CprE/InfAs 131: Introduction to Computer Security Literacy

A one-credit, Satisfactory/Fail only course at Iowa State University
Fall 2014  Section 2

Classroom Location and Meeting Time
1226 Howe Hall, Wednesdays from 11:00 am to 11:50 am.

Instructor Information

<table>
<thead>
<tr>
<th>Name: Doug Jacobson</th>
<th>Name: Julie Rursch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office: 203 Nuc E</td>
<td>Office: 207 Nuc E</td>
</tr>
<tr>
<td>Office Hours: Walk-in hours Tuesday / Thursday 9:30 to 10:30.</td>
<td>Office Hours: Walk-in hours Tuesday / Thursday 9:30 to 10:30.</td>
</tr>
<tr>
<td>Email: <a href="mailto:dougi@iastate.edu">dougi@iastate.edu</a></td>
<td>Email: <a href="mailto:jrursch@iastate.edu">jrursch@iastate.edu</a></td>
</tr>
<tr>
<td>Office Phone: 4-8307</td>
<td>Office Phone: 4-2803</td>
</tr>
</tbody>
</table>

Course Website  Blackboard

Office Hours
During these hours, you can stop by my office without an appointment on a first-come-first-serve basis. If you would like to meet with me but are not available during my walk-in hours, you can email me to make an appointment to meet at some other time that is convenient for both of us.

Course Description
This course will cover some basic concepts in cyber security. You will learn about some of the most common cyber security threats that exploit everyday computer users (malware, phishing scams, Internet eavesdropping, etc.), and you will learn how to defend your computer, your information, and your privacy from these threats. So it’s kind of like a beginners’ self-defense class, but for cyber self-defense.

As you may have read in the ISU course catalog, “this class is intended for students with little or no background in information technology or security.” All you need is basic computing skills—the ability to create documents with a word processor, to browse the Web, to use email, and that kind of thing.

Course Materials

Technology (required): Access to a computer with word processing software and a reliable Internet connection.

Method of Instruction
This course is offered in a “flipped” course format. In a flipped format students are expected to watch the on-line lectures and the course time will be dedicated to discussion. We will meet once a week on Wednesdays for the duration of the course. (Note: we will not meet the first
Wednesday) During our classroom meetings, we will usually not have traditional lectures. We might have question-and-answer time. Or a guest lecturer. Or we might tell you stories about our experiences with cyber security. Or you might work with a group on some problem related to your homework for the week. Or we might explore a fun gadget related to security. Or (most likely) we might do some combination of these things.

We will assign readings and video lectures each week. I expect you to complete them before our meetings each week.

We will assign low-stakes quizzes over the weekly reading material. These quizzes will be due before our meeting each week. They will be hosted on Blackboard.

We will assign one short writing assignment each week. These assignments will be due on Friday of each week at 11:59 pm. You will submit them on Blackboard.

Learning Goals
By the end of this course, you should be able to:

- Recognize and avoid common security threats
- Help your friends and family to recognize and avoid common security threats
- Distinguish secure computer use from unsecure computer use
- Understand how common security threats and their solutions work
- Discuss cyber security in current events
- Define computer security terms and mechanisms
- Describe fundamental security concepts
- State computer security best practices
- Describe the strengths, weaknesses and limitations of security mechanisms and concepts
- Give examples of common security threats, threat sources and threat motivations
- Explain their role in protecting their own physical and non-physical computing assets
- Discuss current events topics and read security articles in the popular press

Grades
Your course grade will either be “satisfactory” or “fail.” Here is how you receive a satisfactory grade:

- Fulfill at least 6 out of the 7 writing assignments
- Score a 75% or better on at least 10 out of the 12 quizzes
- Attend at least 6 out of the 7 class meetings

Attendance Policy
You are allowed only one absence in this course. I will not differentiate between excused and unexcused absences. Failure to show up for any reason will count as an absence. Students who arrive 15 minutes or more after the beginning of class will be counted absent. I will be firm with this policy.

Here are the conditions upon which I might consider making exceptions to the attendance policy:

- If a student speaks to me in person during the first week of the semester to notify me that he or she will have more than one planned absence, and if that student proposes a plan to
make up those absences, then I might consider making an exception to the attendance policy.

- If I receive a notice from the Dean of Students explaining that a student is involved in an emergency, and if that student follows up on that emergency notice by proposing a plan to make up their emergency absences, then I might consider making an exception to the attendance policy. (For more information on requesting emergency notifications from the Dean of Students, see this URL: http://www.dso.iastate.edu/sa/emergency.)
- If a student enrolls in the course after our first class meeting, they will not be counted absent for missing the first day of class.

Late Arrival Policy
Tardiness is bad for you, but even worse, late arrivals distract everybody else, too. Please be respectful to your peers and arrive on time. If you show up after I take attendance, I might mark you absent. Students who are unsure of whether or not they were counted for attendance should wait until class ends to confirm that I counted them.

Special Needs and Disabilities
Please address any special needs or special accommodations with me at the beginning of the semester or as soon as you become aware of your needs. Those seeking accommodations based on disabilities should obtain a Student Academic Accommodation Request (SAAR) form from the Student Disability Resources (SDR) office (515-294-6624). SDR is located on the main floor of the Student Services Building, Room 1076.

Plagiarism Policy
Students who plagiarize once will receive a failing grade on the plagiarized assignment. Students who plagiarize two or more times will receive a failing grade for the course. I may also report plagiarism cases—even first-time cases—to the Dean of Students for review. The university takes plagiarism seriously, and especially nasty cases (such as buying and selling papers, copying other people’s assignments, etc.) can result in expulsion.

Computer Ethics
This class will help you to think like a bad guy so that you can recognize the bad guys’ tactics when you encounter them. But by taking this class, you agree not to misuse for evil any of the resources that we provide—that includes both physical resources like computers, software, and networks and intellectual resources like knowledge and perspectives. If you break any policies or laws, you will be held solely and fully responsible for your actions.

Course topics
Week One: Introducing Cyber Security
Week Two: Passwords
Week Three: Email and Malware
Week Four: Malware Defense and Safely Surfing the Web
Week Five: Online Shopping and Wireless Internet Security
Week Six: Social Networking and Social Engineering
Week Seven: The Human Threat and Concluding Thoughts
## Course Calendar

<table>
<thead>
<tr>
<th>Week/Day</th>
<th>Readings due before class</th>
<th>Videos to be watched before Wed class</th>
<th>Assignment made</th>
<th>Assignments due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1 – Mon</td>
<td>the course syllabus (during class)</td>
<td></td>
<td>Syllabus quiz Chapter 1 quiz Writing #1</td>
<td></td>
</tr>
<tr>
<td>Week 1 – Wed</td>
<td>No Class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 1 – Fri</td>
<td></td>
<td></td>
<td></td>
<td>Writing #1</td>
</tr>
<tr>
<td>Week 2 – Wed</td>
<td>Chapters 1-3</td>
<td>Lectures 1-12</td>
<td>Chapter 2 quiz Chapter 3 quiz Writing #2</td>
<td>Syllabus quiz Chapter 1 quiz</td>
</tr>
<tr>
<td>Week 2 – Fri</td>
<td></td>
<td></td>
<td></td>
<td>Writing #2</td>
</tr>
<tr>
<td>Week 3 – Wed</td>
<td>Chapters 4-5</td>
<td>Lectures 13-16</td>
<td>Chapter 4 quiz Chapter 5 quiz Writing #3</td>
<td>Chapter 2 quiz Chapter 3 quiz</td>
</tr>
<tr>
<td>Week 3 – Fri</td>
<td></td>
<td></td>
<td></td>
<td>Writing #3</td>
</tr>
<tr>
<td>Week 4 – Wed</td>
<td>Chapters 6-7</td>
<td>Lectures 17-20</td>
<td>Chapter 6 quiz Chapter 7 quiz Writing #4</td>
<td>Chapter 4 quiz Chapter 5 quiz</td>
</tr>
<tr>
<td>Week 4 – Fri</td>
<td></td>
<td></td>
<td></td>
<td>Writing #4</td>
</tr>
<tr>
<td>Week 5 – Wed</td>
<td>Chapters 8-9</td>
<td>Lectures 21-25</td>
<td>Chapter 8 quiz Chapter 9 quiz Writing #5</td>
<td>Chapter 6 quiz Chapter 7 quiz</td>
</tr>
<tr>
<td>Week 5 – Fri</td>
<td></td>
<td></td>
<td></td>
<td>Writing #5</td>
</tr>
<tr>
<td>Week 6 – Wed</td>
<td>Chapters 10-11</td>
<td>Lectures 26-29</td>
<td>Chapter 10 quiz Chapter 11 quiz Writing #6</td>
<td>Chapter 8 quiz Chapter 9 quiz</td>
</tr>
<tr>
<td>Week 6 - Fri</td>
<td></td>
<td></td>
<td></td>
<td>Writing #6</td>
</tr>
<tr>
<td>Week 7 – Wed</td>
<td>Chapters 12-13</td>
<td>Lecture 30</td>
<td>Writing #7</td>
<td>Chapter 10 quiz Chapter 11 quiz</td>
</tr>
<tr>
<td>Week 7 – Fri</td>
<td></td>
<td></td>
<td></td>
<td>Writing #7</td>
</tr>
</tbody>
</table>