

CSCI 1800 Cybersecurity and International Relations

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Office Hours: By appointment
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Overview

Description: The global Internet shortens distances, makes businesses more efficient and facilitates greater social interaction. At the same time, it exposes vital national resources to exploitation and makes it easier for the international criminal element to prey on innocent Internet users. Cybersecurity is concerned with making the Internet a more secure and trustworthy environment. In this course we study this topic from the technological and policy points of view. The goal is to facilitate communication across the divide that normally characterizes the technological and policy communities. WRIT.

Prerequisites: None

Time and Location: Monday, Wednesday 3 - 4:20 PM, 85 Waterman Street 130 **Course**

Website: <http://cs.brown.edu/courses/csci1800>

Class & Section Schedule

Date	Topic	Sections
Wed, 1/22	Introduction	No Section
Mon, 1/27	Policy Overview	
Wed, 1/29	Introduction to Hardware & Software	
Mon, 2/3	Hardware & Software Vulnerabilities	Section 1
Wed, 2/5	The Role of Intelligence and Information Sharing Guest	
Mon, 2/10	Design & Operation of the Internet	Section 2
Wed, 2/12	Internet Naming & Routing Protocols	

Mon, 2/18	LONG WEEKEND (No Class)	No Section
Wed, 2/19	Cyber Exploits	
Mon, 2/24	Attribution & Privacy	Section 3
Wed, 2/26	Major Cyber Attacks	
Mon, 3/2	Secure Communications & Authorization	Section 4
Wed, 3/4	Cyber Conflict	
Mon, 3/9	Bitcoin & Blockchains	Section 5
Wed, 3/11	Cyber Economics	
Mon, 3/16	CANCELLED WEEK (No Class)	
Wed, 3/18	CANCELLED WEEK (No Class)	
Mon, 3/23	SPRING RECESS (No Class)	No Section
Wed, 3/25	SPRING RECESS (No Class)	
Mon, 3/30	Transborder Issues	Section 6
Wed, 4/1	Internet Governance	
Mon, 4/6	Social Media & Propaganda	Section 7
Wed, 4/8	AI & Ethics	
Mon, 4/13	Engineering for Security	Section 8

Wed, 4/15	Defense in Depth	
Mon, 4/20	Cyber Norms, Guest Speaker	Section 9
Wed, 4/22	Cyber Conflict	
Mon, 4/24	Future Directions	No Section
Wed, 5/1	Reading Period	
Mon, 5/5		
Wed, 5/9		

Paper Assignment Dates

Assignment	Released	Due
Short Paper 1: Tech / Policy Overview	Wed, Jan. 29	Fri, Feb. 21
Short Paper 2: Security	Sat, Feb. 22	Mon, Mar. 30
Short Paper 3: Internet Governance	Fri, Mar. 20	Mon, Apr. 20
Final Paper	Mon, Apr. 6	Abstract: Mon, Apr 13 Final Paper: Sat, May 9

Grading Policy

Category	Credit Per	Total
Section Attendance / Participation & Group Situation Analysis	<i>Matrix below</i>	20
Three Short Papers	15	45
Final Paper	35	35

Grade Complaints

Grade complaints must be filed **1-7 days** after the date grades are returned. Note you must wait **24 hours** after grades are returned before submitting a complaint. Grade complaints will result in two different TAs grading your paper, without knowledge of the comments or grades awarded by the previous TAs. Please email only the HTAs if you wish to request a regrade.

Writing

- Students will write three short papers, 3-4 pages double-spaced, for each of the lecture categories. Short papers should incorporate at least one of the required/optional readings. Outside research is allowed and encouraged.
- The final research paper is designed to allow students to think critically about an issue or concept related to international relations and cybersecurity that they would like to study further. While the paper can expand upon course material and previous assignments, it should also include academic sources, news articles, and other vetted sources that could provide supplementary information about the chosen topic. The instructor and TAs will be available to discuss potential topics.

Readings

Students will be expected to read 30-50 pages of material per week. The material will vary in difficulty from simple news articles to more complex academic journal articles, and you should be prepared to engage with the whole range of materials. Class readings will be posted on the course website. Section readings will be linked to on Canvas.

Sections

- Purpose: Sections are designed for students to discuss and reflect on course readings in small-sized groups and to learn from their peers.
- Time and Location: Signup forms will be sent out at the end of shopping period.
- Expectations: The one-hour sections are designed to discuss and further study the lecture material. They meet weekly, except over Presidents Day week, Spring Break, and Reading Period. Sections will generally be broken into two components: activities and discussion.
- Once during the semester, you and 1-3 other students will work together on a “**situation analysis**,” for which we will give you a scenario of a real or hypothetical problem at the intersection of cybersecurity and international relations. You will be tasked with summarizing the situation and recommending a course of action. The presentation does not require accompanying visuals, but your group must create a short (one page) brief containing your assessment and recommendation and email it to your section TAs by 5pm the day before you present. Bullet points are acceptable in your brief papers. These presentations should be recorded by one or all groups members, uploaded to Google Drive, and forwarded to your section TAs.
- Students are expected to answer (4-5 sentences) a reading response question on Canvas and respond to another student’s post (also 4-5 sentences), to be submitted by 5pm the day before their section. Students are also expected to respond to submit a 4-5 sentence response to the situation analysis group’s presentation. The situation analysis group should respond to 3 of these posts.
- The section grade is calculated as a combination of your participation grade and your situation analysis grade. Section TAs will keep note of attendance, contribution to discussion, and submission of Canvas posts throughout the semester and aggregate these to calculate an overall participation grade of A, B, C, or NC. The situation analysis, a 5- to 10-minute presentation recommending a course of action in a real or hypothetical situation followed by a Q&A, has a grade calculated on the same scale given according to the quality of presentation, argumentation, and understanding of course content. These two grades will be combined according to the following matrix to calculate your overall section grade:

Situation Analysis

	A	B	C	NC
A	100%	90%	70%	20%
B	90%	80%	65%	10%
C	70%	65%	60%	0%
NC	20%	10%	0%	0%

Section
Participation

Late Days

If there are any issues related to, but not limited to, mental health, physical health, religious obligations, personal matters, or workload challenges please contact Professor Savage and the HTAs before the assignment is due. Extensions are provided at the discretion of Professor Savage and HTAs on a per situation basis.

Final Papers will not be accepted after the due date without explicit exception provided by Professor Savage and the HTAs.

Short Papers are penalized at 10% per day and will not be accepted more than **3 days** late.

Course Communications

- For all questions, please email the TA list at cs1800tas@lists.brown.edu.
- TA Hours: Although there will not be official TA hours, students are encouraged to set up individual meetings with TAs.

Time Expectations

Over 13 weeks, students will spend 1 hour and 20 minutes per class (35 hours total). Required reading is expected to take up approximately 4-6 hours per week (65 hours total). Preparing for and attending sections should take up to 2 hours per section (18 hours total). Writing short papers and the final paper are estimated to require about 50 hours over the term. Cumulatively approximately 170 hours are expected.

Academic Honesty

We adhere strictly to Brown's Academic Code. Please see [here](#) for detailed information. Violation of the Academic Code can result in some or all of the punishments detailed by the

university. Copying from your own previously submitted work is also considered a form of plagiarism and will be handled accordingly.

Mental Health

If at any time you feel under intense pressure, or feel as though psychological issues hold you back at Brown, then you may contact [Brown Counseling And Psychological Services \(CAPS\)](#) for further assistance. We also have an open extension policy if students provide the HTAs and Professor Savage with proper notice. See the Late Days section for more information.

Students with Disabilities

Brown University is committed to full inclusion of all students. All lectures will have lecture capture for student ease. Please inform Professor Savage early in the term if you have a disability or other condition that might require accommodations or modification of any of these course procedures. You may speak with Professor Savage after class or during office hours.

For more information, please contact Student and Employee Accessibility Services at (401) 8639588 or SEAS@brown.edu.

Course Environment

The entire TA staff and Professor Savage are committed to fostering an opening and welcoming space for students of all identities. If any student feels uncomfortable, please do not hesitate to reach out to the HTAs, Professor Savage, the diversity advocates (diversity.advocates@lists.cs.brown.edu) or any other Brown academic support group.