

# Course Syllabus

## CSCI 445/645 - Web Security

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Office Hours:

By appointment.

### Course Description

This course introduces the student to the basics of Web Security. The field of computer security is, in general, one of the hottest topics in Computer Science. E-Commerce systems are now extremely common. These systems are critical to the operation of many of today's businesses from Wal-Mart to IBM. As these systems become more and more prevalent, the temptation to abuse these systems becomes greater and greater. This course will focus on the hacker and the security holes exploited by the attacker. The heart of this course is to show and explain the real-world exploits/hacks so that you, as a security minded professional, can spot and eradicate security breaches.

### Prerequisites

The prerequisites are important and will be enforced. The prerequisites are:

- CSCI 242 – Computer Science II or
- CSCI 322 – Web Concepts II

### Required Text & Materials

McClure, Stuart; Shah, Saumil; Shah, Shreeraj, Web Hacking: Attacks and Defense, Addison Wesley/Pearson Education, 2003, ISBN: 0-201-76176-9.

Students must purchase their own textbook from the campus bookstore. Textbooks cannot be shared.

### Academic Performance

**Accomplishment Levels.** Your level of accomplishment will be recognized at the end of the course with a letter grade. Individual accomplishment is measured against course standards and not against the performance of other students.

**Letter Grades.** At the end of the course, letter grades (including plus/minus) will be assigned based upon your cumulative score percentages as follows:

Letter Grade	+	Grade	-
A		93.3% - above	90.0 – 93.2%
B	86.6 – 89.9%	83.3 – 86.5%	80.0 – 83.2%
C	76.6 – 79.9%	73.3 – 76.5%	70.0 – 73.2%
D	66.6 – 69.9%	63.3 – 66.5%	60.0 – 63.2%
F		Below 60%	

**Weighting Distribution.** The following weighting distribution will be used to compute your final grade:

Hacker.org assignments:	25%
Presentation:	25%
2 Midterm examinations:	30%
1 Comprehensive final examination:	20%

The presentation element will be different depending on whether you are a graduate student or an undergraduate student.

**Point Scores.** Your final grade will be determined as a weighted average of your averages for assignments and exams. The weighting distribution is described in “Weighting Distribution” above. Each of the averages that are used for the weighted average is calculated as: number of points earned / total number of points x 100.

For example, if you earn 65 points out of a total of 80 points that it is possible for you to earn on laboratories, your laboratory average would be:  $65/80 \times 100 = 81.25$ . That final percentage is then weighted to produce a final, weighted percentage.

**Extra Credit.** No *special arrangements* will be made for extra credit for improving grades: there are ample opportunities for you to perform well with the assigned activities. However, there may be opportunities during the semester where I will give extra credit for attending special events.

## Course Specifics

Each class, whether lecture or lab, will begin with a question/answer period. This is where students can ask questions regarding the previous assignment or any other issues that may have arisen since the last class meeting. Of course, *you are encouraged to ask questions during class!*

**Attendance & Absences.** Attendance to lectures is *mandatory and expected*. If you miss a lecture due to some unforeseen circumstance, *it is your responsibility to make up the missed material*.

**Communication.** All course communication will be accomplished in one of two ways: announcements during lecture and electronic communication.

- Missing a lecture is not an excuse for missing an announcement. See “Attendance & Absences” above.
- *Email* is the best way to communicate with your instructor outside of class. When using email, please include the following marker in the subject line: CSCI445 or CSCI645. This marker shows that the email is from this class and will help me fight spam. If you do not include the marker, *I may delete the email without looking at it or my spam filter may delete it without my knowledge!*
- *Desire2Learn* (D2L) is used in this class as a course management tool. All course material can be found at the courses D2L Web site.

## Lecture

The lecture will expand on and highlight material in the textbook. In addition, this is a self-directed course that *requires the student to read the textbook*. It is imperative that the student read the assigned material so that the student will be prepared for lecture. The lecture may or may not include all the material presented in the chapter(s). However, students are responsible for all material within covered chapter(s).

You are *expected to attend* lecture. Please do not skip lectures if possible.

**Examinations.** There will be 1 midterm examination and 1 final examination conducted during finals week (Fall & Spring) or the last day of class (Summer).

*Exams cannot be “made-up”.* If you miss an exam without prior approval by the instructor, you will receive a grade of 0 (zero). If you miss the exam due to an emergency, you must provide *written documentation* supporting your emergency claim in order to be excused. If you are excused for an exam absence, *the exam must be made up before the exam is discussed in class*; this is usually the next lecture period. You lose the right to take the exam if you do not make-up the exam before the next class period. **NO EXCEPTIONS!** It is your responsibility to ensure this does not happen.

## Laboratory

There is no formal laboratory for this course. However, we will, from time to time, go to one of the computer labs on campus. Depending on the subject being covered, we may use the computer facilities in MOLN 115 (PC Lab), MOLN D-116 (CS Lab) or MOLN D-139 (Security Lab).

## Presentations

During the course, students will pick a topic that interests them, find an academic paper related to that topic and make a presentation summarizing their research. During the last few weeks of class, students will present their topics in class. Details of the presentation will be given in an assignment description.

In addition to the presentation, graduate students will be required to teach one of the chapters selected by your instructor. Details will be worked out with the students at the appropriate time.

## Hacker.org

During the course, students will complete and write up “challenges” from `Hacker.org`. `Hacker.org` is a Web site devoted to hacking – in a constructive way. The “challenges” are hacking assignments that are designed to get increasingly more difficult as you progress through the web site. The idea is that the more challenges you complete, the better the grade you get in this portion of the class. You will need to register for an account at `Hacker.org`. Once you look around a bit, you can begin the challenges. Remember that the challenges are designed to be easy at first but they get increasingly more difficult as you do more. As you complete challenges, you are to document your solution in a running log book. The log book will be turned in via D3L at various times during the course.

## Homework

**Reading Assignments.** In general, reading assignments are to be completed before the next lecture.

**Activities.** There may be activities to do based on course material. These are to be completed by the due date given for the activity.

**Homework policies.** *All homework will be submitted via D2L unless instructed to do otherwise.*

*Late assignments will not be accepted.* Extensions may be granted in rare cases when extenuating circumstances (like serious illness or disability, a death in the family, an accident, etc.) exist, *and are supported by written documentation.* There will be no extension of assignment deadlines if computing facilities are down close to the due date unless the downtime exceeds 24 hours. **NO EXCEPTIONS!**

Some assignments will require a written discussion and/or documentation. If written material is required for an assignment, it must be in digital form. *Handwritten submissions are not acceptable.* All written assignments must be submitted as Portable Document Format (.pdf). All other file formats are not acceptable unless specifically instructed otherwise.

## General

**Grading questions.** If you have a question about a grade, you should see me within one week of the day the graded work is returned to you (via D2L). *You lose the right to re-grading after that.*

**Incompletes.** Incompletes (a grade of “I”) *are rarely granted.* The University has strict policies regarding grades of incomplete. These policies will be enforced. Incompletes are not to be used as a shelter from potentially low grades.

**Academic Misconduct and Cheating.** In this course, you are encouraged to study and prepare for lecture and labs with other students. However, when taking examinations or working on individual assignments, you are to work alone. I will tell you if you are to work as a team. *University regulations are very explicit concerning academic misconduct and cheating.* These regulations will be fully enforced. During examinations, we will apply a “Code of Honor” under which you are to work; you should neither give nor receive help from other sources. You are also expected to help enforce this code.

The class policy on cheating is simple: if your work is turned in by another student, or if you turn in the work of another person or persons, all students involved will receive a zero on that assignment. Should you cheat again, I will fail you for the entire class. I take academic dishonesty very seriously and I expect you to take it just as seriously. UWS 14.03 defines what academic misconduct is and what the penalties can be for academic misconduct. See <http://uwp.edu/cwis/admin/policy28.htm> for details.

The bottom line: Do your own work. If you have any doubts, please talk to me – before you do anything you might regret.

**Students with a Disability.** Anyone who has special needs that must be accommodated to fulfill the course requirements should notify the *instructor and Renee Kirby* in the Office of the Educational and Career Development (WLLC D175, 595-2610). The University has many resources available to assist students with their academic studies.

**Accommodation of Religious Observances.** UW Parkside Senate policy requires that this institution make reasonable accommodations for a student's religious beliefs. *Please notify your instructor within the first two weeks of class about any scheduled class date(s) that conflict with a religious observance.*

**Food and Drink in Class.** Beverages and food are allowed in class as long as I do not have clean up after you. This is a privilege that I will revoke if I end up having to be your mother. Please practice a "carry in – carry out" policy.

**Cellular Telephones and Pagers in Class.** I find it very distracting, and quite frankly rude (as I'm sure other students do), when a ring tone goes off during class. As a courtesy to the instructor and other students, please either turn your cellular telephone or pager off or disable the ring tone during lecture and lab. If you must use the phone, please leave the classroom or lab and go to a place that will not disturb other students: use your cellular phone courteously.

**Illnesses.** If you are sick, please stay home. You are able to get all of your course materials on-line and you are able to turn in assignments on-line. So, if you are sick, there is no reason to be at school increasing others chances of getting sick. However, see **Attendance & Absences and Examinations above.**

**Weapons.** Weapons are prohibited in UW-Parkside buildings and all outdoor events. Anyone found in violation will be subject to immediate removal in addition to academic and/or legal sanctions. If you have a concern regarding weapons at this university, please contact the University Police (595-2455).

*The instructor reserves the right to modify this syllabus at any time, as deemed necessary*