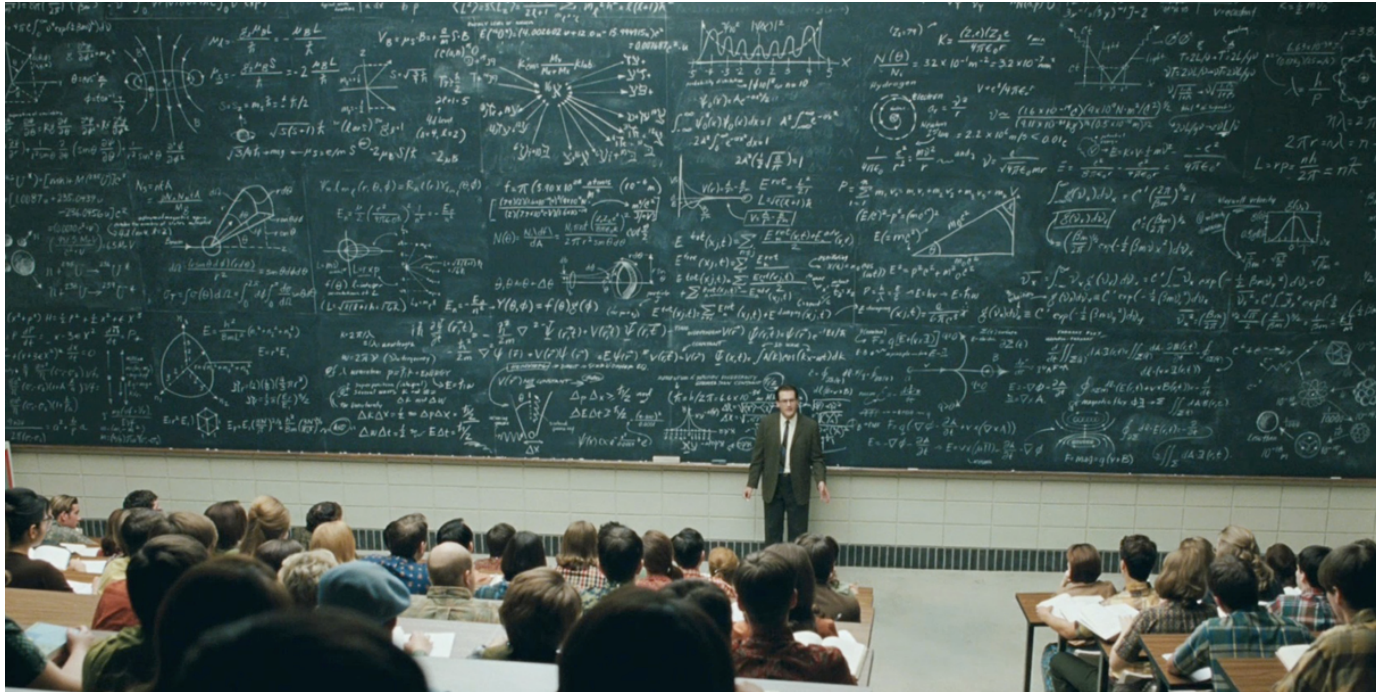


## 20th Century



## 21st Century





## Components of COS 126 (ISC 233)

- Course website
- Textbook
- Booksite
- Lectures
- Class meetings
- Assignments

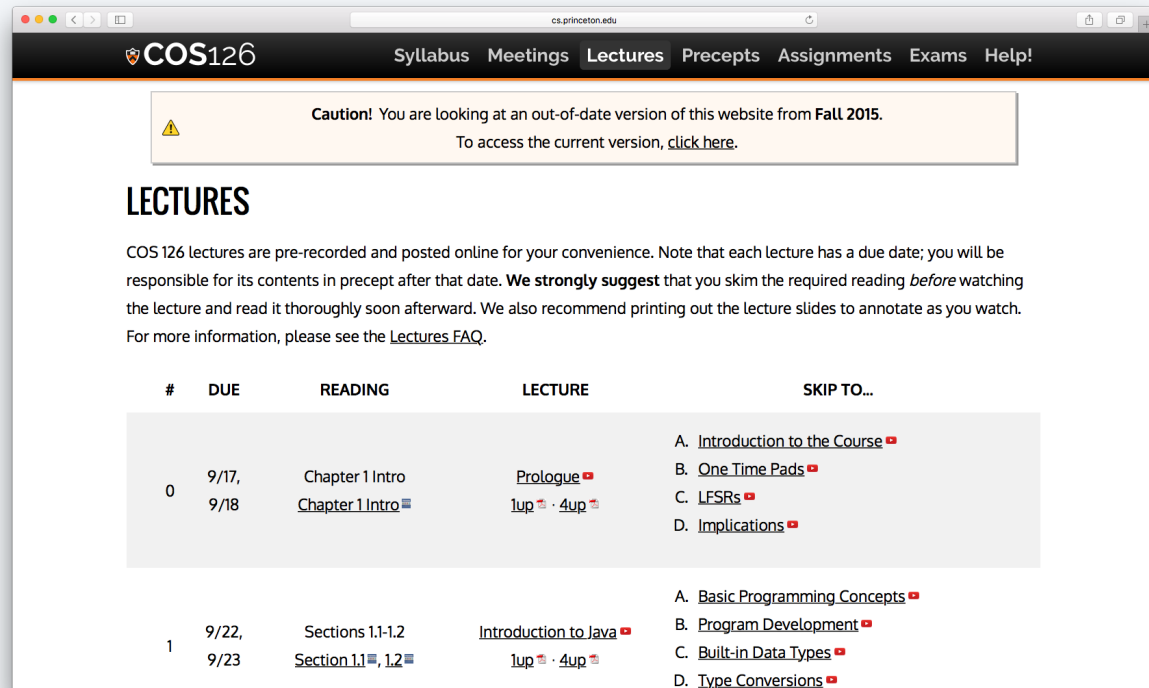
# Course website

<http://www.cs.princeton.edu/courses/archive/fall15/cos126/syllabus.html>

← bookmark this page!

## COS 126 website.

- People.
- Syllabus.
- Lectures.
- Assignments.
- Exams.



The screenshot shows the COS126 website interface. At the top, there is a navigation menu with links for Syllabus, Meetings, Lectures (which is highlighted), Precepts, Assignments, Exams, and Help!. Below the menu is a yellow warning box with a triangle icon that reads: "Caution! You are looking at an out-of-date version of this website from Fall 2015. To access the current version, click here." The main content area is titled "LECTURES" and contains a paragraph explaining that lectures are pre-recorded and have due dates. It also includes a link to the "Lectures FAQ". Below this is a table with columns for #, DUE, READING, LECTURE, and SKIP TO... The table lists two lecture entries, each with a list of sub-topics to skip to.

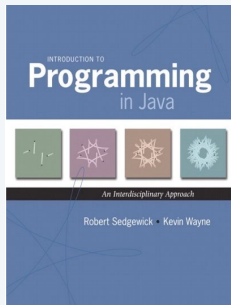
#	DUE	READING	LECTURE	SKIP TO...
0	9/17,	Chapter 1 Intro	Prologue	A. Introduction to the Course
	9/18	<a href="#">Chapter 1 Intro</a>	<a href="#">1up</a> · <a href="#">4up</a>	B. One Time Pads C. LFSRs D. Implications
1	9/22,	Sections 1.1-1.2	<a href="#">Introduction to Java</a>	A. Basic Programming Concepts
	9/23	<a href="#">Section 1.1</a> , <a href="#">1.2</a>	<a href="#">1up</a> · <a href="#">4up</a>	B. Program Development C. Built-in Data Types D. Type Conversions

<http://www.cs.princeton.edu/courses/archive/spring16/cos233/>

← relevant links also available here

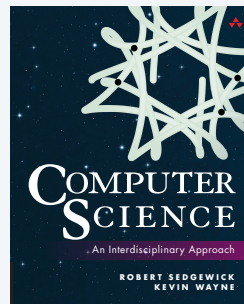
# Textbook

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## Textbook.

- Full coverage of course material.
- Developed for this course.
- Use while learning and studying.



## Coming in 2016.

- New edition of Chapters 1-4.
- New chapters 5, 6, 7.
- Available to you in March.

# Booksite

## Booksite.

- Summary of content.
- Code, exercises, examples.
- Supplementary material.
- NOT the textbook.
- (also not the course web page).
- Use while online.

Introduction to Programming in Java: An Interdisciplinary Approach

intros.cs.princeton.edu/java/home/

home ▾ Princeton ▾ reference ▾ rsrch ▾ save ▾ shop ▾ travel ▾ teach ▾ Coursera ▾ Yahoo! ▾ YouTube ▾ Wikipedia ▾ Mathematica ▾

INTRODUCTION TO PROGRAMMING IN JAVA

*a textbook for a first course in computer science  
for the next generation  
of scientists and engineers*

**Textbook.** Our textbook *Introduction to Programming in Java* [Amazon · Addison-Wesley] is an interdisciplinary approach to the traditional CS1 curriculum. We teach all of the classic elements of programming, using an "objects-in-the-middle" approach that emphasizes data abstraction. A key feature of the book is the manner in which we motivate each programming concept by examining its impact on specific applications, taken from fields ranging from materials science to genomics to astrophysics to internet commerce. The book is organized around four stages of learning to program:

- **Chapter 1: Elements of Programming** introduces variables; assignment statements; built-in types of data; conditionals and loops; arrays; and input/output, including graphics and sound.
- **Chapter 2: Functions** introduces modular programming. We stress the fundamental idea of dividing a program into components that can be independently debugged, maintained, and reused.
- **Chapter 3: Object-Oriented Programming** introduces data abstraction. We emphasize the concept of a data type and its implementation using Java's class mechanism.
- **Chapter 4: Algorithms and Data Structures** introduces classical algorithms for sorting and searching, and fundamental data structures, including stacks, queues, and symbol tables.

**Booksite.** Reading a book and surfing the web are two different activities: This booksite is intended for your use while online (for example, while programming and while browsing the web); the textbook is for your use when initially learning new material and when reinforcing your understanding of that material (for example, when reviewing for an exam). The booksite consists of the following elements:

- **Excerpts.** A condensed version of the text narrative for reference while online.
- **Exercises.** Hundreds of exercises and some solutions.
- **Java code.** Hundreds of easily downloadable [Java programs](#) and [real-world data sets](#).

<http://intros.cs.princeton.edu>

← bookmark this page, too!

## Lectures

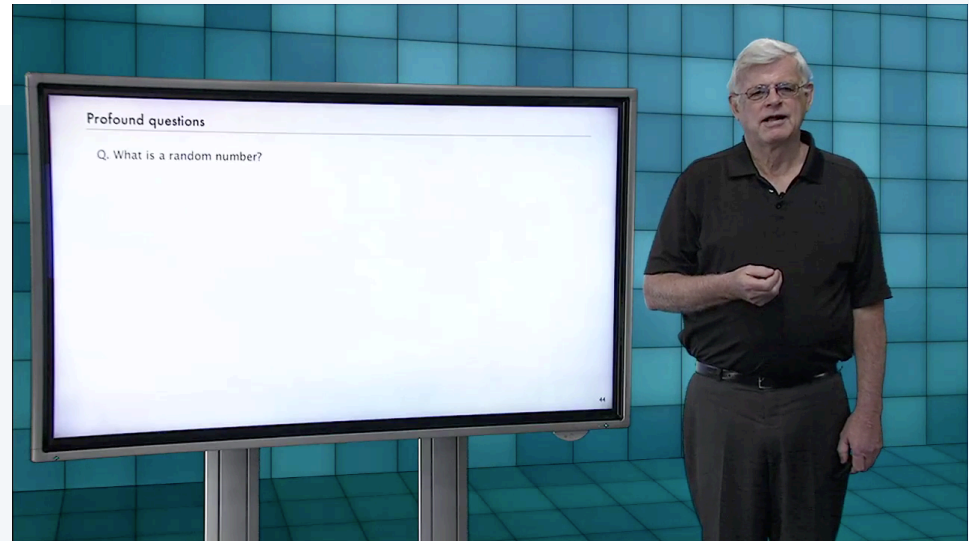
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### Online lecture materials on course website

- Copies of slides (.pdf and 4-up).
- Studio-produced videos.
- **No more live lectures.**
- Class meetings every day as usual.

### Approaches to reviewing a lecture

- Watch before class meeting.
- Review before exams.
- Watch with a friend or a group.
- Bored? Try 1.5x or 2x.
- **You tell us.**



## Class meetings (ISC 233)

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### Preparation for class meetings

- Watch assigned lecture(s).
- Create an exam question/solution.
- Check old exams for examples.
- Working in groups preferred.
- e-mail to [rs@cs.princeton.edu](mailto:rs@cs.princeton.edu) before 6AM.

Monday 29 Feb	Rules of the Game
Tuesday 1 Mar	Searching and Sorting
	Stacks and Queues
Wednesday 2 Mar	Symbol Tables
Thursday 3 Mar	Clustering I (Arjun)
Friday 4 Mar	Clustering II (Arjun)
Monday 28 Mar	Theory of Computing
	Turing Machines
Tuesday 29 Mar	Intractability
Wednesday 30 Mar	A Computing Machine
	von Neumann Machines
Thursday 31 Mar	Circuits
Friday 1 Apr	CPU
Monday 4 Apr	Review
Thursday 7 Apr	EXAM

## Assignments (ISC 233)

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<http://www.cs.princeton.edu/courses/archive/spring16/cos233/>

### Stay tuned for details from preceptors

- Borislav Hristov (borislav@cs.princeton.edu).
- Daniel Munro (dmunro@princeton.edu).

### General rules

- Follow links from COS233 web page (above)
- All assignments are (optional) pair programming.
- Dropbox submission via web link.

This week	Languages Warmup
Tuesday 8 Mar	Guitar Hero
Tuesday 22 Mar	<i>k</i> -means
Tuesday 29 Mar	TSP
Tuesday 5 Apr	Markov
Thursday 7 Apr	EXAM

Do “Languages Warmup” before precept THIS WEEK (do not submit).



# Questions and Answers

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**Q** & **A**