

Course Materials

[CS495 / CS587](#): Introduction to Cryptography (Spring 2020)

[CS330](#): Formal Methods and Models (Spring 2019)

[CS600](#): Theory of Computation (Spring 2018)

[CS795](#): Topics in Privacy, Anonymity and Fairness (Fall, 2018)

[ISA562](#): Information Security, Theory and Practice (Fall, 2017)

Highlights

CS 330: I have created about 16 short videos of myself walking through proofs and homework problems for this course. An example can be seen [here](#). (This and the other videos are all available at the course website.) These videos are not meant to replace my lecture, but to supplement it, allowing the students to go at their own pace on certain key ideas. I intend to increase the number of videos over time.

CS 600: There are not many CS departments that have a required theory course for PhD students. It is challenging to pin down the right curriculum, as undergraduate texts on the subject can be too basic, and graduate texts tend to be aimed at students that wish to do research in computer theory. I have designed my own curriculum, adapting other instructor's lecture notes, as well as writing my own. An example can be seen [here](#). In a [previous offering](#) of the course I covered more subjects, such as interactive proofs and zero knowledge, which students really enjoyed.

CS 499 / 587: I taught undergraduate cryptography for the first time in Spring, 2020. In that semester, I began creating videos similar to those that I created in CS 330: short clips of proofs, such as [this one](#). I am currently teaching this course a second time, and, due to Covid-19, the course is being offered virtually. I am creating much longer videos that can take the place of in-person lectures, such as the one [here](#).

ISA 562: I redesigned this course to make it more consistent with introductory courses in computer security. Because many ISA students do not have strong backgrounds in computer science, I created lectures on these subjects that are consistent with their background. An example of such a lecture can be seen [here](#) (starting on slide 56).

CS 795: I designed a topics course on privacy, anonymity and fairness. These three areas are outside my core area of research (to varying degrees), so this course allowed me to learn alongside the students. This was a very successful course, and the selection of topics has helped inform the research of several of the PhD students in the class.