CMSC 426 – Fall 2018
Syllabus

Section 1: Course Information

Course Number	CMSC 426
Course Name	Principles of Computer Security
Locations	Dependent on course section
Term	Fall 2018
Instructors	Dr. Katherine Gibson k.gibson@umbc.edu
TAs & Graders	RJ Joyce (TA) joyce8@umbc.edu
	Bhanu Phanindra Gorantla (grader) bhanuph1@umbc.edu
Course Website	http://www.csee.umbc.edu/courses/undergraduate/426/fall18/
Course Piazza	https://piazza.com/umbc/fall2018/cmsc426/home
Office Hours	See course website (and by appointment)
Textbook (recommended)	*Computer Security: Principles and Practice* (4th Edition) by William Stallings and Lawrie Brown

Section 2: Course Overview

This course will provide an introduction to computer security, with specific focus on the computing aspects. Topics covered will include: Basics of computer security including an overview of threat, attack, and adversary models; social engineering; essentials of cryptography; traditional computing security models; malicious software; secure programming; Operating system security in practice; trusted operating system design; public policy issues including legal, privacy, and ethical issues; network and database security overview.

Section 3: Course Objectives

By the end of this course, students should:
1. Have learned basic computer security concepts and terminology
2. Understand fundamental classes of vulnerabilities in computer systems
3. Have learned basic cryptography and its applications to computer security
4. Understand threats to computer systems and available countermeasures
5. Have learned about economic, legal, and ethical issues surrounding computer security

Section 4: Grading Criteria

Type	Quantity	Points Per	Subtotal
Labs	4	100	400
Homeworks	5	20	100
Papers*	5	10	50
Exams	3	150	450
Total			**1000**

* Papers will be short, and done in small groups.

Grading Scale:

900 - 1000	A
800 - 899	B
700 - 799	C
600 - 699	D
< 600	F

Section 5: Course Policies

Late Work: <u>No late work will be accepted in this course</u>. All assignments must be submitted by 11:59:59 PM on the day due.

Grade Appeals: You have <u>one week</u> after assignment grades are sent out (or exams are handed back) to appeal for a regrade or to request that your grade be reviewed.

Course Preparedness: You are responsible for <u>all material</u> covered in the lecture, even if it is not in the course slides or web pages. You are responsible for the material in the course slides or web pages, even if it is not covered during lecture.

Section 6: Attendance

You are expected to attend all lectures. Although lecture attendance is not a direct component of your grade, students who attend class generally perform more highly than their non-attending peers.

Section 7: Communication

All communication with CMSC 426 staff should be through your UMBC email as per the dictation of the Family Educational Rights and Privacy Act (FERPA). Email subject lines must contain the course designation, your section number and a meaningful title. (For example, "CMSC 426, Sec 1, HW2 Question" is a good subject line. However, "426 Question" is not.)

If your subject line does not contain the text "426", Dr. Gibson will **NOT** respond to your email.

Course material and information about assignments and exams will be posted on the course website. It is your responsibility to keep track of deadlines and assignments, and to check the website regularly.

Section 8: Academic and Technology Resources

Students have several avenues for receiving help on homeworks, labs, and with general content. Your first stop should be the TAs: they hold office hours in ITE 240 Monday through Friday. Please note that you may attend the office hours of <u>any</u> TA, not just the TA whose discussion section you attend. You may also visit the office hours of any of the instructors. The office hour details can be found on the course website.

You can also visit the Learning Resources Center (LRC), where you can find tutoring for CMSC 104, CMSC 426, CMSC 202, and CMSC 203 by appointment. Each appointment is 50 minutes once a week, with a small group of other students taking the same course. To sign up for CMSC tutoring, fill out their <u>enrollment form</u>.

For technology support, you can contact the Technology Support Center (TSC) on the first floor of the Albin O. Kuhn Library. For more information, call 410-455-3838 or check out the website: <u>http://doit.umbc.edu/tsc/</u>

Section 9: Mental Health Resources

Diminished mental health can interfere with optimal academic performance. The source of symptoms might be related to your course work; if so, please speak with your instructor. However, problems with other parts of your life can also contribute to decreased academic performance. UMBC provides cost-free and confidential mental health services through the Counseling Center to help you manage personal challenges that threaten your personal or academic well-being.

Remember, getting help is a smart and courageous thing to do -- for yourself and for those who care about you. For more resources get the Just in Case mental health resources Mobile and Web App. This app can be accessed on this web page: http://counseling.umbc.edu/justincase

The UMBC Counseling Center is in the Student Development & Success Center (between Chesapeake and Susquehanna Halls). Phone: 410-455-2472. Hours: Monday-Friday 8:30am-5:00pm.

Section 10: Students with Accommodations

UMBC is committed to eliminating discriminatory obstacles that may disadvantage students based on disability. UMBC complies with federal legislation for individuals with disabilities (Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the ADAA of 2009) that offers reasonable accommodations to qualified students with disabilities. Student Disability Services (SDS), formerly Student Support Services, is the UMBC department designated to:
- receive and maintain confidential files of disability-related documentation,
- certify eligibility for services,
- determine reasonable accommodations,
- develop with each student plans for the provision of such accommodations, and
- serve as a liaison between faculty members and students regarding disability-related issues.

If you have a documented disability and need to request accommodations, please refer to the SDS website at <u>http://sds.umbc.edu</u> or contact the office by phone at 410-455-2459, via email at disability@umbc.edu, or in person in Math/Psychology Room 212. If you require accommodations for this class, make an appointment to meet with your instructor to discuss your SDS-approved accommodations.

Section 11: Academic Integrity

CMSC 426 is an upper-level course for juniors and seniors, and students are expected to master the material on an individual level. However, being able to collaborate, and to make effective and judicious use of online resources, is also an important skill.

For this reason, CMSC 426 does have rules about academic integrity, but they are less strict than those used in lower-level courses. Regardless, cases of academic dishonesty will be dealt with *severely*. If your assignment is found to be "substantially similar" to that of another student, both you and the other student will receive a **grade of 0** for that assignment. Furthermore, all parties concerned will have their prior assignments more closely examined for cheating. A second incident will result in a grade of 'F' for the semester.

Below are some basic rules and restrictions that you should never violate in completing your work. If you have questions about what is acceptable, please contact an instructor or TA. What follows is a *non-exhaustive* list of restrictions for completing your assignments in this course.

- **You may not download or obtain anyone else's work, and you may not share or upload the work you do on this course's assignments (homeworks, labs, etc.).**
  - You may **not** purchase or otherwise contract someone else to do the assignment (in whole or in part) for you. If we find that you have done so, it will result in an automatic 'F' in the course. (This includes paying a tutor to solve your assignment.)
  - You may not post code to public repositories or forums, in whole or in part, before the assignment's due date.
  - You may not allow anyone to access your files without your permission. This means **properly protecting your work**! Do not leave your computer unlocked if you step away; do not allow someone to copy code from your monitor; do not give your password to another student.

- **You may make use of online resources, provided that you cite their use, and that it does not comprise a significant portion of what you turn in.**
  - You must cite your usage of online resources or code snippets with an in-line comment that gives:
    - Where you found the information (URL, book, other course's slides)
    - Brief explanation of what it does
    - Whether it was copied, adapted, or you simply used the ideas to inspire your own code
  - You are highly encouraged to take the time to fully understand the code you have made use of, as online resources will (obviously) not be available during exams.
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- **You will be held to UMBC's Undergraduate Student Academic Conduct Policy.**
  - The details of the policy can be found here: http://www.umbc.edu/policies/pdfs/iii-1.10.03.pdf

- **You should come to office hours for assistance.**
  - Make sure you have a specific question, and can explain to the TA what it is you're having trouble understanding and/or what techniques you've already tried to solve your problem.