# Fundamentals of Python: First Programs, 2nd Edition
# Term, Year

## General Course Information

**Instructor:**
**Office:**
**Office Hours:**
**Phone:**
**E-mail:**
**Web site:**
**Classroom:**
**Class Times:**

**Prerequisites:**

**Textbook:** *Fundamentals of Python: First Programs, 2nd Edition*
Author: Kenneth Lambert
Publisher: Cengage Learning, 2018
ISBN-13: 978-1-337-56009-2

## Course Objectives

This course introduces core programming basics—including data types, control structures, algorithm development, and program design with functions—via the Python programming language. The course discusses the fundamental principles of Object-Oriented Programming, as well as in-depth data and information processing techniques. Students will problem solve, explore real-world software development challenges, and create practical and contemporary applications using graphical user interfaces, graphics, and network communications.

Specific topic coverage includes:

- Introduction
- Software Development, Data Types, and Expressions
- Loops and Selection Statements
- Strings and Text Files
- Lists and Dictionaries
- Design with Functions
- Simple Graphics and Image Processing
- Graphical User Interfaces
- Design with Classes
- Multithreading, Networks, and Client/Server Programming
- Searching, Sorting, and Complexity Analysis

## Web Site

Supplementary information for the course is available at [URL]. The Web site contains class announcements and notes, test dates, PowerPoint slides, the course syllabus, and additional information.

## E-Mail

If you have any questions about the course or need assistance, please contact me in person or by telephone during office hours or by e-mail at any time.

All class assignments should be submitted in class on the due date or by e-mail with a date stamp at or before 5:00 PM on the due date.

## Grading and Evaluation Criteria

40% of the grade is based on a midterm and a final examination. Both examinations are cumulative and given in a varied format. An in-class review will be held prior to each examination.

20% of the grade is based on quizzes. Quizzes are announced one day in advance and may vary from three to five questions that may be in any format.

40% of the grade is based on keeping a project notebook. Students are asked to obtain a small notebook to enter their answers and comments to the various homework exercises in the text.

# 14-Week Course Outline

| Week | Topics | Chapter Readings | Exams |
|---|---|---|---|
| **1** | Introduction | Chapter 1 | |
| **2** | Software Development, Data Types, and Expressions | Chapter 2 | |
| **3** | Software Development, Data Types, and Expressions continued | Chapter 2 | |
| **4** | Loops and Selection Statements | Chapter 3 | |
| **5** | Loops and Selection Statements continued | Chapter 3 | |
| **6** | Strings and Text Files | Chapter 4 | |
| **7** | Lists and Dictionaries | Chapter 5 | Midterm Exam |
| **8** | Design with Functions | Chapter 6 | |
| **9** | Design with Functions continued | Chapter 6 | |
| **10** | Simple Graphics and Image Processing | Chapter 7 | |
| **11** | Graphical User Interfaces | Chapter 8 | |
| **12** | Design with Classes | Chapter 9 | |
| **13** | Multithreading, Networks, and Client/Server Programming | Chapter 10 | |
| **14** | Searching, Sorting, and Complexity Analysis | Chapter 11 | Final Exam |

# 10-Week Course Outline

| Week | Topics | Chapter Readings | Exams |
|---|---|---|---|
| **1** | Introduction | Chapter 1 | |
| **2** | Software Development, Data Types, and Expressions | Chapter 2 | |
| **3** | Control Statements | Chapter 3 | |
| **4** | Strings and Text Files | Chapter 4 | |
| **5** | Lists and Dictionaries | Chapter 5 | Midterm Exam |
| **6** | Design with Functions | Chapter 6 | |
| **7** | Simple Graphics and Image Processing | Chapter 7 | |
| **8** | Graphical User Interfaces | Chapter 8 | |
| **9** | Design with Classes | Chapter 9 | |
| **10** | Multithreading, Networks, and Client/Server Programming<br>Searching, Sorting, and Complexity Analysis | Chapter 10<br>Chapter 11 | Final Exam |