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Please note that the specifics of this Course Syllabus are subject to change. Instructors will notify students of any changes and students will be responsible for abiding by them. Even if you print this syllabus, please check the online version often.

## Description

**SRA 221: Overview of Information Security (3 credits)** - The purpose of the course is to provide the student with an overview of the field of information security and assurance. Students will be exposed to the spectrum of security activities, methods, methodologies, and procedures. Coverage will include:

- Introduction to Information Security
- The Need for Security
- Legal, Ethical, and Professional Issues in Information Security
- Planning for Security
- Security Technology: Access Controls, Firewalls, and VPNs
- Security Technology: Intrusion Detection and Prevention Systems and Other Security Tools
- Cryptography

## Prerequisites

- SRA 111
- IST 110
- CMPSC 101

## Objectives

Upon completion of this course, students will be able to:

- Understand the fundamental concepts and issues of information security
- Understand how data and networks are commonly protected
- Defend against unauthenticated and unauthorized access
- Understand foundational software security concepts to make software less vulnerable to attacks

## Instructor

- Larry Boven, [lrb206@psu.edu](mailto:lrb206@psu.edu)

All course-related email, including messages to your instructor(s) and fellow students should be sent within Canvas, using the Inbox. Every attempt will be made for the instructor (or a substitute) to respond to email questions within 24 hours.

Additional instructor information can be found by selecting People and then the Teacher name.

## Materials

- Michael E. Whitman, *Principles of Information Security, 6th Edition*. Cengage, 2018, ISBN 9781337102063

## Assignments & Grading

### Course Grading Breakdown

| Grading Category        | Percentage of Final Grade |
|-------------------------|---------------------------|
| <b>Assignments</b>      | 25%                       |
| <b>Discussions</b>      | 5%                        |
| <b>Labs</b>             | 10%                       |
| <b>Exams</b>            | 30%                       |
| <b>Quizzes</b>          | 10%                       |
| <b>Group Assignment</b> | 20%                       |
| <b>TOTAL</b>            | <b>100%</b>               |

## Course Grading Scale

The following are minimum cutoffs for each grade:

- 93.00% = A
- 90.00% = A-
- 87.00% = B+
- 83.00% = B
- 80.00% = B-
- 77.00% = C+
- 70.00% = C
- 60.00% = D
- less than 60.00% = F

## Course Policies and Expectations

- Logging into Canvas - Students are expected to login regularly to check for course updates, announcements, emails, discussions, etc.
- Late assignments will receive a 15% penalty per day unless prior approval is given. The submission deadline is at 11:59 PM on the due date. No assignment will be accepted more than 1 week late. Quizzes/Exams may not be taken late (passed the due date).
- Emailing through Canvas - Students are expected to use Canvas for all course email communication.
- Attending virtual meetings - Students are expected to use specified virtual meeting tool(s) for collaboration, meetings, presentations, etc., as needed.

## Technical Requirements

Standard World Campus computer technical specifications are assumed for this course. Please test your computer for requirements. In addition, a webcam and a headset with a microphone are REQUIRED for the course. These may be used for virtual meetings, virtual office hours, interactions with classmates and your instructor, and group presentations - which are all conducted with virtual meeting tools. No special software is required.

## Resources

Find extensive information and links to many Penn State and IST resources (including the **Penn State libraries, video conferencing tools, technology and software, writing and research**, and much more) on the [Resources](#) page.

## University Policies

Review current information regarding Penn State policies (including **academic integrity, copyrights, counseling and psychological services, disability accommodations, discrimination and harassment, emergencies, military accommodations, trade names**, etc.) on the [University Policies](#) page.

## Schedule

The following schedule outlines the topics covered in this course, along with the associated time frames, readings, activities, and assignments. All due dates reflect Eastern Time (ET). Specifying the time zone ensures that all students have the same deadlines, regardless of where they live.

## Course Summary:

| Date             | Details  | due by 8:59pm |
|------------------|--|---------------|
| Sun Jan 14, 2018 | <a href="#">Academic Integrity Quiz</a>                                | due by 8:59pm |
|                  | <a href="#">Canvas Quiz</a>  | due by 8:59pm |
| Sun Jan 21, 2018 | <a href="#">L01: Activities - Introduction to Information Security</a> | due by 8:59pm |
|                  | <a href="#">L01: Computer and Information Security Discussion</a>      | due by 8:59pm |
|                  | <a href="#">L01: IT Job Functions Discussion</a>                       | due by 8:59pm |
| Sun Jan 21, 2018 | <a href="#">L01: Quiz - Chapter 1</a>                                  | due by 8:59pm |
|                  | <a href="#">L01: Lab - Getting Started with Virtual Hand-On Labs</a>   | due by 8:59pm |

| Date             | Details  |               |
|------------------|--|---------------|
| Sun Jan 28, 2018 | <u>L02: Activities - The Need for Security</u>   | due by 8:59pm |
|                  | <u>L02: Buffer Overflow: Analyze this code snippet</u>                                   | due by 8:59pm |
|                  | <u>L02: Lab - Web Hacking</u>  | due by 8:59pm |
|                  | <u>L02: Quiz - Chapter 2</u>   | due by 8:59pm |
| Sun Feb 4, 2018  | <u>L03: Activities - Legal, Ethical, and Professional Issues in Information Security</u> | due by 8:59pm |
|                  | <u>L03: Cybercrime Perpetrator Analysis Discussion</u>                                   | due by 8:59pm |
|                  | <u>L03: Lab - Password Cracking</u>  | due by 8:59pm |
| Sun Feb 11, 2018 | <u>L04: Activities - Planning for Security</u>   | due by 8:59pm |
|                  | <u>L04: Defense-In-Depth Discussion</u>  | due by 8:59pm |
|                  | <u>L04: Lab - Understanding Linux</u>  | due by 8:59pm |
|                  | <u>L04: Quick Exercise</u>   | due by 8:59pm |
| Sun Feb 18, 2018 | <u>L05: Activities - Security Technology: Access Controls, Firewalls and VPNs</u>        | due by 8:59pm |
|                  | <u>L05: DMZ Exercise</u>   | due by 8:59pm |
|                  | <u>L05: Software Firewalls Exercise</u>  | due by 8:59pm |
| Sun Feb 25, 2018 | <u>L05: Quiz - Chapter 6</u>   | due by 8:59pm |
|                  | <u>L05: Security Essay</u>   | due by 8:59pm |
| Sun Mar 4, 2018  | <u>Midterm Exam</u>  | due by 8:59pm |
|                  | <u>Spring Break Begins</u>   | 9pm           |

| Date             | Details   |               |
|------------------|---|---------------|
| Sat Mar 10, 2018 | <u>Spring Break Ends</u>  | 9pm           |
| Sun Mar 18, 2018 | <u>L06: Activities - Security Technology: Intrusion Detection and Prevention Systems and Other Security Tools</u> | due by 8:59pm |
|                  | <u>L06: Firewall Architecture Analysis</u>  | due by 8:59pm |
|                  | <u>L06: Roger's Information Security Blog</u>   | due by 8:59pm |
|                  | <u>L06: ZoneAlarm Quick Exercise</u>  | due by 8:59pm |
| Sun Mar 25, 2018 | <u>L06: Case Analysis - Think Critically</u>  | due by 8:59pm |
|                  | <u>L06: Quiz - Chapter 7</u>  | due by 8:59pm |
| Sun Apr 1, 2018  | <u>L07: Activities - Cryptography</u>   | due by 8:59pm |
|                  | <u>L07: Group Project Setup</u>   | due by 8:59pm |
|                  | <u>L07: Lab - Symmetric Encryption</u>  | due by 8:59pm |
|                  | <u>L07: Transposition Exercise</u>  | due by 8:59pm |
|                  | <u>L07: Vigenere Exercise</u>   | due by 8:59pm |
| Sun Apr 8, 2018  | <u>L07: Case Analysis - Think Critically</u>  | due by 8:59pm |
|                  | <u>L07: Cryptosystems and Protocols Discussion</u>  | due by 8:59pm |
| Sun Apr 15, 2018 | <u>L07: Caesar Exercise</u>   | due by 8:59pm |
|                  | <u>L07: Lab - Public Key Cryptography</u>   | due by 8:59pm |
|                  | <u>L07: Quiz - Chapter 8</u>  | due by 8:59pm |
| Sun Apr 22, 2018 | <u>L08 Activities - Group Project</u>   | due by 8:59pm |
|                  | <u>L08: Group Project Paper</u>   | due by 8:59pm |
|                  | <u>L08: Group Project Presentation</u>  | due by 8:59pm |

| Date             | Details   | due by 8:59pm |
|------------------|---|---------------|
| Fri Apr 27, 2018 | <u>L08: Group Project: Presentation</u><br><u>Peer Review</u> | due by 8:59pm |
|                  | <u>L08: Group Project Peer</u><br><u>Evaluation</u>           | due by 8:59pm |
| Mon Apr 30, 2018 | <u>Final Exam</u>   | due by 8:59pm |

| January 2018 |    |    |    |    |    |    |
|--------------|----|----|----|----|----|----|
| 31           | 1  | 2  | 3  | 4  | 5  | 6  |
| 7            | 8  | 9  | 10 | 11 | 12 | 13 |
| 14           | 15 | 16 | 17 | 18 | 19 | 20 |
| 21           | 22 | 23 | 24 | 25 | 26 | 27 |
| 28           | 29 | 30 | 31 | 1  | 2  | 3  |
| 4            | 5  | 6  | 7  | 8  | 9  | 10 |

**Assignments are weighted by group:**