Introduction To Computer Science And Programming In Python

Menu

Readings

Textbook

The textbook is **Buy at MIT Press** Guttag, John. *Introduction to Computation and Programming Using Python: With Application to Understanding Data Second Edition*. MIT Press, 2016. ISBN: 9780262529624. The book and the course lectures parallel each other, though there is more detail in the book about some topics. It is available both in hard copy and as an e-book.

SES #	TOPICS	READINGS
1	What is computation?	Chapters 1 and 2.1
2	Branching and Iteration	Chapters 2.2, 2.3.1, 2.4, and 3.2
3	String Manipulation, Guess and Check, Approximations, Bisection	Chapters 3.1 and 3.3–3.5
4	Decomposition, Abstractions, Functions	Chapters 4.1–4.2 and 4.4–4.6
5	Tuples, Lists, Aliasing, Mutability, Cloning	Chapters 5.1–5.3.1 and 5.4–5.5
6	Recursion, Dictionaries	Chapters 4.3 and 5.6
7	Testing, Debugging, Exceptions, Assertions	Chapters 6 and 7
8	Object Oriented Programming	Chapter 8.1
9	Python Classes and Inheritance	Chapter 8.2
10	Understanding Program Efficiency, Part 1	Chapters 9.1–9.3.1, 9.3.3, and 9.3.5
11	Understanding Program Efficiency, Part 1 (Cont.)	Chapters 9.3.2, 9.3.4, 9.3.6, and 9.3.7
12	Searching and Sorting algorithms	Chapters 10.1–10.2

MIT Open Learning

Over 2,500 courses & materials
Freely sharing knowledge with learners and educators around the world. Learn more

Accessibility

Creative Commons License

Terms and Conditions

Proud member of: Open Education GLOBAL

Feedback