**Syllabus for COS-205**

PYTHON PROGRAMMING

# COURSE DESCRIPTION

**Python Programming** enables students to implement fundamental principles of modern programming using the Python programming language and problem-solving techniques related to computing.

# COURSE TOPICS

* Writing simple programs in Python
* Computing with numbers
* Objects and graphics
* Sequences of strings, lists, and files
* Defining and using functions
* Decision structures
* Loop structures and Booleans

# COURSE OBJECTIVES

After completing this course, you should be able to:

**CO1** Write Python programs that perform programmatic numerical computations.

**CO2** Explain the concept of objects and use objects in the graphics library.

**CO3** Process strings, lists, and files.

**CO4** Use functions.

**CO5** Use decision structures.

**CO6** Handle program exceptions.

**CO7** Use programming loops.

**CO8** Apply Boolean algebra, expressions, and data types.

# COURSE MATERIALS

You will need the following materials to complete your coursework. Some course materials may be free, open source, or available from other providers. You can access free or open-source materials by clicking the links provided below or in the module details documents. To purchase course materials, please visit the [University's textbook supplier](https://sites.google.com/tesu.edu/generalinformation/resources/educational-resources-landing-page/course-materials).

### Required Textbook

* Zelle, J. (2016). *Python programming: An introduction to computer science* (3rd ed.). Portland, OR: Franklin, Beedle & Associates Inc.

**ISBN-13: 978-1590282755**

# COURSE STRUCTURE

**Python Programming** (COS-205) is a three-credit online course, consisting of **seven** modules, a midterm examination, and a final project. Modules include an overview, topics, learning objectives, study materials, and activities. Module titles are listed below.

* **Module 1—Writing Simple Programs**Course objectives covered in this module: 1
* **Module 2—Computing with Numbers**Course objectives covered in this module: 1
* **Module 3—Objects and Graphics**Course objectives covered in this module: 2
* **Module 4—Sequences of Strings, Lists, and Files**Course objectives covered in this module: 3
* **Module 5—Defining and Using Functions**Course objectives covered in this module: 4
* **Module 6—Decision Structures**Course objectives covered in this module: 5, 6
* **Module 7—Loop Structures and Booleans**Course objectives covered in this module: 7, 8

# ASSESSMENT METHODS

For your formal work in the course, you are required to participate in online discussion forums, complete programming assignments, take a midterm examination, and complete a final project. See below for details.

Consult the Course Calendar for due dates.

### Promoting Originality

One or more of your course activities may utilize a tool designed to promote original work and evaluate your submissions for plagiarism. More information about this tool is available in [About SafeAssign](https://docs.google.com/document/d/1zUhfbPL0y-LHEKHbYy1BKNyw7iHVxS7UImd8gzCrxks/edit?usp=sharing).

## Icon imageDiscussion Forums

You are required to participate in **five** graded discussion forums. Discussion forums are on a variety of topics associated with the course modules. There is also an ungraded but required Introductions Forum in Module 1.

## Icon imageProgramming Assignments

You are required to complete **seven** programming assignments.

## Icon imageMidterm Examination

You are required to take a closed-book, proctored online midterm examination.

The midterm exam is 2 hours long and consists of multiple-choice, code-prediction, and short, code-writing questions. The exam covers materials assigned in Modules 1 through 4 of the course.

For the midterm, you are required to use the University's [Online Proctor Service](https://www.tesu.edu/academics/online-testing) (OPS). Please refer to the "[Examinations and Proctors](https://docs.google.com/document/d/1LBjltzWdpEzJedGlt3dLcy1R5Mc3VWU8ttUx-GoS-Ek/edit?usp=sharing)" section of the Online Student Handbook (see General Information area of the course website) for further information about scheduling and taking online exams and for all exam policies and procedures. You are strongly advised to schedule your exam within the first week of the semester.

Online exams are administered through the course website. Consult the Course Calendar for the official dates of exam weeks.

## Icon imageFinal Project

The final project, which you will complete in Week 12, consists of the development of a series of Python programs.

# GRADING AND EVALUATION

Your grade in the course will be determined as follows:

* **Discussion Forums (5)**—10 percent
* **Programming Assignments (7)**—35 percent
* **Midterm Examination**—25 percent
* **Final Project**—30 percent

All activities will receive a numerical grade of 0–100. You will receive a score of 0 for any work not submitted. Your final grade in the course will be a letter grade. Letter grade equivalents for numerical grades are as follows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | A | = | 93–100 | C+ | = | 78–79 |
|  | A– | = | 90–92 | C | = | 73–77 |
|  | B+ | = | 88–89 | C– | = | 70–72 |
|  | B | = | 83–87 | D | = | 60–69 |
|  | B– | = | 80–82 | F | = | Below 60 |

To receive credit for the course, you must earn a letter grade of C or better (for an area of study course) or D or better (for a course not in your area of study), based on the weighted average of all assigned course work (exams, assignments, discussion postings, etc.).

# STRATEGIES FOR SUCCESS

### First Steps to Success

To succeed in this course, take the following first steps:

* Read carefully the entire Syllabus, making sure that all aspects of the course are clear to you and that you have all the materials required for the course.
* Take time to read the entire Online Student Handbook. The Handbook answers many questions about how to proceed through the course and how to get the most from your educational experience at Thomas Edison State University.
* Familiarize yourself with the learning management systems environment—how to navigate it and what the various course areas contain. If you know what to expect as you navigate the course, you can better pace yourself and complete the work on time.
* If you are not familiar with Web-based learning be sure to review the processes for posting responses online and submitting assignments before class begins.

### Study Tips

Consider the following study tips for success:

* To stay on track throughout the course, begin each week by consulting the Course Calendar. The Course Calendar provides an overview of the course and indicates due dates for submitting assignments, posting discussions, and scheduling and taking examinations.
* Check Announcements regularly for new course information.

# ACADEMIC POLICIES

To ensure success in all your academic endeavors and coursework at Thomas Edison State University, familiarize yourself with all administrative and academic policies including those related to academic integrity, course late submissions, course extensions, and grading policies.

For more, see:

* [University-wide policies](https://www.tesu.edu/academics/catalog/college-wide-policies)
* [Undergraduate course policies and regulations](https://www.tesu.edu/academics/catalog/undergraduate-course-policies-and-regulations)
* [Graduate academic policies](https://www.tesu.edu/academics/catalog/graduate-academic-policies)
* [Nursing student policies](https://www.tesu.edu/academics/catalog/nursing-student-policies)
* [Academic code of conduct](https://www.tesu.edu/academics/catalog/academic-code-of-conduct)