

Seton Hall University

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Diplomacy Syllabi

School of Diplomacy and International
Relations

Spring 2024

DIPL 3470 Cyber Security and International Relations

Brandon Valeriano PhD

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Seton Hall University
School of Diplomacy
Cyber Security and International Relations
Spring 2024

DIPL 3470 - 15575 // F – 11-1:30pm

Location (all sections): Muscarelle Hall 205

Contact

Professor: Brandon Valeriano, PhD

valeribr@shu.edu (drbvaler@gmail.com as backup)

Office Hours: R 4-5pm//F 1:30-3:00pm

Office 135 – School of Diplomacy – McQuaid Hall

Course Description

This course explores the role that cyber security and cyber warfare play in intentional relations. It will examine the interactions, planning, history, and recent actions of states, the private sector, and the international community in cyberspace. We will explore how states and other actors leverage cyberspace to pursue goals and strategic objectives.

Course Goals

By the end of the course the student will have a general understanding of the history and development of the nexus between cyber security and international relations. This includes exploring the nature of cyber diplomacy, cyber strategy, cyber policy, and cyber war. The student will be able to grasp and articulate the main issue areas and core theories of cyber warfare and security. After this course, the student will be prepared to undertake graduate studies in cyber security and impact cyber policy. The student will also be able to engage in and articulate constructive analysis of current cyber security issues. Thinking critically about how digital politics impacts the world, global issues, and diplomacy are core demands of an engaged global citizen.

Learning Objectives:

- Plan research into key contemporary international cyber security issues.
- Integrate material from course readings and lectures with real-world research.
- Appraise the prospects for cyber conflict and cooperation on key issues.
- Present research findings in a cogent and professional fashion.

Course Text:

Reveron, Derek and John Savage. *Security in the Cyber Age*. Cambridge University Press

([Cambridge Core](#))* (SH has purchased online access, you are welcome to buy a physical copy if you prefer)

Course Requirements

Current Events

We will start each class session reviewing current events and global news. Anything that is relevant to Cyber Security is fair game and the students are encouraged to bring new items to discuss and dissect. Key sources include the New York Times, Washington Post, Foreign Affairs, Foreign Policy, and the BBC.

Class Readings

Students are expected to come to class having read all the required readings. Frequently through Canvas I will push out new and interesting news stories and analysis. The students should do their best to maintain an active vigilance on the course readings, suggested readings, and key topics of conversation.

Participation and Attendance

Students who miss more than five classes will be dropped from the course. Students can also miss two class sessions with no consequence. After three missed class meetings there will be an active impact on the participation grade. Participation is also measured by active participation in classroom discussions and activities including the class presentation.

Grading

There will be no exams in this course. The focus will be on writing assignments cumulating in a longer assignment. You are encouraged to use provided sources, suggested sources, found sources, and generative AI to help produce your written assignments.

More information on each assignment will be provided on Canvas.

Presentations

Each student is responsible for presenting one debate/position in class. There is no formal written requirement beyond addressing the prompt to the class. This assignment counts for a large part of your participation grade.

Explore a Cyber Incident/Scandal/Event (Du Feb 23rd)

Pick one cyber security incident or event and explore its genesis, impact on international relations, and termination. >1,500 words

Use [DCID 2.0](#) to pick an incident, you may also propose one not on the list and clear with the Professor.

Cyber Security and Film or Literature (Mid Term – April 5th)

Your task is to explore how cyber security is covered in popular culture. Your goal is to explain the themes, issues, and implications of how cyber security is covered (often poorly) in a piece of popular media such as *Blackhat*, *Sword Art Online*, *Mr. Robot*, *Hackers*, *Wargames*, etc or a piece of popular literature such as *Ready Player One*. Is the portrayal of cyber security accurate and what lessons from the course does the media explore? >2000 Words

Final Essay Prompt (Due May 10th)

More information to follow, but you will be given a prompt from the course on an overall theme. Identify superior sources, explain the argument, and relate it to a recent issue in international affairs. This assignment brings all tasks and activities from this course into focus. >3,000 words

Examples of possible topics:

Cyber incidents in Gaza

Ukraine Cyber after 2023

Evolution of Chinese cyber capabilities

Sector attacks (space, water, health)

Rubic

Participation (Presentations): 20%

Incident Piece: 25%

Midterm Media Paper: 25%

Final Theme Analysis: 30%

Grading Scale

A: 93+

A-: 90-92

B+: 87-89

B: 83-86

B-: 80-82:

C+: 77-79

C: 73-76

C-: 70-72

D+: 67-69

D: 63-66

F: 0-62

Course Policies:

Computer Use:

You are adults, just do not disturb your neighbors and the rest of the class. Respect the course and your own time, do not show up if you intend to be on social media the entire time.

Attendance:

Attendance is covered under participation. Attendance is not mandatory but there will be an impact on your participation grade and ultimate grades since attendance correlates with higher marks. If you need help, support, or want to engage with the course outside of the classroom, do come to office hours or arrange meetings for lunch or breakfast with me and fellow classmates. The one thing I do not want is the “what did I miss?” “catch me up” email.

Disability Services Statement

It is the policy and practice of Seton Hall University to promote inclusive learning environments. If you have a documented disability you may be eligible for reasonable accommodations in compliance with University policy, the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and/or the New Jersey Law against Discrimination. Please note, students are not permitted to negotiate accommodations directly with professors. To request accommodations or assistance, please self-identify with the Office for Disability Support Services (DSS), Duffy Hall, Room 67 at the beginning of the semester. For more information or to register for services, contact DSS at (973) 313-6003 or by e-mail at DSS@shu.edu.

Policy on Incompletes

Incompletes will be given only in exceptional cases for emergencies. Students wishing to request a grade of Incomplete must provide documentation to support the request to the professor *before* the date of the final examination. If the incomplete request is approved, the professor reserves the right to specify the new submission date for all missing coursework. Students who fail to submit the missing course work within this time period will receive a failing grade for all missing coursework and a final grade based on all coursework assigned. Any Incomplete not resolved within one calendar year of receiving the Incomplete or by the time of graduation (whichever comes first) automatically becomes an “FI” (which is equivalent to an F). It is the responsibility of the student to make sure they have completed all course requirements within the timeframe allotted. Please be aware that Incompletes on your transcript will impact financial aid and academic standing.

Academic Integrity & Dishonesty

Plagiarism and other forms of academic dishonesty will be reported to the administration and may result in a lowered or failing grade for the course and up to possible dismissal from the School of Diplomacy. See University and School standards for academic conduct here:

<https://www.shu.edu/documents/Student-Code-of-Conduct.pdf>

and <https://www.shu.edu/diplomacy/academic-conduct.cfm>.

Resources for academic integrity are on the course Blackboard [or Canvas] page.

Citation Formats

Papers should utilize one of the Chicago Manual of Style citation formats: Author-Date or Notes and Bibliography. The guidelines for these formats are on the course Canvas site.

CAPS:

As part of our commitment to the health and well-being of all students, Seton Hall University's Counseling and Psychological Services (CAPS) offers initial assessments, counseling, crisis intervention, consultation, and referral services to the SHU community. The CAPS office is located on the second floor of Mooney Hall, room 27. Appointments can be made in-person or by calling 973-761-9500 during regular business hours, Monday-Friday, 8:45 a.m. - 4:45 p.m. In case of a psychological emergency, call CAPS (973-761-9500) please visit: <https://www.shu.edu/counseling-psychological-services/index.cfm>

Course Schedule

Week 1 Jan 19

Introductions and Themes

Interactive Element:

YouTube Videos (In Class if we have Audio)

[Cyber Warfare: A New Era of War](#) (Valeriano)

[How Dangerous are Cyberattacks](#) (Schnieder)

[Internet Expert Debunks Cyber Security Myths](#) (Galprin)

[Why the Next Cyber Attack Could be as Deadly as a Nuclear Weapon](#) (Infographics)

At Home

[Could a Russian Cyber Attack Trigger WWII](#) (The Agenda)

Week 2 Jan 26

The Basics

Reading:

Reveron Ch 1 Emergence

Valeriano et al. Cyber Wild West

Student Presentation:

Where Did the Internet Come From?

Week 3 Feb 2

Functions and Methods

Readings:

Reveron Ch 2 and 3

Montgomery, M., B. Jensen, E. Borghard, J. Costello, V. Cornfeld, C. Simpson, and B. Valeriano. "Cyberspace Solarium Commission Report." *Washington, DC* (2020). ([LINK](#))

Gomez, Mueller, Shandler, Valeriano, and Whyte. 2024. "The Need for Substantive and Methodological Diversity in Cyberwarfare Research." Tim Stevens, Ed. *Handbook on Cyberwarfare*. ([LINK](#))

Student Presentations:

What was the Solarium Strategy and what did the Commission accomplish?

Week 4 Feb 9

Cyber Strategy

Readings:

Valeriano, Brandon, Benjamin M. Jensen, and Ryan C. Maness. *Cyber strategy: The evolving character of power and coercion*. Oxford University Press, 2018. Chapters 1-2. (LINK [OUP Academic](#), PDF will be distributed)

Summary, Department of Defense Cyber Strategy 2018. (Defend Forward) ([LINK](#))

Valeriano, Brandon, and Benjamin Jensen. "Building a national cyber strategy: the process and implications of the cyberspace solarium commission report." In *2021 13th International Conference on Cyber Conflict (CyCon)*, pp. 189-214. IEEE, 2021. ([LINK](#))

Recommended:

Reveron Ch. 5

Student Presentation:

Summarize the 2023 US and/or UK Cyber Strategy (2022)

Week 5 Feb 16

Visions of Cyber War

Readings:

Rid, Thomas. "Cyber war will not take place." *Journal of strategic studies* 35, no. 1 (2012): 5-32. ([LINK](#))

Gartzke, Erik. "The myth of cyberwar: bringing war in cyberspace back down to earth." *International security* 38, no. 2 (2013): 41-73. ([LINK](#))

Kello, Lucas. "The meaning of the cyber revolution: Perils to theory and statecraft." *International Security* 38, no. 2 (2013): 7-40. ([LINK](#))

Valeriano, Maness, Jensen. "Cyber War." In *What Do We Know About War* (3rd Edition). Eds. John Vasquez and Sara Mitchell. 2021. ([LINK](#))

Student Presentation:

Why did various scholars and/or policymakers believe in the idea of a cyber revolution or cyber pearl harbor?

Week 6 Feb 23

Coercion and Escalation in Cyberspace

- 1. Coercion in Cyberspace**
- 2. Escalation in Cyberspace**
- 3. Hacking Nukes**

Readings:

Borghard, Erica D., and Shawn W. Lonergan. "The logic of coercion in cyberspace." *Security Studies* 26, no. 3 (2017): 452-481. ([LINK](#))

Jensen, Benjamin, Brandon Valeriano, and Sam Whitt. "How cyber operations can reduce escalation pressures: Evidence from an experimental wargame study." *Journal of Peace Research*. 2023. ([LINK](#))

Schneider, Jacquelyn, Benjamin Schechter, and Rachael Shaffer. "Hacking Nuclear Stability: Wargaming Technology, Uncertainty, and Escalation." *International Organization* 77, no. 3 (2023): 633-667. ([LINK](#))

Recommended:

Lonergan, Erica D., and Shawn W. Lonergan. *Escalation Dynamics in Cyberspace*. Oxford University Press, 2023. ([LINK](#), [Oxford Academic](#))

Interactive Session:

Visit Columbia SIPA or Teams Presentation (Prepare Questions for Lonergan)

Week 7 March 1

The Reality of Cyber Conflict

- 1. Cyber Reality**
- 2. Cyber Reality in Ukraine**
- 3. US Operations**

Readings:

Valeriano, Brandon, and Ryan C. Maness. "The dynamics of cyber conflict between rival antagonists, 2001–11." *Journal of Peace Research* 51, no. 3 (2014): 347-360. ([LINK](#))

Mueller, Grace, Benjamin Jensen, Brandon Valeriano, Ryan Maness and Jose Macias. Cyber Operations During the Russo-Ukraine War. Center for Strategic and International Studies. 2023. [\[LINK\]](#)

Barzashka, Ivanka. "Are Cyber-Weapons Effective? Assessing Stuxnet's Impact on the Iranian Enrichment Programme." *The RUSI Journal* 158, no. 2 (2013): 48-56. ([LINK](#))

Recommended:

Valeriano, Brandon G. "Expanding the Dyadic Cyber Incident and Campaign (Dcid) Dataset: Cyber Conflict from 2000 to 2020." *Cyber Defense Review* (2022). [\[LINK\]](#)

Department of Defense. Joint Publication 3-12. Cyberspace Operations. 2018. [\[LINK\]](#)

Student Presentation:

How could cyber conflict in Ukraine draw in NATO and the US? Why hasn't it?

Spring Break March 8

Week 8 March 15

Visions of Cyber Peace

- 1. What is Cyber Peace**
- 2. De-escalation and Offramps**
- 3. Cyber Diplomacy**
- 4. Wargame**

Readings:

Valeriano, Brandon, and Benjamin Jensen. "De-Escalation Pathways and Disruptive Technology." *Cyber Peace: Charting a Path toward a Sustainable, Stable, and Secure Cyberspace* 64 (2022). [\[LINK\]](#)

Loneragan, Erica D., and Shawn W. Lonergan. "Cyber operations, accommodative signaling, and the de-escalation of international crises." *Security Studies* 31, no. 1 (2022): 32-64. [\[LINK\]](#)

Roff, Heather. *Cyber Peace: Cybersecurity Through the Lens of Positive Peace*. New America. 2016 [\[LINK\]](#)

Author "Cyber-diplomacy: the emergence of a transient field", 2023. *Hague Journal of Diplomacy*. [\[LINK\]](#)

Interactive Element:

Cyber Wargame

Week 9 March 22

Alliances and Wargames

- 1. Alliances and Cyber Security**
- 2. Wargaming and Modern Technology**

Readings

Valeriano, Jacobsen, and Jensen. Cyber Alliance Commitments. [LINK]

Valeriano, Gomez, and Lango. Cyber Regionalism. [LINK]

Valeriano, Brandon G., and Benjamin Jensen. "Wargaming for social science." Ed Sebastian Bae. Forging Wargamers. Marine University Press. 2021. [LINK]

Lin-Greenberg, Erik, Reid BC Pauly, and Jacquelyn G. Schneider. "Wargaming for international relations research." *European Journal of International Relations* 28, no. 1 (2022): 83-109. [LINK]

**Interactive Element:
Alliance Wargame**

Easter March 29

Conference April 5

Student Task:

Paper on Movie

Week 10 April 12

Law and Norms

- 1. Norms and Cyber Norms**
- 2. Law and Cyber Law**
- 3. Cyber Security and the UN**
- 4. The Defense?**

Readings:

Jacobsen, Jeppe Teglskov, and Brandon Valeriano. "The false promise of cyber conventions: Why the West is losing and what to do about it." *Bulletin of the Atomic Scientists* (2023). [LINK]

Jensen, Benjamin, Nevi, Attlan, Macias. "CISA's evolving .gov Mission." *Center for Strategic and International Studies*. 2023. [[LINK](#) – skim]]

Finnemore, Martha, and Duncan B. Hollis. "Constructing norms for global cybersecurity." *American Journal of International Law* 110, no. 3 (2016): 425-479. [[LINK](#)]

Reveron Ch 7

Student Presentation:

What did the UN GGE and/or OWEG accomplish?

(There will likely also be an optional Zoom presentation)

Week 11 April 19

Human Dimension

1. Human Element
2. Economics of Cyber

Readings

Reveron Ch 4

Romanosky, Sasha. "Examining the costs and causes of cyber incidents." *Journal of Cybersecurity* 2, no. 2 (2016): 121-135. [[LINK](#)]

Student Presentation:

Mundane Cyber Security (explain the most boring topic in cyber security and tell us why its important)

Week 12 April 26

Emerging Topics

1. *Space*
2. *Repression*
3. *AI*

Readings

Reveron Ch 9

Valeriano, Brandon and Allison Pytlak. "Closing that internet up": The Rise of Cyber Repression. *Net Politics*. 2016. [[LINK](#)]

Gohdes, Anita R. "Repression technology: Internet accessibility and state violence." *American Journal of Political Science* 64, no. 3 (2020): 488-503. [[LINK](#)]

Lonergan and Valeriano, Space Cyber Nexus. Forthcoming

Student Presentation:

What is Humanitarian Cyber Security?

Week 13 May 3

Student Final Presentations (Final Project)