

The Politics of Cyber Security

University of Georgia
Department of International Affairs
Fall 2023

Instructor

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Office hour: Either on Zoom or in person, 3-5 PM, Thursdays by appointment.

(Plz use Calendly:

https://calendly.com/jay_lee_uga/jay-lee-office-hours)

Course Information

Course: INTL 4666

Time: MWF 10:20 - 11:10am (50 min)

Location: Sanford Hall 314

1. Course description and objectives

Through this course, we're going to study different topics of cybersecurity from the perspective of international relations. As an international relations professional, it is critical to build a comprehensive and systematic framework to understand emerging phenomena. This course covers from a history of the internet to various forms of cooperation and conflicts among various actors in cyberspace. Based on these understandings, we will discuss definitions of cybersecurity and future policy implications. As the field is full of dynamics, students are encouraged to do group work, especially presentations about the topics of their interest.

2. Books

Kizza, J. M., Kizza, W., & Wheeler. (2013). *Guide to computer network security* (Vol. 8). Berlin: Springer. (Free version is available at http://repository.psa.edu.my/xmlui/bitstream/handle/123456789/2022/2017_Book_GuideToComputerNetworkSecurity.pdf?sequence=1&isAllowed=y)

Tikk, E., & Kerttunen, M. (Eds.). (2020). *Routledge handbook of international cybersecurity*. Routledge.

Burgess, J. P. (Ed.). (2010). *Routledge Handbook of new security studies*. Routledge.

Recommended

Romaniuk, S. N., & Manjikian, M. (Eds.). (2021). *Routledge companion to global cybersecurity strategy*. Routledge.

Most readings for this course are either accessible through the University of Georgia library system or will be provided by the instructor.

3. Evaluation

Pop-up quiz (10%): These quizzes will be held randomly (not every class) at the end of a class instead of an attendance check. The quiz will be very easy if you pay enough attention to the class of the day, composed of 1 - 5 problems. The scores themselves wouldn't be reflected in the grading except for attendance. So, for example, if there were five pop-up quizzes during the semester and you took four of them, then regardless of the scores, you will get 8 points, i.e. 80% of the attendance score.

Group presentation (20%): Group work. As a group, you're going to present twice during this semester up-to-date news or articles, to the class on the topics of your interest. The project comprises a no more than two-page memo (single-spaced, font size 12) and a presentation. A team must email me their memo 24 hours prior to their presentation. The memo should include: 1) why you choose the news or articles, 2) how they are related to cybersecurity in international relations and their weaknesses & strengths, and 3) what possible policy implication. The presentation should be within 20 minutes including Q&A.

Write-ups (40%): Individual work. During this semester, you will produce four short (750-1000 words) write-ups in response to provided questions requiring you to demonstrate the knowledge that you learned from class coupled with your own thoughts and interpretations.

Final Short Essay (30%): Individual work. Among the discussed topics, pick one and write a 3–4 page essay. (single-spaced, font size 12) In the essay, you would write about: 1) your research question and relevant existing literature review, 2) summarizations of three to four articles that you want to focus on, 3) your analysis of their strengths and weaknesses, and 4) your opinions on their policy or theoretical implications.

4. Grading Scale

A	94 to 100
A-	90 to 93.9
B+	87 to 89.9
B	84 to 86.9
B-	80 to 83.9
C+	77 to 79.9
C	74 to 76.9
C-	70 to 73.9
D	60 to 69.9
F	59 and below

5. Administrative Policy

5.1. Academic Honesty

The course syllabus is a rough outline for the course; instructors need to inform changes to the class. The University of Georgia's "Culture of Honesty" (http://www.uga.edu/honesty/ahpd/culture_honesty.htm) has requirements that must be met by all academic work. It is your responsibility to familiarize yourself with these requirements before beginning any academic work. Our academic dishonesty policy is straightforward: Avoid plagiarism. You will receive a failing grade in the course if you turn in a written assignment that is (in part) not your own. Disciplinary actions that could result in your dismissal from the university could be taken.

5.2 Prohibition on Recording Lectures

In the absence of written authorization from the UGA Disability Resource Center, students may not make a visual or audio recording of any aspect of this course.

5.3 Students with Disabilities

If you plan to request accommodations for a disability, please register with the Disability Resource Center (DRC). The DRC can be reached by visiting Clark Howell Hall, by calling 706-542-8719 (voice) or 706-542-8778 (TTY), or by visiting <http://drc.uga.edu>

5.4 Resources for Mental Health and Wellness

Contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or go to <https://sco.uga.edu> if you or someone you know needs help. By putting you in touch with the proper resources or services, they will assist you in navigating any challenging situations you might be dealing with. For students looking for crisis help or mental health services, UGA has a number of resources available at <https://www.uhs.uga.edu/bewelluga/bewelluga>. Please visit BeWellUGA (<https://www.uhs.uga.edu/bewelluga/bewelluga>) for a list of FREE programs, classes, mentoring, and health coaching given by certified clinicians and health educators in the University Health Center if you need assistance managing stress, anxiety, relationships, etc. The UGA App gives users access to more resources.

5.5 Diversity and Inclusion

The University of Georgia is dedicated to upholding a just and courteous atmosphere for employment, residence, and education. To that end, the University forbids harassment of or discrimination against any person on campus due to race, color, sex (including sexual harassment and pregnancy), sexual orientation, gender identity, ethnicity or national origin, religion, age, genetic information, disability, or veteran status by any member of the University Community in accordance with federal and state law, University System of Georgia policy, and University policy.

6. Course Schedule

This schedule is a suggestion for the class and is open to modification at my discretion. The

underlined dates are assigned for group presentations. Watch or read assigned materials before class.

Week01 (Aug 16,18): Introduction

Aug 16

- Course introduction (survey: why are you taking this course? what do you want to achieve?)

Aug 18

- Group work (Form ten groups based on topics of interest, 4 people/group), and possibly a short introduction to the Internet.

Week02 (Aug 21,23,25): What is computer & the Internet 01

Aug 21

- Youtube Lecture, by David Clark (The Future of the Internet with David Clark 2021): <https://www.youtube.com/watch?v=2-1841nqKHs>
- WAN vs. LAN: Comparing Wide Area Network to Local Area Network: <https://www.ipxo.com/blog/wan-vs-lan/>
- Burgess, J. P. (Ed.). Chapter 16 in *The Routledge Handbook of new security studies*. Routledge. 2010.

Aug 23

- Kizza, J. M., Kizza, W., & Wheeler. pp. 3 – 22 in *Guide to computer network security* (Vol. 8). Berlin: Springer. 2013.

Aug 25

- Kizza, J. M., Kizza, W., & Wheeler. pp. 22 - 40 in *Guide to computer network security* (Vol. 8). Berlin: Springer. 2013.

Recommended

Hafner, K., & Lyon, M. (1998). *Where wizards stay up late: The origins of the Internet*. Simon and Schuster.

Berners-Lee, T. (1999). *Weaving the Web: The original design and ultimate destiny of the World Wide Web by its inventor*. Harper San Francisco.

Gillies, J., & Cailliau, R. (2000). *How the Web was born: The story of the World Wide Web*. Oxford University Press, USA.

Week03 (Aug 28,30, Sep 1): What is computer & the Internet 02

Aug 28

- Clark, David D. *An Insider's Guide to the Internet*. MIT Computer Science and Artificial Intelligence Laboratory, Version 2.0. Massachusetts Institute of Technology, 2004.

Aug 30

- Tan, L., & Wang, N. (2010, August). Future internet: The internet of things. In 2010 *3rd international conference on advanced computer theory and engineering (ICACTE)* (Vol. 5, pp. V5-376). IEEE.

Sep 1

- Group work

Recommended

The Internet Hall of Fame: <https://www.internethalloffame.org/about/>

IEEE (Institute of Electrical and Electronics Engineers) Computing Conversations: <https://www.youtube.com/playlist?list=PL4660FB7F523B1770>

Week04 (Sep 6,8,11): The Definitions of Cybersecurity

Write-up 01: Due Sep 10, 11:59 p.m.

Sep 6

- Stevens, Tim. pp 1-11, 20-41 in *Cyber security and the politics of time*. Cambridge University Press, 2016.

Sep 8

- Stevens, Tim. Chapter 2 in *Cyber security and the politics of time*. Cambridge University Press, 2016.
- Balzacq, T. Chapter 1 in *Securitization theory: How security problems emerge and dissolve*. Routledge, 2011.

Sep 11

- Group work

Recommended

Weinberger, David. *Everyday chaos: technology, complexity, and how we're thriving in a new world of possibility*. Harvard Business Press, 2019.

Bambauer, D. E. (2012). *Conundrum*. *Minnesota Law Review*, 96(2), 584–674.

Choucri, Nazli. "Co-evolution of cyberspace and international relations: New challenges for the social sciences." (2014). (downloadable at

<https://dspace.mit.edu/bitstream/handle/1721.1/141686/Choucri%20%282013%29%20Co-evolution%20of%20cyberspace%20and%20international%20relations.pdf?sequence=1&isAllowed=y>)

Zittrain, J. (2019) The Hidden Costs of Automated Thinking. *The New Yorker*: <https://www.newyorker.com/tech/annals-of-technology/the-hidden-costs-of-automated-thinking>

Week05 (Sep 13,15,18): Existing IR Theories

Sep 13

- Burchill, Scott, et al. Introduction in *Theories of international relations*. Bloomsbury Publishing, 2013.
- Sørensen, G., Møller, J., & Jackson, R. H. (2016). Chapters 3 in *Introduction to international relations: theories and approaches (6th edn)*. Oxford university press.

Sep 15

- Sørensen, G., Møller, J., & Jackson, R. H. (2016). Chapters 4 and 8 in *Introduction to international relations: theories and approaches (6th edn)*. Oxford university press.

Sep 18

- Group work

Recommended

Kay, Sean. Chapters 1, 2 and 3 in *Global Security in the Twenty-first Century*. Rowman and Littlefield Publishers, 2011.

Week06 (Sep 20,22,25): Overview of International Political Economy (IPE)

Sep 20

- Sørensen, G., Møller, J., & Jackson, R. H. (2016). Chapters 6 and 7 in *Introduction to international relations: theories and approaches (6th edn)*. Oxford university press.

Sep 22

- Bourbeau, P. (Ed.). Chapter 8 in *Security: Dialogue across disciplines*. Cambridge University Press. 2015.

Sep 25

- Group work

Recommended

Benkler, Y. *The Wealth of Networks: How Social Production Transforms Markets and Freedom*.

Yale University Press, 2007. ISBN: 9780300125771.

Week07 (Sep 27,29, Oct 2): New IR Theories?

Write-up 02: Due Oct 1, 11:59 p.m.

Sep 27

- Reardon, Robert, and Nazli Choucri. "The role of cyberspace in international relations: A view of the literature." (2012). (downloadable at <https://dspace.mit.edu/bitstream/handle/1721.1/141724/Reardon%2C%20Choucri%20%282012%29%20The%20role%20of%20cyberspace%20in%20international%20relations.pdf?sequence=1&isAllowed=y>)

Sep 29

- Bourbeau, P. (Ed.). Chapter 6 in *Security: Dialogue across disciplines*. Cambridge University Press. 2015.

Oct 2

- Group work

Recommended

Choucri, Nazli, and David D. Clark. "Who controls cyberspace?." *Bulletin of the Atomic Scientists* 69.5 (2013): 21-31.

Choucri, Nazli, and David D. Clark. *Cyberspace and International Relations: Toward an Integrated System*. Version 8-25 for *internal ECIR review*, August 2011.

McCarthy, D. R. (Ed.). (2017). *Technology and world politics: An introduction*. Routledge.

Week08 (Oct 4,6,16): Protocols and Net Neutrality

Oct 4

- Besen, Stanley M., and Joseph Farrell. "Choosing how to compete: Strategies and tactics in standardization." *Journal of economic perspectives* 8.2 (1994): 117-131.

Oct 6

- Turilli, Matteo, Antonino Vaccaro, and Mariarosaria Taddeo. "Internet neutrality: Ethical issues in the internet environment." *Philosophy & Technology* 25 (2012): 133-151.
- Oct 9-13: Midterm week

Oct 16

- Group work

Recommended

Clark, David D., John Wroclawski, et al. "Tussle in Cyberspace: Defining Tomorrow's Internet." *IEEE/ACM Transactions on Networking* 13, no. 3 (2005): 462–75.

DeNardis, L. (2009). Protocol politics: *The globalization of Internet governance*. MIT Press.

Week09 (Oct 9-13): Midterm week

Week10 (Oct 18,20,23,25): Cybercrime, Terrorism, and Cyberwarfare

Oct 18

- Goodman, Marc. Chapters 14 and 15 in *Future crimes: Everything is connected, everyone is vulnerable and what we can do about it*. Anchor, 2015.

Oct 20

- Singer, P. W. Friedman A.(2014), pp. 67-76, 96-102 in *Cybersecurity and Cyberwar: What Everyone Needs to Know*. Oxford Press

Oct 23

- Singer, P. W. Friedman A.(2014), pp. 120-121, 126-147 in *Cybersecurity and Cyberwar: What Everyone Needs to Know*. Oxford Press

Oct 25

- Group work
- Instructions on the final paper

Recommended

Cavelty, Myriam Dunn. "Cyber-terror—looming threat or phantom menace? The framing of the US cyber-threat debate." *Journal of Information Technology & Politics* 4.1 (2008): 19-36.

Devost, Matthew G., Brian K. Houghton, and Neal Allen Pollard. "Information terrorism: Political violence in the information age." *Terrorism and Political Violence* 9.1 (1997): 72-83.

Finklea& Theohary, Cybercrime: Conceptual Issues for Congress and U.S. Law Enforcement, Congressional Research Service, Jan 2015. (downloadable at <https://sgp.fas.org/crs/misc/R42547.pdf>)

Singer, P. W. Friedman A. Other parts in *Cybersecurity and Cyberwar: What Everyone Needs to Know*. Oxford Press. 2014

Mehan, J. (2014). *Cyber War, Cyber Terror, Cyber Crime and Cyber Activism: An in-depth guide to the role of standards in the cybersecurity environment*. IT Governance Publishing.

Week11 (Nov 3,6,8): Cyber Global Governance

Write-up 03: Due Nov 7, 11:59 p.m.

Nov 3

- Hess, Charlotte, and Elinor Ostrom, eds. Chapters 1 and 3 in *Understanding Knowledge as a Commons: From Theory to Practice*. MIT Press, 2006. ISBN: 9780262083577.

Nov 6

- Deibert, Ronald J., and Masashi Crete-Nishihata. "Global governance and the spread of cyberspace controls." *Global Governance* 18 (2012): 339.

Nov 8

- Group work

Recommended

Jayawardane, Sash, J. E. Larik, and Erin Jackson. *Cyber governance: Challenges, solutions, and lessons for effective global governance*. (2015).

Kruger, Internet Governance and the Domain Name System: Issues for Congress, *Congressional Research Service*, Nov 2016. (downloadable at <https://sgp.fas.org/crs/misc/R42351.pdf>)

Malcolm, J. M. (2008). *Multi-stakeholder public policy governance and its application to the Internet Governance Forum* (Doctoral dissertation, Murdoch University).

Week12 (Nov 10,13,15): Regional Cooperation

Nov 10

- Tikk, E., & Kerttunen, M. (Eds.). Chapter 16 in *Routledge handbook of international cybersecurity*. Routledge. 2020.

Nov 13

- Romaniuk, Scott N., Alexander Fotescu, and Mihai Chihaiia. "NATO's Evolving Cyber Security Policy and Strategy." *Routledge Companion to Global Cyber-Security Strategy*. Routledge, 2021. 226-248.

Nov 15

- Group work

Recommended

Tikk, E., & Kerttunen, M. (Eds.). Other parts in *Routledge handbook of international cybersecurity*. Routledge. 2020.

Romaniuk, S. N., & Manjikian, M. (Eds.). *Routledge companion to global cyber-security*

strategy. Routledge. 2021.

Heinl, Caitríona H. "Regional cybersecurity: moving toward a resilient ASEAN cybersecurity regime." *Asia policy* 18 (2014): 131-160.

Week13 (Nov 17,20,27): Trade and Cybersecurity

Write-up 04: Due Nov 26, 11:59 p.m.

Nov 17

- Huang, K., Madnick, S., Choucri, N., & Zhang, F. (2021). A systematic framework to understand transnational governance for cybersecurity risks from digital trade. *Global Policy*, 12(5), 625-638.

Nov 20

- Selby, J. (2017). Data localization laws: trade barriers or legitimate responses to cybersecurity risks, or both?. *International Journal of Law and Information Technology*, 25(3), 213-232.

Nov 27

- Group work

Recommended

Kay, Sean. Chapter 6 in *Global Security in the Twenty-first Century*. Rowman and Littlefield Publishers, 2011.

Tikk, E., & Kerttunen, M. (Eds.). Chapter 29 in *Routledge handbook of international cybersecurity*. Routledge. 2020.

Week14 (Nov 29, Dec 1,4): Privacy and Data

Nov 29

- Burgess, J. P. (Ed.). Chapter 19 in *Routledge Handbook of new security studies*. Routledge. 2010.
- Zureik, E., Stalker, L. H., & Smith, E. pp. 87-90, 147-149, 189-192 in *Surveillance, Privacy, and the Globalization of Personal Information: International Comparisons*. McGill-Queen's Press-MQUP. 2010.

Dec 1

- Landwehr, C., Boneh, D., Mitchell, J. C., Bellovin, S. M., Landau, S., & Lesk, M. E. (2012). Privacy and cybersecurity: The next 100 years. *Proceedings of the IEEE, 100(Special Centennial Issue)*, 1659-1673.

Dec 4

- Group work

Recommended

Houser, K. A., & Voss, W. G. (2018). GDPR: The end of Google and Facebook or a new paradigm in data privacy. *Rich. JL & Tech.*, 25, 1.

Gilman, M. E. (2020). Five privacy principles (from the GDPR) the United States should adopt to advance economic justice. *Ariz. St. LJ*, 52, 368.

Iyer, S. (2011). Cyber security for smart grid, cryptography, and privacy. *International Journal of Digital Multimedia Broadcasting*, 2011.

Maleh, Y., Shojafar, M., Alazab, M., & Romdhani, I. (Eds.). (2020). *Blockchain for cybersecurity and privacy: architectures, challenges, and applications*.

Rustad, M. L., & Koenig, T. H. (2019). Towards a global data privacy standard. *Fla. L. Rev.*, 71, 365. Dec 1

Week15 (Dec 8): Final week

Final Short Paper: Due Dec 7, 11:59 p.m.