

Georgetown University
School of Continuing Studies

Cyber Operations and Global Politics

Overview

Networks around the world are under constant assault and threatened by hackers who want to steal information or cause harm. By looking at cyber intelligence and the domestic and international goals of governments, policymakers can develop better policies, make improved resource investment decisions, and make more complete risk management decisions. This course will focus on building an understanding of how cyber operations are used by governments to achieve domestic or international goals. We will investigate the use of cyber operations as a tool of statecraft and the options it provides leaders in achieving foreign and domestic goals.

Unclear norms of behavior about the use of cyber operations and uncertainty over acceptable responses mean governments should be prepared for uncertainty and a complication of traditional international relations. We will examine the cyber operations of various countries to see the context, drivers, and goals for their actions. Students will learn how using cyber intelligence can drive global politics, international policies, and cyber security decisions.

- The course is not intended to look at cyber security at a technical level. Students do not need a technical background. Students will be expected to have some working understanding of international relations and current events.

Coursework will focus on looking at cyber operations through the lens of international relations. Throughout the course we will compare the use of cyber operations with traditional foreign policy tools and examine the emerging use of cyber technologies to achieve national goals. The course will emphasize how strategic cyber intelligence can improve risk management decisions and assist policymakers in setting effective policies.

Learning Objectives

Coming out of this course, students should be able to:

- Explain how cyber operations support the national or domestic goals of country suspected of conducting the operation.

- Look at world events and anticipate or conceptualize possible cyber actions from countries involved the event.
- Explain the benefits and shortcomings of the use of cyber operations as an instrument of foreign policy.
- Compare the use of cyber operations with traditional tools of statecraft (diplomacy, economic policies, military policies etc).
- Explain how cyber threat intelligence can be framed in the context of an actor's domestic or international goals.
- Identify the factors complicating the use of cyber operations to achieve national goals and the establishment of effective policies in response to cyber operations.

Class Requirements (% of total grade)

This class consists primarily of lecture with a portion of each class devoted to classroom discussion of the theme examined that week. Class participation by all students is expected and will be a key aspect of the success of each lecture. Participation will consist of regularly contributing to class discussion and drawing from readings and integrating lessons from earlier lectures. Class participation will represent 15% of students' final grade.

During Week 2 an in-class exam will be administered. The exam will cover concepts addressed during the first two weeks of the course. This exam will represent 10% of students' final grade.

At the beginning of Week 6 a paper will be due which addresses concepts addressed in the first half of the course. The required length of the paper will be 6-8 pages. The specific assignment question(s) will be handed out during week 4.

- This paper will represent 25% of your final grade.

During Week 9 of the course an in-class presentation will be required of all students. All students will also be required to submit an accompanying 5-page summary of the presentation.

- The presentation and written summary will represent 20% of your final grade.

A paper representing the final exam of the course will be due the last week of the course. The specific final assignment will be handed out during the second-to-last week of the course. Students will be expected to integrate lessons and points from throughout the course in addressing the final exam question(s).

- This final paper will be 10-15 pages in length and represent 30% of your final grade.

For all papers and written work, students are expected to use an acknowledged system of bibliographic references to document the sources of ideas and quotations in your work. Acceptable styles include APA style, MLA style, and Turabian.

Grade Structure:

Letter grades will be given to papers, presentation, and class participation. The letter grades correspond to the following numerical scale. Final course grade will be determined using the weighted average of the assignments and the below numerical equivalents.

A	=	4.00
A-	=	3.67
B+	=	3.33
B	=	3.00
B-	=	2.67
C+	=	2.33
C	=	2.00
C-	=	1.67
D+	=	1.33
D	=	1.00
F	=	0.00

Students are expected to complete and hand in assignments on time. Papers will be penalized by a 1/3 letter grade reduction for each day past the due date.

Failure to complete ANY of the assignment will result in failure of the course.

Attendance

Attendance each week is very important. Because the lectures and class discussion are the primary means for learning the concepts and themes of this course, being present in class each week will be key to grasping the learning objectives. Consistent with the policies of the Liberal Studies program, two or more absences may result in failure of the course. Repeated tardiness (defined as being tardy by more than 15 minutes for three or more classes) will be counted as an absence.

Required Texts

Weekly readings will consist of portions of the below required books and a series of articles and publications. Depending on current events the instructor may assign or substitute additional articles related to world events that may unfold during the semester.

- Freeman Jr., Charles W. Arts of Power: Statecraft and Diplomacy. Washington, DC United States Institute of Peace Press, 1997. ISBN-13: 978-1878379658
- Clarke, Richard A., and Robert Knake Cyber War: The Next Threat to National Security and What to Do About It. New York, NY Harper-Collins Publishers, 2010. ISBN: 978-0-06-196224-0
- Singer, P.W. and Allan Friedman Cybersecurity and Cyberwar: What Everyone Needs to Know. New York, NY Oxford University Press, 2014. ISBN 978-0-19-991811-9

Weekly Course Work

Part 1. Cyber as a Tool of Statecraft

Week 1. Wednesday August 30

Introductions, terminology, understanding cyberspace

Week 2. September 11

Principles of Global Politics and Tools of National Power

Readings: Freeman pages 1-68
Singer and Friedman pages 1-30

A portion of this week's instruction will include an in-class exam that covers the topics addressed in class over the first two weeks as well as the Week 2 readings.

Week 3. September 18

Cyber as a Tool of Statecraft

Readings: Freeman pages 69-104
Singer and Friedman pages 31-59

Week 4. September 25

Norms of Behavior and Responding to Cyber Operations

Readings: Freeman pages 105-140
Singer and Friedman pages 120-165

Week 5. October 2

Internet Governance and Controlling the Internet

Readings: Singer and Friedman pages 166-240

Part 2. Cyber Intelligence

Week 6. October 16

What is Cyber Intelligence and How Should It Be Used

Readings: “Operational Levels of Cyber Intelligence,” Intelligence and National Security Alliance, Cyber Intelligence Task Force. September 2013

Clarke and Knake chapter 1 pages 1-32

Week 7. October 23

US Cyber Strategies

Readings: The Department of Defense Cyber Strategy, April 2015.
www.defense.gov

The White House; International Strategy for Cyberspace, May 2011. www.whitehouse.gov

Clarke and Knake chapter 2 pages 33-68

Week 8. October 30

The US as a Victim of Cyber Attacks

Readings: Bloomberg | Blog Post “Nuke Remark Stirred Hack on Sands Casinos that Foreshadowed Sony” 11 Dec 2014

Fox News | Online Article “FBI Launches Probe into Massive Sony Pictures Hack” 2 Dec 2014

“Bank Hack was the Work of Iranians, Officials Say”, New York Times, Nicole Perlroth and Quentin Hardy, Jan 8, 2013

Network World | “DDOS attacks against banks raise question: Is this cyberwar?” Ellen Messmer 24 Oct 2012

Clarke and Knake chapter 3 pages 69-102

Week 9. November 6

Student Presentations – students will address one of several questions (to be provided during week 7) that reflect on previous course work

Readings: Clarke and Knake chapter 4 pages 103-150

Week 10. November 13

China: Cyber Operations, Motivations, and Implications

Readings: Center for a New American Security | “Warring State: China’s Cybersecurity Strategy” by Amy Chang; December 3, 2014

Mandiant | “APT 1: Exposing One of China’s Cyber Espionage Units” February 2013 Report

Clarke and Knake chapter 5 pages 151-178

Week for Distance Learning Component. Wednesday, November 15
Examining and Evaluating the Use of Threat Models and Cyber Intelligence

Week 11. November 20

Iran: Cyber Operations, Motivations, and Implications

Readings: American Enterprise Institute Critical Threats Project and Norse Corporation | “The Growing Cyberthreat from Iran: The Initial Report of Project Pistachio Harvest,”
Frederick W. Kagan and Tommy Stiansen; April 2015

International Institute for Strategic Studies | “The Cyber Attack on Saudi Aramco,” *Survival: Global Politics and Strategy* vol. 55 number 2, 1 April 2013 pages 81-96

Clarke and Knake chapter 6 pages 179-218

Singer and Friedman pages 114-119

Week 12. November 27

Russia: Cyber Operations, Motivations, and Implications

Readings: Atlantic Council, “The Bear is Inside the Wire,”
9 April 2015

Clarke and Knake Chapter 7-8 pages 219-279

Week 13. December 4

Realities of Cyber War and Cyber Armageddon

Readings: Rid, Thomas *Hacking Can Reduce Real-World Violence*
Foreign Affairs. November/December 2013

Libicki, Martin *Don’t Buy the Cyberhype* Foreign Affairs.
August 14, 2013

Disabilities

If you are a student with a documented disability who requires accommodations or if you think you may have a disability and want to inquire about accommodations, please contact the Academic Resource Center at 202-687-8354 or arc@georgetown.edu.

Turnitin.com

Students acknowledge that by taking this course all required papers can be submitted for a Textual Similarity Review to Turnitin.com for the detection of plagiarism. Use of the Turnitin.com service is subject to the terms of use agreement posted on the Turnitin.com site.

Extreme weather, Emergencies, and Instructional Continuity

During inclement weather or other emergencies on a day when we are scheduled to meet face-to-face, check the university's Web site or call (202) 687-7669 for information on whether the university is open. If the university is open, this class will meet. If the university is closed, this class will meet through distance means such as online videoconferencing; check your e-mail for a message from me on how we will proceed in that situation. Due dates for written assignments submitted through Blackboard will not be changed due to campus closings.

The university recently has acquired the capability to send text messages and recorded messages about emergencies to cell phones and other mobile devices. Sign up on MyAccess.

Georgetown Honor System

All students are expected to follow Georgetown's honor code unconditionally. We assume you have read the honor code material located at <http://scs.georgetown.edu/academic-affairs/honor-code>, and in particular have read the following documents: Honor Council Pamphlet, What is Plagiarism, Sanctioning Guidelines, and Expedited Sanctioning Process. Papers in this course will all be submitted to turnitin.com for checking.

Submitting material in fulfillment of the requirements of this course means that you have abided by the Georgetown honor pledge:

In the pursuit of the high ideals and rigorous standards of academic life, I commit myself to respect and uphold the Georgetown Honor System: To be honest in any academic endeavor, and to conduct myself honorably, as a responsible member of the Georgetown community, as we live and work together.

Plagiarism

In accord with university policy, all incidents of suspected plagiarism or other Honor Code violations will be reported to the Honor Council without fail.

If the Honor Council finds that a student has plagiarized or has violated the Honor Code in any other way, the student will receive a grade of F for the course.

Policy Accommodating Students' Religious Observances

The following is university policy:

Georgetown University promotes respect for all religions. Any student who is unable to attend classes or to participate in any examination, presentation, or assignment on a given day because of the observance of a major religious holiday or related travel shall be excused and provided with the opportunity to make up, without unreasonable burden, any work that has been missed for this reason and shall not in any other way be penalized for the absence or rescheduled work. Students will remain responsible for all assigned work. Students should notify professors in writing at the beginning of the semester of religious observances that conflict with their classes.

Library Reserves: access through GU email. Click the link below and go to town!

Want to place an item on reserve? Physical or electronic? Book or streaming media? Check to see if Georgetown University Library owns the item(s) here . Secondly, complete the appropriate reserve request form.

TURNITIN Directions for Profs

Georgetown has a full license to use Turnitin.com and other iParadigm products, such as Gradermark, etc. Go to www.turnitin.com and click on the "Create Account" button at the top of the Turnitin homepage.

If you haven't already signed up, the information you will need is as follows: account code: 81031; "join" password: classreg2. With that information you can establish your own profile, register your classes(s), and instruct students to submit their papers to Turnitin. Signing up is really very easy, and Turnitin has good "help" features, including a step-by-step tutorial about the process.

2 - Former users:

Many faculty used Turnitin regularly before there was a hiatus year due to budget constraints. Consequently, these former users may experience difficulty accessing their old accounts. Please reply to this email if this happens to you.

We'd like to provide the best help to you. If you would like the Honor Council to submit a paper for you, we can do that, and send the Originality Report back right away.

On using Turnitin, this page is very helpful. http://turnitin.com/en_us/support/help-center

Turnitin available via Blackboard:

There also is a portal in Blackboard (Bb) if you like to have your students submit papers to Turnitin via Bb. Although it is preferable to use Turnitin for all students in a class, it also is possible to do single submissions if you have cause to do so.

Even if you are an experienced student paper reader, here also are a few features the Honor Council has noticed in cases reported which may cause faculty to be uncertain about the authenticity of student work:

- a - the quality of a student's previous written work is just too inconsistent with the paper at issue
- b - the final paper submitted is very different from previous drafts
- c - the student uses references or sources not recommended or used in class
- d - the paper is off the topic assigned.

Please understand that no one of these observations is proof of any wrong-doing but have been cited by faculty as to why a paper required further analysis, and sometimes investigation and adjudication.
