[USC Data Science](#) 529 (DSci 529): Security and Privacy in Informatics - Spring 2025

Lecture Friday - Noon to 3:20PM PM, OHE 136 and Online
[Clifford Neuman](#)

Announcements

Please see the Assignments Section and the readings Section of this page for important updates.

Schedule

- Friday January 17, 2025 - First Lecture - Introduction - Overview - What is Privacy and Security?
- Friday January 24, 2025 - Second Lecture - What data is collected and how is it used?
- Friday January 31, 2025 - Third Lecture - Technical Means of Protection - Encryption - Security Primer part 1
- Friday February 7, 2025 - Fourth Lecture - Identifications, Authentication, Audit - Security Primer part 2
- Friday February 14, 2025 - Fifth Lecture - Reasonable Expectations of Privacy - What do we expect
- Friday February 21, 2025 - Sixth Lecture - Use of and Access to Data by Governments - Privacy in a Pandemic
- Friday February 28, 2025 - Seventh Lecture - AI and Bias - Big Data - Measuring Privacy - Technology and Prvacy
- Friday **March 7, 2025 - Eighth Lecture - Mid-term Exam Noon-1:40PM**, Followed by Eighth Lecture 2PM-3:20PM
- Friday March 14, 2025 - Ninth Lecture - Social Media - Social Networks - Security and Privacy - How our data is used
- Friday March 28, 2025 - Tenth Lecture - Free Speech - Disinformation - Influence of Social Media - Regulation of Content
- Friday April 4, 2025 - Eleventh Lecture - Privacy Regulation - GDPR, CCPA, CPRA, international context
- Friday April 11, 2025 Twelfth Lecture - The Internet of Things and Security and Privacy
- Friday April 18, 2025 - Thirteenth Lecture - CryptoCurrency - TOR - Privacy Preserving Technologies
- Friday April 25, 2025 - Mass Surveilance, China's Social Credit Score
- Friday May 2, 2025 - Final Lecture - Conclusion - Review for Final Exam - The Future of Privacy and Security
- **Final Exam - Friday May 9th, 2024 - 11AM to 1PM**

Course Materials (additional materials will be added during the seemster)

- For January 14th
  - [If youre not paranoid your crazy,](#) Walter Kern, The Atlantic, November 2015.
  - [Google collects a frightening amount of data about you. You can find and delete it now](#)
  - [Think Target and Home Depot invade your privacy? Political campaigns might be worse](#), Evan Halper, LA Times, January 27 2016.

Course Summary

Some have said privacy is dead, but is it? Students of informatics will approach the problem of security from different perspectives. Different parts of the curriculum will be already familiar to students depending on their perspective: the goals of the class are to let students see how their focus fits into the bigger picture, while simultaneously exposing them to important perspectives that might be absent from their other studies.

Students will develop the following abilities

- For security practitioners
  - Understand public policy and legal landscape
  - Understand their behind privacy
- For data scientists and informaticists
  - Understand implications of your craft for privacy
  - Understand public policy and legal landscape
- For policy wonks
  - Understand the technical landscape
  - What is possible, what is not
    - Both in terms of protecting and destroying privacy
- From the legal perspective
  - What is technically possible

The intended outcome for students with different backgrounds is:

- Data Informatic students will understand the kinds of data collection and mining that contribute to the loss of privacy, and will consider the ethical and legal implications of the data collection in the systems they implement. They will also be introduced to security measures they should take to protect the personally identificable information they collect.
- Security Informatics students will understand the environemtn within which personally identifiable iformation is collected, the the impact of the processing and inference that occurs. They will also learn some of the theiry surrounding mesurement of privacy and inference and the ethical and legal implications of privacy invading and privacy perserving technologies.
- Student coming from a legal or public policy perspective will gain an appreciation for the technical capabilities to preserve and violate privacy, and will understand what the technical limits and best practices are that can and cannot be practically legislated.

Instructors and Assistants

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Academic Integrity

As an instructor I take academic integrity seriously. Cases of academic misconduct will result in the assignment of a failing grade for the class and referal of the matter to the student conduct office. In each of the past several years I have turned in multiple students for cheating and assigned failing grades. Information on what constitutes academic dishonesty can be found on the CSci530 academic integrity page, and by following links to university resources found on that page.

Assignments

- Quarter-Weekly assignment - See discussion in lecture 1 regarding requirement to submit and discuss current events. Due Weekly, but students must submit one event every four weeks.
- Assignment 1 Posted in D2L Discussion forum (Due before 2nd lecture)

Lecture Slides

- [Lecture 1](#) - 17 January 2025 ([ppt](#))
- [Lecture 2](#) - 24 January 2025 ([ppt](#))
- [Lecture 3](#) - 31 January 2025 ([ppt](#))
- [Lecture 4](#) - 7 February 2025 ([ppt](#))
- [Lecture 5](#) - 14 February 2025 ([ppt](#))
- [Lecture 6](#) - 21 February 2025 ([ppt](#))
- [Lecture 7](#) - 28 February 2025 ([ppt](#))
- [Lecture 8](#) - 7 March 2025 ([ppt](#))
- [Lecture 9](#) - 14 March 2025 ([ppt](#))

Exams from Prior Years

- [Spring 2016 Mid-term](#)
- [Spring 2017 Mid-term](#)
- [Spring 2018 Mid-term](#)
- [Spring 2019 Mid-term](#)
- [Spring 2020 Mid-term](#)
- [Spring 2021 Mid-term](#)
- [Spring 2022 Mid-term](#)
- [Spring 2023 Mid-term](#)
- [Spring 2024 Mid-term](#)
- [Spring 2016 Final](#)
- [Spring 2017 Final](#)
- [Spring 2018 Final](#)
- [Spring 2019 Final](#)
- [Spring 2020 Final](#)
- [Spring 2021 Final](#)
- [Spring 2022 Final](#)
- [Spring 2023 Final](#)
- [Spring 2024 Final](#)