ARCADIA UNIVERSITY
COMPUTER SCIENCE
CS 242 NETWORK SECURITY

MWF, 2:45PM – 3:50PM, BOYER HALL 014, 4 CREDITS, SPRING 2018

INSTRUCTOR INFORMATION
Instructor’s Name: Dr. Vitaly Ford
Telephone Number: (267) 620-4745
Email: fordv@arcadia.edu
Office: Boyer 328
Office hours: Refer to the schedule: http://vford.me/schedule

COURSE INFORMATION
PREREQUISITES
CS 227 (Fundamentals of Networking)

COURSE OBJECTIVES
This course focuses on learning about applied wireless and wired network security, basics of cryptography, cyberattacks, and network defenses.

MAJOR TEACHING METHODS
Lecture, demonstrations, discussion, reading, project assignments.

SPECIAL INSTRUCTIONAL PLATFORM/MATERIALS
Canvas, git.

LEARNING RESOURCES
• We are going to use Canvas. I expect the students to check Canvas regularly.
• Me (in-class, email, office hours, by appointment).
• Tutors from the University’s Learning Resource Network (LRN):
  https://www.arcadia.edu/academics/academic-support/learning-resource-network

CLASS ATTENDANCE AND PARTICIPATION
It is your responsibility to attend classes regularly. Should you have to miss a class meeting, please notify me of your absence prior to the class, and it is your responsibility to find out what has been taught that day and make up the work. In case of emergency, please contact me by email or phone as soon as you can.

In-class participation will be rewarded with extra credit!
OPTIONAL TEXTBOOK
William Stallings
ISBN-10: 013452733X

EVALUATION
GRADE DISTRIBUTION
Attendance: 10%
Assignments: 60%
Quizzes: 10%
Final Project: 20%

GRADING SCALE

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<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>F</td>
<td>0-60</td>
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<tr>
<td>D-</td>
<td>60-63</td>
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<td>A-</td>
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<td>A</td>
<td>95-100</td>
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Note: blue numbers mean exclusive

NOTE: If you have an issue with a grade on ANY individual assignment, you must see me within three days of the grade being released to the class.

CALENDAR (TENTATIVE)
Introduction to Security Week 1
Networking Fundamentals Week 2
Cryptography Week 3
Virtualization and Cloud Week 4
Key Distribution & User Authentication Week 5, 6
Wireshark, NMap, nikto Week 7
Transport-Layer Security Weeks 8
/* Spring Break! */ Week 9
IP Security Week 10
Wireless Security Week 11
Intrusion Detection and Prevention Week 12
Firewalls Week 13
Hash Algorithms vs Quantum Computing vs Blockchain Week 14
Final Project Presentations Week 15

ASSIGNMENTS AND QUIZZES
There will be multiple assignments during the semester (every two-three weeks). Assignments are due at 11:59 PM on the date specified on the assignment. Submit your assignments via Canvas or if it is a programming assignment, then you are also encouraged to use GitHub or BitBucket.

Late submissions will be accepted with a penalty: $5(2^{x-1})$, where x is the number of days late. As you would soon discover (if you don’t know it already), computer assignments require time, patience, and planning. Start early and do not wait until the last moment!
There will be two quizzes (midterm and final). If you missed a quiz without a legitimate reason, no late make-up quizzes will be accepted.

**FINAL PROJECT**
There will be a final group project. The project will include both a writeup and final presentation. More details on the final project will be given later in the class.

**COURSE POLICIES**
You are expected to adhere to the code of academic honesty of Arcadia University.

You may discuss course material and help one another. However, **borrowing others’ code or sharing implementation details is absolutely not allowed**. A simple way to avoid inadvertent plagiarism is to talk about the assignments, **but don’t read each other’s work or write solutions together**. For example, if two people share the same code or implementation details, **both parties** will be considered as conducting plagiarism.

If you are not sure, check with your instructor. Finally, I reserve the right to ask you to explain your assignments/code to me.

**UNIVERSITY PLAGIARISM POLICY**
When you use (for example, quote or even summarize or paraphrase) someone else’s media, words, data, ideas, or other works, you must cite your source. You should be especially careful to avoid plagiarizing Internet sources (for example, email, chat rooms, Web sites, or discussion groups). It does not matter whether you borrow material from print sources, from the Internet, from online data bases, or from interviews. Failure to cite your source is plagiarism. Students who plagiarize may receive an “F” or a “0” for the assignment, or an “F” for the course. View the University Plagiarism Policy: [http://handbook.arcadia.edu/node/129](http://handbook.arcadia.edu/node/129)

**HONESTY**
Copying assignments or allowing your assignments to be copied by others constitutes cheating and as such will not be tolerated. Faking your program so that it produces the sample output without implementing the underlying process is also cheating. The penalty for cheating in this course is the automatic grade of an F for your assignment. If you are caught a second time, you will automatically fail the course.

**DISABILITY ACCOMMODATION**
Any student who feels s/he may need an accommodation based on a disability should contact Disabilities Support Services in the Office of Academic Development in Knight Hall to coordinate reasonable accommodations for students with documented disabilities.

**TITLE IX STATEMENT**
Arcadia University is committed to assuring a safe and productive educational environment for all students. In order to meet this commitment and to comply with Title IX of the Education Amendments of 1972 and guidance from the Office for Civil Rights, the University requires faculty members to report incidents of sexual violence shared by students to the University’s Title IX Coordinator. The only exceptions a faculty member’s reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project.

Information regarding the reporting of sexual violence and the resources that are available to victims of sexual violence is set forth at [https://www.arcadia.edu/university/policies-guidelines/title-ix](https://www.arcadia.edu/university/policies-guidelines/title-ix).
Office Etiquette

Do NOT write code or do your assignments in my office unless I explicitly ask you to. Some students wish to sit in my office (or at an empty desk around my office) and have me fix each problem as they code. You learn nothing by doing this; you must at least attempt to solve your problems yourself before coming to me.