Course Syllabus - Spring B 2025
CSE 543: Information Assurance and Security

Course Description

The course will provide an overview of the historical underpinnings and the current, global landscape of information assurance and security. Principles and strategies that modern information assurance practices should follow will be highlighted as well as legal and ethical issues. Solidly grasping the theoretical background supports learners to later ethically tackle challenging security tasks. A high-level view of physical and personnel security will be discussed with a focus on authentication and access control. The basics of cryptography, which forms the foundation of modern security, will be addressed, so learners can adopt secure crypto-practices and use secure cryptography in both their daily lives and their development duties. Information assurance in information systems and direct applications of entry-level cryptography in security will be covered. A strong grasp of this content enables learners to recognize common attacks on both local and global networks and understand the security threats that some seemingly secure practices may entail. The essentials of web security, software security, and related emerging problems and vulnerabilities will be featured. Learners taking this course will be challenged to demonstrate concepts and solve problems in a hands-on way in ethical hacking environments.

Specific topics covered include:

- Security and privacy principles
- Physical security
- Personnel security
- Contingency and disaster recovery planning
- Information assurance policies
- Authentication and access control
- Administrative security controls
- Risk analysis and management
- Computer virus and malware
- Network attacking attempts
- Phishing

CSE 543 Syllabus
Spring B 2025
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1

- Social engineering
- Software security
- Definitions of software security
- Traditional software vulnerabilities
- Modern software vulnerabilities
- Vulnerability discovery
- Vulnerability mitigation
- Secure software development
- Laws and regulations about Information Assurance
- Ethical hacking

Technologies covered include:

- Scripting programming language: Python
- Linux
- Computer Networking
  - Ethernet, ARP Routing, IP Addresses, Fragmentation, ICMP, UDP and TCP
- Reading C source code
- ELF binaries
- Computer Architecture
  - x86-64 Assembly
- Binary and C tools
  - gdb
  - ltrace
  - strace
- Security specific tools
  - pwntools
  - Ghidra
  - IDA Free
  - Chrome Developer Tools
  - Burp Proxy
- Web Technologies
  - HTTP
  - HTML
  - JavaScript
  - SQL
  - PHP

CSE 543 Syllabus
Spring B 2025
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2

Learning Outcomes

Learners completing this course will be able to:

- Recognize common security threats and attacking attempts.
- Identify typical vulnerabilities in programs.
- Develop secure programs.
- Analyze legal and ethical concerns of computer security activities.
- Launch attacks in ethical hacking environments.

Estimated Workload/ Time Commitment Per Week

Average of 18 - 20 hours per week

Required Prior Knowledge and Skills

This course will be very challenging, and learners are expected to learn the necessary technologies on their own time.

Proficient Mathematical Skills and Theoretical Understanding

- Algebra
- Linear Algebra
- Algorithms
- Data Structures
- Computer Organization and Architecture
- Operating Systems
- Computer networking

Strong Application Skills

- Ability to effectively read C code
- Ability to effectively read Python code

CSE 543 Syllabus
Spring B 2025
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3

Proficient Experience

- C programming Language
- Debugging and tracing C programs
- Python 3
- Assembly (preferably x86-64)
- Javascript
- SQL
- Linux
    - Linux terminal environment
    - Linux shell (Bash, csh, sh, zsh etc)
- Networking protocols (IP-based)

Course Access

Your ASU courses can be accessed by both my.asu.edu and asu.instructure.com. Bookmark both in the event that one site is down.

Technology Requirements

Proctoring

- LockDown Browser Computer Requirements for Installation
- Honorlock Minimum System Requirements

Hardware

- Standard personal computer with major operating system
    - 8 GB RAM or higher and an x86-64 CPU
        - Must be able to install virtual machines on this computer. Computers with ARM processors (or any other architecture) will not work.
- Reliable, strong Internet connection with unrestricted access to key websites that are commonly used in software development activities (e.g., GitHub and StackOverflow)
- Webcam
- Microphone

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

4

Software/Other

- VS Code
- Linux (Ubuntu 20.04 is recommended) (Ubuntu 20.04 LTS)
- A virtual machine application, such as VMware, is recommended for non-Linux. users You can get VMware for free as an ASU learner (strongly recommended) and install Ubuntu 20.04 in a VM.
- Access to external websites:
  - pwn.college
- Python
  - You are strongly encouraged to use Python 3 and the scapy package
  - Most reference code will be provided as a Python script. Therefore, Python is strongly recommended.
    - For some coursework, the course team will not be able to help you if you choose any language that is not Python, Java, or C#; therefore, to create the best learning experience, Python is strongly recommended. This is noted on the overview docs where it applies.
- Browser (e.g., Chrome, FireFox, or Microsoft Edge), an HTTP request sender (curl), and Burp Suite

Note: The course project will be completed using the language that you choose. However, the course team will not be able to help you if you choose any language that is not Python, Java, or C#.

Textbook and Readings

At the graduate level, inquiry, research, and critical reading are part of the learning experience; however, this course does not have a required textbook.

Course Schedule and Important Dates

Course teams will not be working on ASU's days off* and those are listed in the Course Schedule. Please review the ASU Days Off for more details.

Module: Title	Begins at 12:01 AM Arizona (AZ) Time	Ends at 11:59 PM Arizona (AZ) Time

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

5

Orientation and Onboarding Review You must complete required tasks in the Orientation and Onboarding Review for Module 0: Welcome and Start Here to be unlocked.	March 10, 2025	March 12, 2025
Module 0: Welcome and Start Here You must complete required tasks in Module 0: Welcome and Start Here for the rest of the course to be unlocked.	March 10, 2025	March 16, 2025
Module 1: Foundations of Information Assurance and Security	March 17, 2025	March 23, 2025
Module 2: Physical Security, Personnel Security, Authentication, and Access Control	March 24, 2025	March 30, 2025
Module 3: Cryptography	March 31, 2025	April 06, 2025
Module 4: IA in Information Systems	April 07, 2025	April 13, 2025
Exam 1	April 13, 2025	April 20, 2025
Module 5: Web Security	April 14, 2025	April 20, 2025
Module 6: Software Security	April 21, 2025	April 27, 2025
Course Evaluation You may also refer to ASU's Office of Evaluation and Educational Effectiveness (UOEEE) for dates.	April 21, 2025	May 01, 2025
Module 7: Privacy and Ethical Issues	April 28, 2025	May 04, 2025
Deadline to Submit all Graded Coursework	N/A	May 08, 2025
Exam 2	May 03, 2025	May 10, 2025
Request for Faculty Review: MCS Portfolio Project Report Inclusion Request Optional, degree-seeking learner degree requirement	April 28, 2025	First submission deadline by: May 16, 2024

CSE 543 Syllabus

Spring B 2025

Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

If you submit by the first deadline and it is not accepted, you are encouraged to review the feedback and re-submit it a second time by the last submission deadline. Anything submitted past the last submission deadline will **not** be reviewed for approval in your portfolio to meet your degree requirements. You will have to repeat this process for another course and a project from that course.		Last submission deadline (if necessary) by May 26, 2025
Faculty Feedback for the Review: MCS Portfolio Project Report Inclusion Request Optional, degree-seeking learner degree requirement	May 16, 2025	June 06, 2025
Course Closes Past this date, Ed Discussion will no longer be monitored. Please download copies of what you would like from the course (e.g., Request for Faculty Review: MCS Portfolio Project Report Inclusion Request).		June 23, 2025

Grades are due May 12, 2025. Please see the ASU Academic Calendar for additional information.

Late or Missed Coursework

When possible, kindly notify the instructor before a coursework deadline by creating a private thread in Ed.

If an urgent situation or emergency arises and you are unable to submit the assignment on time, please send the instructor a private thread on Ed as soon as you are able to.

Follow the appropriate University policies to request an accommodation for religious practices or to accommodate a missed assignment due to University-sanctioned activities.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

7

Coursework Due Dates and Late Penalties

Unless otherwise noted, all coursework is due on **Sundays at 11:59 PM Arizona (AZ) time**. Due dates in your course are set up in Arizona Standard time. Use a [Time Converter](#) to ensure you account for the difference in time zones and remember to update your course settings to reflect your time zone (see your onboarding course for directions). Arizona does **not** observe daylight savings time.

Review specific due dates directly in your course. For learners with accommodations through [Student Accessibility and Inclusive Learning Services (SAILS)](#) and/or the [Pat Tillman Veterans Center (PTVC)](#), please work with your SAILS consultant and/or PTVC Advocacy Team, Connect, and your instructor.

This course has a designated deadline to submit all graded coursework. This deadline means graded coursework submitted after the date, will not be evaluated and result in a grade of zero (0) points. Please review the Course Schedule and Important Dates section.

Graded Quizzes

A single late penalty of 5% is applied after the scheduled due date and time. The maximum grade for each late submission is 95%.

- **Module 1 Graded Quiz**
- **Module 2 Graded Quiz**
- **Module 7 Graded Quiz**

Assignments

A single late penalty of 5% is applied to each challenge submitted after the scheduled due date and time.

- **Caesar Cipher Assignment**
- **Esper Cipher Assignment**
- **UDP Spoofing Assignment**

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

8

- **TCP Spoofing Assignment**

- **Pwn Them All Assignment**

- **Finding Crashes Assignment**

Projects

A single late penalty of 5% is applied to each challenge submitted after the scheduled due date and time.

- **Fuzz Them All Project**

Exams

An automatic late penalty of 100% is applied after the scheduled due date and time.

- **Exam 1**

- **Exam 2**

Course Content

Each course in the MCS program is uniquely designed by expert faculty, so learners can best master the learning outcomes. As a result, course features and experiences are not the same across all MCS courses. Learners are expected to plan accordingly to accommodate for these differences.

Content and Assessment Details

If you have specific questions related to instructional and assessment items in this course that you would like to be considered to be addressed in the Zoom meeting hosted by the instructor, please clearly indicate your request in your Ed Discussion thread.

For details regarding how points are earned in different types of assessments, please refer to your onboarding courses.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

9

PlayPosit Lecture Playlists

The course content is presented through a collection of Playposit Playlists embedded in each module. Playposit is a video platform that prompts interaction and note-taking while viewing course content. The playlists launch automatically and you can playback the course content by selecting the video titles in the playlist. The videos can be rewatched, but playlist videos cannot be downloaded. The playlist pages will include the downloadable video transcripts and any applicable supplementary material. Other course materials that accompany the lectures will be found in the media guides.

A media guide is included at the beginning of each module in the Overview section. These guides are designed to give you a snapshot description of each module's media components and to provide PDF lecture slides or note-taking materials where available, so you can plan your learning and quickly go back and review material as you prepare for your coursework.

Overview videos do not have PDF lecture slides because they are not lectures and have associated documents specific to them. The interview videos build context for the course and do **not** have PDF slides.

Discussions

Ed Discussion

Ed Discussion (Ed) is being used in place of Canvas Discussion Forums. The purpose of Ed Discussion is to provide a place for learners to ask questions and receive answers from course staff and peers about course content and coursework. The course team is engaged in discussions, but it is also a space to clarify, support, and enrich learner-to-learner communication and learning. There are designated categories for course items. You must select a category and subcategory to start a thread.

Discussions in Ed are designed to provide:
- Clarification
- Feedback
- Enrichment and deeper learning
- Connections between concepts or key ideas
- Reflection opportunities of real-world experiences
- Respectful debate and perspective building
- Resource sharing

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

10

- Networking

There are no late penalties. Ed is not counted toward your final grade in the course.

Designated Assignment and Project Discussion in Ed Discussion

Use Ed to discuss items relating to the course assignments and projects. Questions/Threads should be categorized by their designated title in Ed. Please check for questions already asked and answered, or marked as resolved.

There are no late penalties. Responses in Ed are not counted toward your final grade in the course.

Practice Quizzes

There is a practice quiz to help prepare you for each graded quiz. You may retake these as often as you like at any point in the course. You are encouraged to read the feedback, review your answer choices, and compare them to the correct answers. With the feedback as your guide, you may use these as opportunities to study for other assessments and tasks in the course.

There are no late penalties. Practice quizzes are **not** counted toward your final grade in the class.

Graded Quizzes

Modules 1, 2, and 7 each include one (1) graded quiz for a total of three (3) graded quizzes in the course. Each graded quiz includes eight to ten (8-10) multiple-choice questions with a single correct answer. You will be allowed one (1) attempt for each of these quizzes. There is a 60-minute amount of time permitted to complete each graded quiz. Once you open a graded quiz, the timer will start and you are to complete the graded quiz in a single session. Graded quizzes in this course include no feedback and do not include incorrect and correct answers. Read the Graded Quiz and Exam Policy for your course for more information.

There are late penalties associated with graded quizzes. All graded quizzes count toward your final grade in the class.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

11

Assignments

This course includes six (6) individual assignments. All assignment overview documents and materials are provided in the Welcome and Start Here section of your course, so you can preview what is expected and design your own learning schedules to complete these on time.

There are late penalties associated with assignments. All assignments count toward your final grade in the class.

Pwn.College

All assignments for this course will use pwn.college. You must complete and then submit your work in pwn.college. In addition, your final work for each assignment must be submitted to the submission space in the course. Carefully review submission directions outlined in the assignment overview documents in order to correctly earn credit.

Individual Project

This course includes one (1) individual project. All project overview documents and materials are provided in the Welcome and Start Here section of your course, so you can preview what is expected and design your own learning schedules to complete these on time. Review the "Request for Faculty Review: MCS Portfolio Project Report Inclusion Request" section of this syllabus for what can be used from this course to potentially meet the degree portfolio requirement, which is optional and for degree-seeking learners only.

There are late penalties associated with the projects. These projects count toward your final grade in the class.

Pwn.College

The Fuzz Them All Project for this course may be developed using pwn.college. You may complete your work in pwn.college, but your final work must be submitted to the submission space in the course. Carefully review submission directions outlined in the project overview document in order to correctly earn credit.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

12

Request for Faculty Review: MCS Portfolio Project Report Inclusion Request

This is an optional task for degree-seeking students wanting to use this course's project(s) as part of their portfolio degree requirement/specialization requirements. Review your onboarding course and the Welcome and Start Here section of your course for more details. The submission space is towards the end of the course.

Your Request for Faculty Review: MCS Portfolio Project Report Inclusion Request will be evaluated only if the criteria is met (see your MCS Handbook for more details):

- Your course is designated as a portfolio-eligible course
- You address the designated project(s), which equal 30% or more of your overall course grade
- Your final course letter grade of a B* or higher

*Degree-seeking students with course letter grades that are lower than a B will **not** have their submissions reviewed.

Although there are no late penalties, these requests must be submitted by the designated deadlines. The Request for Faculty Review: MCS Portfolio Project Report Inclusion Request does not count toward your final grade in the class.

Address this project in your Request for Faculty Review: MCS Portfolio Project Report Inclusion Request:

- Fuzz Them All Project

Practice Exams

In order to help you prepare for your proctored exams, you will have practice exams. Since they are intended to be practice opportunities and to help you learn, you have unlimited attempts and they are untimed, ungraded, and include feedback.

You may engage with your peers in Ed Discussion to address questions, share resources and strategies, and provide feedback to help one another learn. You are encouraged to read the feedback, review your answer choices, and compare them to the correct answers. You are encouraged to submit questions in Ed Discussion for the course team to address during Zoom Events and/or Zoom Support Sessions. Use the feedback to guide your learning and to study for the

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

13

proctored exam.

There are no late penalties. Practice exams are **not** counted toward your final grade in the class.

Proctored Exams

You have two (2) proctored exams. These consist of Exam 1 and Exam 2. Proctored exams do **not** include feedback. Read the Graded Quiz and Exam Policy for your course for more information.

No late exams will be permitted or accepted and will result in a score of zero (0) points. This does **not** include established accommodations for learners receiving accommodations through Student Accessibility and Inclusive Learning Services (SAILS) and and/or the Pat Tillman Veterans Center (PTVC).

Proctored exams count toward your final grade in the class.

Exam Details	Exam 1	Exam 2
Content Covered	Modules 1, 2, 3, and 4	Modules 5, 6, and 7
Question Type	Multiple-choice questions with a single correct answer	Multiple-choice questions with a single correct answer
Number of Questions	26 total questions (25 content questions pulled randomly from a question bank + 1 academic integrity question)	26 total questions (25 content questions pulled randomly from a question bank + 1 academic integrity question)
Availability Start	Sunday, April 13, 2025 at 12:01 AM AZ Time	Saturday May 03, 2025 at 12:01 AM AZ Time
Availability End	Sunday, April 20, 2025 at 11:59 PM AZ Time	Saturday May 03, 2025 at 11:59 PM AZ Time
Scheduling Reminder In order to have enough time to	Sunday, April 20, 2025 at 9:01 PM AZ Time	Saturday May 10, 2025 at 9:01 PM AZ Time

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

14

complete the exam, you should start your exam no later than the listed date and time to ensure you have enough time to complete it before the due date.		
Duration	120 minutes + plan for at least 15 minutes for proctoring set up	120 minutes + plan for at least 15 minutes for proctoring set up

Proctoring

Learners needing allowance accommodations need to work through the Student Accessibility and Inclusive Learning Services (SAILS) and/or the Pat Tillman Veterans Center (PTVC).

LockDown Browser

LockDown Browser will proctor your graded quizzes this session. It is an online proctoring service that allows you to take your exam from the comfort of your home. You do **not** need to create an account or schedule an appointment in advance. It is available twenty-four hours a day/seven days a week/and three hundred sixty-five days a year (24 hours a day/7 days a week/365 days a year), and all that is required is a computer, a working webcam/microphone, your ID, and a stable internet connection.

Review your onboarding course and the Welcome and Start Here section in your course for more information about LockDown Browser and how to download the required software.

Graded Quiz Allowances

Any items **not** included in this list are **not** allowed during the assessment sessions or in your assessment space.

Reminders

- Instructors reserve the right to adjust scoring based on academic integrity violations (e.g., not following the allowances).

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

15

- You are to independently take the assessment in a single session without leaving the testing space (e.g., no bathroom breaks) to ensure proctoring of the entire session.

- You will be allowed one (1) attempt to take and complete your assessment. Once you open your assessment, your testing session begins and you will need to complete it within the allotted time. Your assessment will automatically be submitted if it is **not** completed before the deadline.

- Select a location where you can comfortably take your assessment without interruption and have a video recording taken of yourself and your workspace environment. This area should also be free of distractions and interruptions.

- Turn off all other devices (e.g., tablets, phones, second computers) and place them outside of your reach.

- Clear your environment of all external materials **not** permitted. Review the allowances to ensure you know what is permitted.

- Before starting the assessment, know how much time is available for it by checking your course and syllabus, and that you have allotted sufficient time to complete it.

- Remain at your device for the duration of the assessment.

- If the device or networking environment is different than what was used previously with the **Webcam Check** and **System & Network Check** in LockDown Browser, run the checks again prior to starting the test.

- You are to stay within a clear view of the webcam throughout the duration of the proctored session.

- To produce a good webcam video:

  - Avoid wearing headwear (e.g., hats).

  - Ensure your device is on a firm surface (e.g., desk or table). Do **not** have the device on your lap, a bed or other surface where the device or you are likely to move.

  - If using a built-in webcam, avoid tilting the screen after the webcam setup is complete.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

16

○ Take the assessment in a well-lit room and avoid backlighting, such as sitting with your back to an open window.

● Remember that LockDown Browser will prevent you from accessing other websites or applications; you will be unable to exit the assessment until all questions are completed and submitted unless otherwise directed in the allowances.

● Before the assessment concludes and the proctoring session ends, all scratch paper must be destroyed and all whiteboard markings must be erased.

Specific Allowances

● **Web links:** no

● **Open book:** no

● **Pre-written paper notes:** no

● **Scratch paper**: yes

  ○ Unlimited amount of blank scratch paper of any size, writing utensils (e.g., pens, pencils, markers, and/or highlighters) and erasers; please have extra ones in your testing area should you run out of ink, the pencil breaks, etc.

  ○ Before the quiz concludes and the proctoring session ends, all scratch paper must be destroyed and all whiteboard markings must be erased. The last question in the quiz will be a confirmation of learners executing these ASU academic integrity actions.

● **On-Screen Calculator**: no

● **Handheld calculator**: no

Honorlock

Honorlock will proctor your exams this session. Honorlock is an online proctoring service. You do **not** need to create an account or schedule an appointment in advance. Honorlock is available twenty-four hours a day and seven days a week (24 hours/7 days).

Honorlock will be enabled for at least one practice assessment in your course to prepare you for the proctored exams in this course.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

17

Review your onboarding course and the Welcome and Start Here section in your course for more information about Honorlock and how to download the required Chrome Extension.

Exam 1 and Exam 2 Allowances Allowances

Any items **not** included in this list are **not** allowed during the exam or in your exam space.

Reminders

- You are to independently take your exams in a single session. Once you open your exam, your testing session begins and you will need to complete it within the allotted time. Your exam will automatically be submitted if it is **not** completed before the deadline. You will be allowed one (1) attempt to take and complete your exams.

- You are to independently take the exam in a single session without leaving the testing space (e.g., no bathroom breaks) to ensure proctoring of the entire session.

- You are to stay within a clear view of the webcam throughout the duration of the proctored exam session.

- Before the exam concludes and the proctoring session ends, all scratch paper must be destroyed and all whiteboard markings must be erased.

- The last question in the exam will be a confirmation of you upholding ASU academic integrity.

Specific Allowances

- **Site URLs:** no

- **Open book:** no

- **Pre-written paper notes:** no

- **Scratch paper**: yes

  - Unlimited amount of blank scratch paper of any size, writing utensils (e.g., pens, pencils, markers, and/or highlighters) and erasers; please have extra ones in your testing area should you run out of ink, the pencil breaks, etc.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

18

○ Before the exam concludes and the proctoring session ends, all scratch paper must be destroyed and all whiteboard markings must be erased. The last question in the exam will be a confirmation of learners executing these ASU academic integrity actions.

- **On-Screen Calculator**: no

- **Handheld calculator**: no

- **Restroom breaks**: no

- **Copy and Paste**: no

- **Hats**: no

- **Headphones**: no

- **Take Exam in a Public Area**: no

- **Mobile Phone Use**: no

- **Background Noise (Occasional sounds expected in the testing area)**: no

Course Grade Breakdown

Course Work	Quantity	Team or Individual	Points
Graded Quizzes	3	Individual	90
Assignments	6	Individual	480
Fuzz Them All Project*	1	Individual	300
Exam 1	1	Individual	65
Exam 2	1	Individual	65
Total Course Points			1000

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

19

*The project(s) count for 30% or more of the overall course grade, so this is a portfolio eligible course. See the MCS Graduate Handbook for more information about the portfolio requirement if you are a degree student.

Grade Scale

You must earn a cumulative grade of 70% to earn a "C" in this course. You must earn at least a "C" to receive graduate credit. This course has no grade curving. All graded coursework will be included to calculate grades (i.e., no graded items will be dropped). Grades **not** be rounded. Grades in this course will include pluses but not minuses.

The instructor reserves the right to adjust individual grades based on, but not limited to: violations of academic integrity.

Range of Points	Percentage	Letter Grade
970 - 1000	97 - 100	A+
900 - 969.99	90 - 96.99	A
870 - 899.99	87 - 89.99	B+
800 - 869.99	80 - 86.99	B
770 - 799.99	77 - 79.99	C+
700 - 769.99	70 - 76.99	C
600 - 699.99	60 - 69.99	D
0 - 599.99	0 - 59.99	E

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

20

Zoom Meetings

This course has three (3) types of Zoom meetings:

- **Instructor Zoom Events:** If you have specific questions or topics of interest to be discussed, please indicate your request in an Ed Discussion thread. Although it may not be possible to address all requests during the Zoom event, the instructor is interested in tailoring this time to your questions and interests. The instructor will be following a set agenda, so please be mindful of that when engaging in the Zoom event.

- **Instructional Assistant (IA) Zoom Support Sessions:** These sessions offer a chance for learners to get their questions answered from the IAs. Although the course team is responsive to trends in Ed Discussion, these events focus on addressing learners' specific questions related to content: clarifications, reteaching, assessment preparation, etc.

- **Grader Zoom Support Sessions:** These sessions are singularly focused on addressing questions related to **grading**.

Check the Zoom tab in the navigation menu of your course. Although we try to be consistent for our learners' planning purposes, the schedule is subject to change throughout the course, so stay up-to-date on the event details by checking your Ed and course announcements.

Read about the specific policies related to Zoom meetings directly in your onboarding course and your course pages: Syllabus, ASU Course Policies, and any additional course-specific policy information in the Welcome and Start Here area. Additional information may be included in the Policies section of this syllabus. You are responsible for adhering to all policies.

Zoom Recordings

- Instructor Zoom Events are **recorded and shared** through the "Zoom" navigation link in your course. These can be found by going to the "Cloud Recordings" tab. These recordings will be unavailable after 120 days.

- IA Zoom Support Sessions are **recorded**, but **not uploaded** into the course. It is at the discretion of the instructor if these sessions will be shared during the course session.

- Grader Zoom Support Sessions are **recorded**, but **not uploaded** into the course.

CSE 543 Syllabus
Spring B 2025
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21

Policies

Please refer to the ASU Course Policies section in your course, your onboarding course, and the Welcome and Start Here section of your course in addition to the policies listed in this section.

Code of Conduct

The aim of education is the intellectual, personal, social, and ethical development of the individual. The educational process is ideally conducted in an environment that encourages reasoned discourse, intellectual honesty, openness to constructive change, and respect for the rights of all individuals. Self -discipline and a respect for the rights of others in the university community are necessary for the fulfillment of such goals. The Student Code of Conduct is designed to promote this environment at Arizona State University.

The Student Code of Conduct sets forth the standards of conduct expected of students who choose to join the university community. Students who violate these standards will be subject to disciplinary sanctions in order to promote their own personal development, to protect the university community, and to maintain order and stability on campus.

Students are expected to follow the ABOR Student Code of Conduct and the ASU Student Code of Conduct at all times.

Expected Behavior

Students are expected to follow the ASU Student Code of Conduct and are expected to acknowledge and embrace the FSE Student Professionalism Expectation.

An instructor may withdraw a student from a course with a mark of "W" or "E" or employ other interventions when the student's behavior disrupts the educational process. For more information, review SSM 201–10.

If you identify something as unacceptable classroom behavior (e.g., in Canvas, Ed Discussion, Zoom, etc.), please notify the course team.

Our classroom community rules are to:
● Be professional

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

22

- Be positive
- Be polite
- Be proactive

Academic Integrity

All engineering students are expected to adhere to the ASU Student Honor Code and the ASU academic integrity policy, which can be found at https://provost.asu.edu/academic-integrity/policy. Students are responsible for reviewing this policy and understanding each of the areas in which academic dishonesty can occur. If you have taken this course before, you may not reuse or submit any part of your previous assignments without the express written permission from the instructor.

All student academic integrity violations are reported to the Fulton Schools of Engineering Academic Integrity Office (AIO). Withdrawing from this course will not absolve you of responsibility for an academic integrity violation and any sanctions that are applied. The AIO maintains a record of all violations and has access to academic integrity violations committed in all other ASU college/schools.

Specific academic integrity announcements for this class are:

1. Using or copying code from outside resources is **not permitted**. Learners may reference outside material but should complete coursework on their own (see statement 2).

2. If you reference outside material, including code, include citations.

3. Sharing code amongst peers is **not permitted**.

4. Discussing intellectual content of assignments and projects is permitted.

When in doubt, reach out to the course instructor for clarification on these policies.

No Generative AI Use Permitted

In this course, all assignments must be completed by the student. Artificial Intelligence (AI), including ChatGPT and other related tools used for creating of text, images, computer code, audio, or other media, are not permitted for use in any work in this class. Use of these generative AI tools will be considered a violation of the ASU Academic Integrity Policy, and students may be sanctioned for confirmed, non-allowable use in this course.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

23

Copyright

You must refrain from uploading to any course shell, discussion board, or website used by the course instructor or other course forum, material that is not the student's/learner's original work, unless the student/learner first complies with all applicable copyright laws; faculty members reserve the right to delete materials on the grounds of suspected copyright infringement.

The contents of this course, including lectures (Zoom recorded lectures included) and other instructional materials, are copyrighted materials. Students may not share outside the class, including uploading, selling or distributing course content or notes taken during the conduct of the course. Any recording of class sessions is authorized only for the use of students enrolled in this course during their enrollment in this course. Recordings and excerpts of recordings may not be distributed to others (see ACD 304–06, "Commercial Note Taking Services" and ABOR Policy 5-308 F.14 for more information).

Graded Quiz and Exam Policy

Each course in the MCS program is uniquely designed by expert faculty so that learners can best master the learning outcomes specific to each course. By design, course features and experiences are different across all MCS courses.

In the MCS program, we strive to provide learners with exercises and applied practice beyond quizzes and exams that align with the hands-on nature of the computer science industry. Ungraded practice opportunities may include, but are not limited to: in-video-questions (IVQs), knowledge check quizzes (KCs), module practice quizzes, practice exams, and other coursework. When available, the questions and correct answers are provided to learners. Depending on the type of questions, auto-generated feedback is built into the course to further help learners learn in real-time. Please thoroughly review your course to ensure that you are aware of the types of practice opportunities available to you.

For academic integrity purposes, once grades are made available, learners will see their overall total scores. Like other standardized tests, such as the GRE and SAT, learners will receive a singular grade for the graded quizzes and exams, but the questions, correct and incorrect answers, and feedback to each question will **not** be provided.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

24

If learners desire 1:1 feedback, please send a private thread to the course team on Ed and/or attend a Zoom meeting with the course team. Rather than receiving the exact questions learners had correct and incorrect and the answers to those questions, learners will likely receive the concepts that were covered in the assessment questions so they will know what they need to review prior to other assessments and how to apply this information in their professional environments.

Absence Policies

There are no required or mandatory attendance events in this online course. Different types of Zoom meetings hosted by any course team member do not take attendance.

Excused absences do not relieve students of responsibility for any part of the coursework required during the period of absence. If exceptions for graded coursework deadlines need to be made for known excused absences, please reach out to the course team by the end of the second week of the course by sending a private thread to the course team on Ed. Review availability windows and due dates for coursework and schedule accordingly. The exam availability windows allow for your own flexibility and you are expected to plan ahead.

Review the resources for what qualifies as an excused absence and review the late penalties in the Assignment Deadlines and Late Penalties section of the syllabus and the course:

a. Excused absences related to religious observances/practices that are in accord with ACD 304–04, "Accommodation for Religious Practices" (please see Religious Holidays and Observances).

b. Excused absences related to university sanctioned events/activities that are in accord with ACD 304–02, "Missed Classes Due to University-Sanctioned Activities".

c. Excused absences related to missed class due to military line-of-duty activities that are in accord with ACD 304–11, "Missed Class Due to Military Line-of-Duty Activities," and SSM 201–18, "Accommodating Active Duty Military".

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

25

Zoom Meetings

Recording Notice

Instructors will record Zoom meetings. An archived recording will be made available in Canvas for enrolled students, instructors, or support personnel. Creation of recordings for individuals or groups beyond these requires consent from students who are recorded.

Expectations

The environment should remain professional at all times. Inappropriate content/visuals, language, tone, feedback, etc. will not be tolerated, reported and subject to disciplinary action. Review the policy regarding Expected Behavior section of the syllabus, ASU Student Code of Conduct, and FSE Student Professionalism Expectation for more detailed information.

Policy Against Threatening Behavior, per the Student Services Manual, (SSM 104-02)

Students, faculty, staff, and other individuals do not have an unqualified right of access to university grounds, property, or services (see SSM 104-02). Interfering with the peaceful conduct of university-related business or activities or remaining on campus grounds after a request to leave may be considered a crime. All incidents and allegations of violent or threatening conduct by an ASU student (whether on- or off-campus) must be reported to the ASU Police Department (ASU PD) and the Office of the Dean of Students.

Disability Accommodations

Suitable accommodations are made for students with disabilities. Students needing accommodations must register with ASU Student Accessibility and Inclusive Learning Services (SAILS) office. Students should communicate the need for an accommodation at the beginning of each course so there is sufficient time for it to be properly arranged. These requests should be submitted through the online portal. See ACD 304-08 Classroom and Testing Accommodations for Students with Disabilities. SAILS will send the instructor a notification of accommodations. It is recommended that students communicate with instructors regarding documented accommodations.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

26

Harassment and Sexual Discrimination

Arizona State University is committed to providing an environment free of discrimination, harassment, or retaliation for the entire university community, including all students, faculty members, staff employees, and guests. ASU expressly prohibits discrimination, harassment, and retaliation by employees, students, contractors, or agents of the university based on any protected status: race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, and genetic information.

Title IX is a federal law that provides that no person be excluded on the basis of sex from participation in, be denied benefits of, or be subjected to discrimination under any education program or activity. Both Title IX and university policy make clear that sexual violence and harassment based on sex is prohibited. An individual who believes they have been subjected to sexual violence or harassed on the basis of sex can seek support, including counseling and academic support, from the university. If you or someone you know has been harassed on the basis of sex or sexually assaulted, you can find information and resources at https://sexualviolenceprevention.asu.edu/faqs.

As a mandated reporter, I am obligated to report any information I become aware of regarding alleged acts of sexual discrimination, including sexual violence and dating violence. ASU Counseling Services, https://eoss.asu.edu/counseling is available if you wish to discuss any concerns confidentially and privately. ASU online students may access 360 Life Services, https://goto.asuonline.asu.edu/success/online-resources.html.
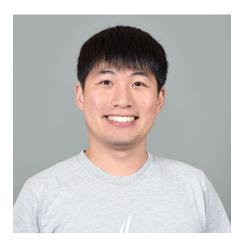
Photo Requirement

Arizona State University requires each enrolled student and university employee to have on file with ASU a current photo that meets ASU's requirements (your "Photo"). ASU uses your Photo to identify you, as necessary, to provide you educational and related services as an enrolled student at ASU. If you do not have an acceptable Photo on file with ASU, or if you do not consent to the use of your photo, access to ASU resources, including access to course material or grades (online or in person) may be negatively affected, withheld or denied.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

27

Course Creator

Dr. Ruoyu "Fish" Wang

Dr. Ruoyu "Fish" Wang is an Assistant Professor in the School of Computing and Augmented Intelligence (SCAI) at Arizona State University (ASU). He received his Ph.D. degree from the Department of Computer Science at the University of California, Santa Barbara in 2018 and his Bachelor's degree in Computer Software at Tsinghua University in 2013. Dr. Wang's research focuses on system security, especially on automated binary program analysis and reverse engineering of software. As part of his research, Dr. Wang co-founded the binary analysis platform, angr.

Besides research, Dr. Wang plays many CTFs and is a core member of the CTF team Shellphish and pwndevils. Dr. Wang was a core member of the CGC team Shellphish CGC, with whom he won third place in the Final Event of the DARPA Cyber Grand Challenge in 2016.

CSE 543 Syllabus
Spring B 2025
Any information in this syllabus may be subject to change without advance notice. Stay informed by checking course announcements and the syllabus section of your course.

28