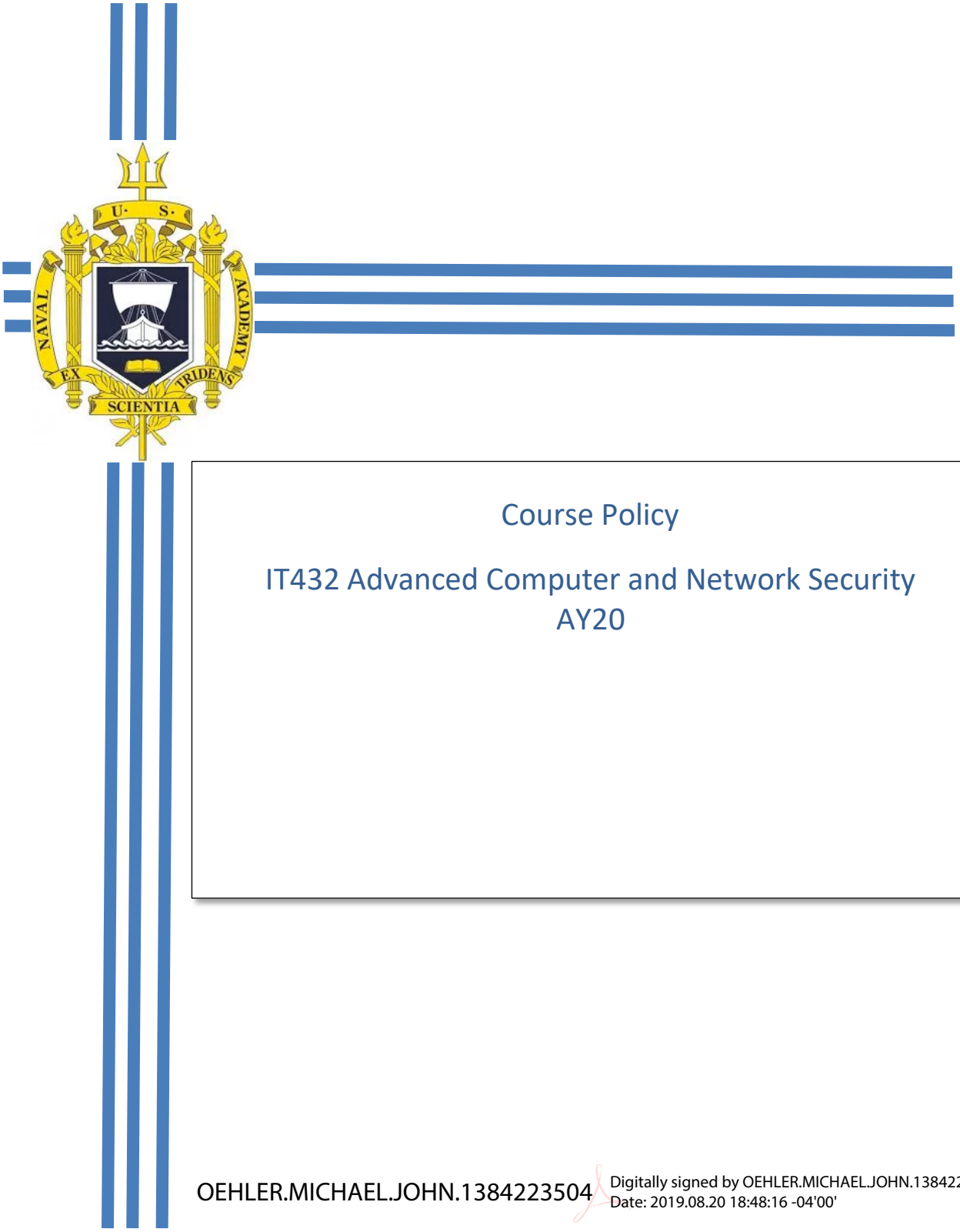

Course Policy

IT432 Advanced Computer and Network Security
AY20

OEHLER.MICHAEL.JOHN.1384223504

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IT432 Advanced Computer and Network Security
Course Policy, Fall AY20

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

Course Description: This course covers topics in secure system design, including: cryptography, operating system security, and language based security. Where the IT430 course focuses primarily on securing an existing system, this course studies how to design a system to meet security goals. Students will design and implement components of a secure system.

Credits: 2-2-3

Learning Objectives:

1. Understanding the theoretical concepts of application security (Protect)
2. Analyze security capabilities, discover and mitigate vulnerabilities (Detect)
3. Implement secure system design techniques (Respond)
4. Understand cryptographic theories, applied algorithms, protocols and their implementation
5. Communicate technical and security relevant results in code, written, and oral form
6. Know when (cyber) response actions are permitted, restricted, and forbidden; demonstrate good ethical judgement
7. Collaborate, strategize, and develop appropriate courses of action for presented cybersecurity problems and vulnerabilities. “Cyber is a team sport”
8. Gauge when capabilities are not warranted by a risk and user feasibility assessment

Student Outcomes:

Graduates of the program will have an ability to:
1. Analysis. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.
2. Implementation. 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. Ethics. 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. Theory. Apply computer science theory and software development fundamentals to produce computing-based solutions.
IT-6. Requirements. Identify and analyze user needs and to take them into account in the selection, creation, integration, evaluation, and administration of computing based systems.

Textbook(s): None

Extra Instruction: 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.

Classroom Conduct: 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.

Late Policy: 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
Labs	60%	60%	60%	60%
Homework	10%	10%	10%	10%
6wk Exam	30%	10%	10%	10%
12wk Exam		20%	10%	10%
Final Exam			10%	10%
Total	100%	100%	100%	100%

Labs, quizzes, homework, and exams are numerically weighted across the grading period.