

Syllabus for COS-1010

INTRODUCTION TO COMPUTERS

COURSE DESCRIPTION

This course provides students with a broad, general introduction to hardware and software fundamentals, data and relational databases, networking, the Internet, and security issues. Students also learn and practice basic programming concepts including variables, arithmetic operators, expressions and statements, strings, functions, conditionals, and iteration using the Python programming language.

COURSE TOPICS

- Computer hardware
- Computer software
- Data and databases
- Networking and communications
- Systems security
- Simple Python programs
- Functions and recursion
- Conditionals and iteration

COURSE OBJECTIVES

After completing this course, students should be able to:

- CO 1** Explain hardware and software fundamentals including a variety of digital devices, operating systems, and application software.
- CO 2** Distinguish between data, information, and knowledge.
- CO 3** Describe a relational database, data warehouse, and data mining.
- CO 4** Explain the networking technologies used for connecting networks.
- CO 5** Explain computer systems security related concepts and techniques.
- CO 6** Write simple Python programs using arithmetic operators, variables, expressions, and statements.

CO 7 Write Python programs that use functions, conditionals, recursion, and iteration.

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](#).

Required Textbook

- Bourgeois, D., Smith, J., Wang, S., & Mortati, J. (2019). [*Information systems for business and beyond*](#). Saylor Foundation. This book is licensed under [CC BY-NC-SA 4.0](#).
- Downey, A. (2015). [*Think Python: How to think like a computer scientist \(2nd ed.\)*](#). Green Tea Press. This book is licensed under [CC BY-NC 3.0](#).

COURSE STRUCTURE

Introduction To Computers is a three-credit online course consisting of **five** modules. Modules include an overview, topics, learning objectives, study materials, and activities. Module titles are listed below.

- **Module 1: Computer Hardware and Simple Python Programs**
Course objectives covered in this module: CO 1, CO 6
- **Module 2: Computer Software and Functions**
Course objectives covered in this module: CO 1, CO 7
- **Module 3: Databases, Conditionals, and Recursion**
Course objectives covered in this module: CO 2, CO 3, CO 7
- **Module 4: Networking, Communications, and Fruitful Functions**
Course objectives covered in this module: CO 4, CO 7
- **Module 5: Information Systems Security and Iteration**
Course objectives covered in this module: CO 5, CO 7

ASSESSMENT METHODS

For your formal work in the course, you are required to participate in online discussion forums, complete written assignments and programming assignments, and take proctored midterm and final examinations.

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 [this document](#).



Discussion Forums

You are required to complete **five** discussion forums. There is also one ungraded but required Introductions Forum in Module 1.

Discussion forums are on a variety of topics associated with the course modules. The purpose of the discussion forums is to help make the connection between the course concepts and the goals of the course. Online discussions involve two distinct activities: an initial response to discussion questions and at least two subsequent comments on classmates' responses.

In discussion posts, you express your opinions and thoughts, provide support and evidence for the position(s) you take on a subject, and have the opportunity to ask questions and expand on insights provided by your classmates. Active participation is vital to your overall success in this course.

Located within the Evaluation Rubrics section of the course website is the online discussion forum rubric used to aid in the grading of all online discussion assignments.



Written Assignments

You are required to complete **five** written assignments. The written assignments are on a variety of topics associated with the course modules.



Programming Assignments

You are required to complete **five** programming assignments using the Python programming language. Before you start your first programming assignment, you should follow the instructions given in the [Downey book](#) for how to create, edit, save, and run Python scripts in a browser or in an IDE you can install on your computer. Most programming assignments require you to write two Python scripts or programs so you should submit two script files.

Examinations

You are required to take **two** proctored online examinations: a midterm exam and a final exam. Both exams require that you use the University's [Online Proctor Service](#) (OPS). Please refer to the "Examinations and Proctors" section of the Online Student Handbook (see [Student Handbooks](#) in the 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 exams 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.

Exam Study Guides

For a list of key concepts that may appear on your exams, refer to the study guides available in the **Examinations** section of the course website.

Midterm Examination

The midterm exam is 2 hours long and covers Modules 1 through 3 of the course. It consists of 50 multiple-choice questions related to hardware, software, databases, and Python programming.

Final Examination

The final exam is 2 hours long and covers Modules 4 through 5 of the course. It consists of 50 multiple-choice questions related to networking, communications, information systems security, and Python programming.

Both exams are closed-book exams.

Statement About Cheating

You are on your honor not to cheat during the exam. Cheating means:

- Looking up any answer or part of an answer in an unauthorized textbook or on the Internet, or using any other source to find the answer.
- Copying and pasting or in any way copying responses or parts of responses from any other source into your online test. This includes but is not limited to copying and pasting from other documents or spreadsheets, whether written by yourself or anyone else.
- Plagiarizing answers.
- Asking anyone else to assist you by whatever means available while you take the exam.
- Copying any part of the exam to share with other students.
- Telling your mentor that you need another attempt at the exam because your connection to the Internet was interrupted when that is not true.

If there is evidence that you have cheated or plagiarized in your exam, the exam will be declared invalid, and you will fail the course.

GRADING AND EVALUATION

Your grade in the course will be determined as follows:

- **Online discussions (5)**—10%
- **Written assignments (5)**—25%
- **Programming assignments (5)**—25%
- **Midterm exam (proctored, Modules 1–3)**—20%
- **Final exam (proctored, Modules 4–5)**—20%

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 (e.g., exams, assignments, discussion postings).

STRATEGIES FOR SUCCESS

First Steps to Success

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

- Read the entire Syllabus carefully, 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, how to schedule exams, and how to get the most from your educational experience at Thomas Edison State University.
- Arrange to take your examination(s) by following the instructions in this Syllabus and the Online Student Handbook.
- 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.

Using AI Ethically: A Guide for TESU Students

TESU's [Academic Code of Conduct](#) permits student AI use in support of their writing and research process—not as a replacement for original writing. Document AI use with an acknowledgment statement at the end of each assignment, noting the tools and prompts used. Cite any AI-generated content on the References page. Please review [Using AI Ethically: A Guide for TESU Students](#) for more detailed information.

COMMITMENT TO DIVERSITY, EQUITY, AND INCLUSION

Thomas Edison State University recognizes, values, and relies upon the diversity of our community. We strive to provide equitable, inclusive learning experiences that embrace our students' backgrounds, identities, experiences, abilities, and expertise.

ACCESSIBILITY AND ACCOMMODATIONS

Thomas Edison State University adheres to the Americans with Disabilities Act (ADA, 1990; ADAAA, 2008) and Section 504 of the Rehabilitation Act of 1973. The Office of Student Accessibility Services (OSAS) oversees requests for academic accommodations related to disabilities; a student who is pregnant, postpartum, or a student parenting a newborn who is not the birth parent [as covered under NJSA18A]; and students requesting academic accommodation for a short-term/temporary illness and/or injury. Information can be found on the [Office of Student Accessibility Services](#) webpage and questions can be sent to ADA@tesu.edu.

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](#)
- [Undergraduate academic policies](#)
- [Undergraduate course policies](#)
- [Graduate academic policies](#)
- [Graduate course policies](#)
- [Nursing student policies](#)
- [Nursing graduate student policies](#)
- [International student policies](#)
- [Academic code of conduct](#)