**Module 1**

Topics: introduction to computing and problem solving, Python programming environment, Python IDEs, iPython Notebook environment, modules, input/output, running Python, core data types, simple expressions

Reading: Chapters 1, 2

**Module 2**

Topics: variables, immutability, expressions, operators and Boolean expressions, operator precedence

Reading: Chapters 2, 3

**Module 3**

Topics: mathematical functions, strings and text manipulation, selections, control flow (if, break, continue, for, while) and iterations, files and file manipulation

Reading: Chapters 4, 5, 8, 13

**Module 4**

Topics: collections, set membership and comprehension, lists, tuples, sets, dictionaries, searching and sorting

Reading: Chapters 10, 11, 14

**Module 5**

Topics: advanced data structures, functions, exception handling, parameter passing, recursive functions

Reading: Chapters 6, 15

**Module 6**

Topics: objects and classes, attributes, methods, data encapsulation, abstract classes, inheritance and polymorphism

Reading: Chapters 7, 12

**Module 7**

Project presentations and review. Everybody has to present the course Project in the class.