



COS 116: The Computational Universe

Adam Finkelstein

Spring 2012



COS 116: The Computational Universe

- Instructor: Adam Finkelstein
- TAs: Sema Berkiten & Sourindra Chaudhuri
- Labs
 - Mon, Wed 7:30-10:20pm, Friend 009
 - This week only: take-home lab



Computer Science 116 The Computational Universe

Princeton University
Computer Science
Department

Spring 2012

[General](#)

[Policies](#)

[Syllabus](#)

[Readings](#)

[Handouts](#)

[Assignments](#)

[Labs](#)

[Extras](#)

Course Summary

Computers have brought the world to our fingertips. We will try to understand at a basic level the science – old and new – underlying this new Computational Universe. Our quest takes us on a broad sweep of scientific knowledge and related technologies: propositional logic of the ancient Greeks (microprocessors); quantum mechanics (silicon chips); network and system phenomena (internet and search engines); computational intractability (secure encryption); and efficient algorithms (genomic sequencing). Ultimately, this study makes us look anew at ourselves – our genome; language; music; "knowledge"; and, above all, the mystery of our intelligence. This course satisfies Princeton's Science and Technology (with Lab) distribution requirement.

Administrative Information