

 <b>FLORIDA ATLANTIC UNIVERSITY</b>	<b>COURSE CHANGE REQUEST</b> <b>Undergraduate Programs</b>	UUPC Approval _____ UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department _____ College _____	
<b>Current Course Prefix and Number</b>		<b>Current Course Title</b>
<i>Syllabus must be attached for ANY changes to current course details. See <a href="#">Template</a>. Please consult and list departments that may be affected by the changes; attach documentation.</i>		
<b>Change title to:</b>  <b>Change prefix</b> From: _____ To: _____ <b>Change course number</b> From: _____ To: _____ <b>Change credits*</b> From: _____ To: _____ <b>Change grading</b> From: _____ To: _____ <b>Change WAC/Gordon Rule status**</b> Add _____ Remove _____ <b>Change General Education Requirements***</b> Add _____ Remove _____ <small>*See <a href="#">Definition of a Credit Hour</a>.</small> <small>**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See <a href="#">WAC Guidelines</a>.</small> <small>***GE criteria must be indicated in syllabus and approval attached to this form. See <a href="#">Intellectual Foundations Guidelines</a>.</small>		<b>Change description to:</b>     <b>Change prerequisites/minimum grades to:</b>     <b>Change corequisites to:</b>     <b>Change registration controls to:</b>  Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).
<b>Effective Term/Year for Changes:</b>		<b>Terminate course? Effective Term/Year for Termination:</b>
<b>Faculty Contact/Email/Phone</b>		
<b>Approved by</b> Department Chair <u>Hani Kava</u> College Curriculum Chair <u>Hongbo Su</u> College Dean <u>[Signature]</u> UUPC Chair _____ Undergraduate Studies Dean _____ UFS President _____ Provost _____		<b>Date</b> _____ 2/12/2024 _____ 2/13/2024 _____ 2/15/2024 _____ _____ _____

Email this form and syllabus to [mjenning@fau.edu](mailto:mjenning@fau.edu) seven business days before the UUPC meeting.

# FLORIDA ATLANTIC UNIVERSITY

COP 2220

Programming 1

3 Credit(s)

Fall 2024 - 1 Full Term

## 1 Instructor Information

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Office: 412

Office Hours: Tuesday 2pm – 4pm (by appointment)

Phone: 754 213 3829

TA Name: TBD

Office:

Office Hours:

Telephone:

Email:

## 2 Course Description

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Programming 1

This course teaches computational thinking and problem solving. Students learn the [Python](#) programming language, foundational programming concepts, abstraction, program design and software development tools. Students also learn the concepts by developing a series of small programs. A final project allows students to put together the programming concepts learned in the course.

There are no prerequisites for this course.

## 3 Instructional Method

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Fully Online Class

100% of the course is delivered online.

## 4 Required Texts/Materials

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Think Python

**ISBN:** 9781449332037

**Publisher:** OREILLY MEDIA INC.

**Edition:** 1<sup>st</sup>

## 5 Recommended Readings and Materials

## 6 Course Objectives/Student Learning Outcomes

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1. Apply computer science theory and software development fundamentals to produce computing-based solutions.
2. Apply top-down design techniques, and modular programming using functions, control structures such as if-else, switch, and loop statements.
3. Define and utilize arrays, and strings.
4. Apply input/output file processing.
5. Implement user-defined structure types.
6. Apply the basic concept of data structures and general programming techniques for larger programs.
7. Install, setup, and efficiently navigate the Python environment using the command line.
8. Understand and differentiate between various Python data structures such as lists, dictionaries, tuples, and sets, and demonstrate proficiency in data manipulation using these structures.
9. Employ Python's string operations and methods to effectively manage and format textual data.
10. Demonstrate understanding of Python's number types, variables, and fundamental I/O operations with basic files.
11. Interpret and construct conditional statements using Python's comparison operators and chaining techniques, combined with logical operators.
12. Construct, modify, and debug Python programs using conditional statements, loops, and list comprehensions.
13. Identify and utilize Python's built-in methods, create custom functions, and comprehend function concepts such as lambda expressions, tuple unpacking, and scope.
14. Design and implement basic Object-Oriented Programming (OOP) concepts including class creation, attribute management, and method definition.
15. Utilize external Python modules and packages and demonstrate understanding of Python's package management using Pip and PyPi.
16. Detect, handle, and troubleshoot errors and exceptions within Python code, and explore advanced concepts such as decorators, generators, and file management techniques for various file types including images and CSVs.

The Accreditation Board for Engineering and Technology (ABET) has specified outcomes expected of students. Listed below are the ABET outcomes and the alignment to the course-level objectives.

ABET Outcomes:

An ability to apply engineering/computer science theory and hardware/software development fundamentals to develop and conduct appropriate experimentation, analyze and interpret data, and use computing/engineering judgment produce engineering/computing-based solutions/conclusions

## 7 Faculty Rights and Responsibilities

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Florida Atlantic University respects the rights of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede their exercise. To ensure these rights, faculty members have the prerogative to:

- Establish and implement academic standards.
- Establish and enforce reasonable behavior standards in each class.
- Recommend disciplinary action for students whose behavior may be judged as disruptive under the Student Code of Conduct [University Regulation 4.007](#).

## 8 Disability Policy

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In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at [www.fau.edu/sas/](http://www.fau.edu/sas/).

## 9 Course Evaluation Method

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Homework ..... 40 % (One every week, include Quizzes)

Lab sessions participation ..... 5 % (2 hrs. sessions per week)

Class Attendance participation ..... 5 %

Exams (4 in total) ..... 50 %

Throughout the semester, multiple homework assignments will be posted via Canvas. For each assignment, you will have about 1 week to complete the assignment and submit your solution via Canvas. Every homework may have an online Quiz associated. Also, exams will be taken in the classroom time (details to be announced on Canvas).

Attendance of 2hrs Lab sessions will be required every week. (details to be announced on Canvas).

## 10 Code of Academic Integrity

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Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see [University Regulation 4.001](#).

Unless otherwise noted, all assignments, homework, projects, programs, quizzes, and exams in this course must be INDIVIDUAL effort. Late submissions will not be accepted or graded.

The best way to learn is to complete your own assignments. Sharing code and sharing solutions is considered cheating, this includes posting completed work before the assignment official deadline onto sites such as GitHub, emailing work to other students, allowing any access to your work before the official deadline has passed. Other offenses include submitting another person's work as your own, this includes taking code and solutions off sites such as GitHub, Chegg, etc.

Modifying code and submitting it as your own is a fraudulent practice—specifically, plagiarism—and is no different than copying paragraphs of information from a book or journal article and calling it your own (make sure that you work independently and submit only your own code)

Please take the time to read the documentation. You are responsible for the information outlined in it. Please see the instructor, any teaching assistant, or Engineering Student Services tutoring for assistance. Check the Help Section on Canvas.

## 11 Attendance Policy Statement

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Students are expected to attend all their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations, or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances, and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

## 12 Religious Accommodation Policy Statement

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In accordance with the rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs regarding admissions, registration, class attendance, and the scheduling of examinations and work assignments. University Regulation 2.007, Religious Observances, sets forth this policy for FAU and may be accessed on the FAU website at [www.fau.edu/regulations](http://www.fau.edu/regulations).

Any student who feels aggrieved regarding religious accommodations may present a grievance to the executive director of The Office of Civil Rights and Title IX. Any such grievances will follow Florida Atlantic University's established grievance procedure regarding alleged discrimination.

## 13 Time Commitment Per Credit Hour

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For traditionally delivered courses, not less than one (1) hour of classroom or direct faculty instruction each week for fifteen (15) weeks per Fall or Spring semester, and a minimum of two (2) hours of out-of-class student work for each credit hour. Equivalent time and effort are required for Summer Semesters, which usually have a shortened timeframe. Fully Online courses, hybrid, shortened, intensive format courses, and other non-traditional modes of delivery will demonstrate equivalent time and effort.

## 14 Course Grading Scale

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Letter Grade	Letter Grade
A	93 - 100%
A-	90 - 92%
B+	87 - 89%
B	83 - 86%
B-	80 - 82%
C+	77 - 79%
C	70 - 76%
D+	67 - 69%
D	63 - 66%
D-	60 - 62%
F	Below 60

## 15 Grade Appeal Process

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You may request a review of the final course grade when you believe that one of the following conditions apply:

- There was a computational or recording error in the grading.
- The grading process used non-academic criteria.
- There was a gross violation of the instructor's own grading system.

[University Regulation 4.002](#) of the University Regulations contains information on the grade appeals process

## 16 Policy on Make-up Tests, Late work, and Incompletes

Late work is not acceptable. All projects will have a Final due date, assignments will be posted well in advance and students may submit assignments early.

- All assignments are posted on Canvas well ahead of the due dates.
- Assignment deadlines are final on Canvas.
- Students should not wait until the last minute to submit assignments, Canvas may not accept submissions at the last minute.
- Late assignments will not be accepted for grading
- Assignments sent by email will not be accepted for grading
- All assignments allow multiple submissions, students may submit early and resubmit if necessary

### Make-up Policy for Tests

Makeup tests are given only if there is solid evidence of a medical or otherwise serious emergency that prevented the student from participating in the exam. Late assignments will not be accepted. All assignments are posted well ahead of the due date with multiple submissions. Requests for makeup exams must occur either prior to missing the exam, or no later than 24 hours after the occurrence of the incident.

Makeup exams should be administered and proctored by department personnel unless there are other pre-approved arrangements. If unable to meet the make-up deadline, other accommodations may be made on a case-by-case basis.

Remember, you must make sure your software, hardware and internet connection are working; if not, make sure, your backup system is in place and working.

Examples of Unexcused Absences for a Test (These excuses are not permissible excuses for a makeup exam.)

1. Forgetting to take the test
2. Plans to take trip on test day because of prior reservations
3. Training/Orientation for a new job during test
4. Work
5. No internet connection
6. Software or hardware not working

## 7. Other tests on the same day

### Incomplete Grade Policy

The University policy states that a student who is passing a course but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete ("I"). The assignment of the "I" grade is at the discretion of the instructor but is allowed only if the student is passing the course.

## 17 Special Course Requirements

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### Communication Policy

#### Expectations for Students

#### Announcements

You are responsible for reading all announcements posted by the instructor. Check the course announcements each time you log in.

#### Email/ Video Conferencing

You are responsible for reading all of your course email and responding in a timely manner.

#### Course-Related Questions

Post course-related questions to the FAQ discussion board. This allows other participants with the same question to benefit from the responses. Also, make sure you review this forum prior to posting a question. Someone may have already asked and answered the question in previous posts.

#### Instructor's Plan for Classroom Response Time & Feedback

#### Email/ Video Conferencing Policy

Except for weekends and holidays, the instructor will typically respond to email (Canvas inbox or FAU email) within 48 hours. You should ask course-related questions in the FAQ discussion board. If you have questions of a personal nature, you should email the instructor.

#### Assignment Feedback Policy

The instructor will provide feedback on submitted assignments within one week of the submission date. Some assignments may require a longer review period, during which the instructor will communicate to you.

#### Course-Related Questions Policy

Except weekends and holidays, the instructor will generally answer questions within 48 hours.



## Electronic Communication Policy

In addition to the University's policy, please consider the following:

- Privacy, confidentiality, and security in all electronic communications.
- All electronic communication resources must be used for the course and in alignment with to the University mission.
- Prohibited use of false identity, false identity pseudonyms, or anonymous (sender's name or electronic identification is hidden).
- Access without consent.
- Disruption of services including introducing computer contaminants (viruses).
- Harassment of any kind.

Please see the Office of Information Technology's policies on Cyber Security Awareness.

## Hardware & Software Requirements

### Hardware

- Dependable computer
- Computer speakers
- Headset with microphone
- Webcam

### Software

- Microsoft 365 Suite
- Reliable web browser (recommended Chrome )
- Canvas mobile app: Download instructions for iOS device or Android device
- Adobe Reader
- Integrated Development Environment, IDE, (Like Visual Studio Community) to test your code

### Internet Connection

- Recommended: Broadband Internet connection with a speed of 4 Mbps or higher.
- To function properly, Canvas requires a high-speed Internet connection (cable modem, DSL, satellite broadband, T1, etc.). The minimum Internet connection speed to access Canvas is a consistent 1.5 Mbps (megabits per second) or higher.

- Check your Internet speed here.

#### Other Technologies

##### Lockdown Browser or Honorlock

- Within this course you will be required to use Lockdown Browser or Honorlock with a webcam, details will be posted on Canvas

#### Computer Requirements

##### Basic Computer Specifications for Canvas

- Operating system: Windows 10 or macOS Sierra (or higher).
- Specifications
- A backup option should be available to minimize the loss of work. This can be an external hard drive, a USB drive, cloud storage, or your folder on the FAU servers.
- Once logged in to Canvas make sure your Internet browser is compatible.
- Other software may be required for specific learning modules. If so, the necessary links to download and install will be provided within the applicable module.

#### Minimum Technical Skills Requirements

The general and course-specific technical skills you must have to succeed in the course include but are not limited to:

- Accessing Internet.
- Using Canvas (including taking tests, attaching documents, etc.).
- Using email with attachments.
- Creating and submitting files
- Copying and pasting functions.
- Downloading and installing software.
- Using presentation, graphics, and other programs.
- Posting and commenting in an online discussion.
- Searching the FAU library and websites.

## 18 Policy on the Recording of Lectures

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Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private

conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

## 19 Counseling and Psychological Services (CAPS) Center

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Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>

## 20 Student Support Services and Online Resources

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- [Center for Learning and Student Success \(CLASS\)](#)
- [Counseling and Psychological Services \(CAPS\)](#)
- [FAU Libraries](#)
- [Math Learning Center](#)
- [Office of Information Technology Helpdesk](#)
- [Center for Global Engagement](#)
- [Office of Undergraduate Research and Inquiry \(OURI\)](#)
- [Science Learning Center](#)
- [Speaking Center](#)
- [Student Accessibility Services](#)
- [Student Athlete Success Center \(SASC\)](#)
- [Testing and Certification](#)
- [Test Preparation](#)
- [University Academic Advising Services](#)
- [University Center for Excellence in Writing \(UCEW\)](#)
- [Writing Across the Curriculum \(WAC\)](#)

## 21 Course Topical Outline

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Topics

Python Setup

Command Line Basics

Installing Python

Running Python Code

Jupyter Notebooks

Python Object and Data Structure Basics

Introduction to Python Data Types

Python Numbers

Variable Assignments

Introduction to Strings

Indexing and Slicing with Strings

String Properties and Methods

Print Formatting with Strings

Lists in Python

Dictionaries in Python

Tuples with Python

Sets in Python

Booleans in Python

I/O with Basic Files in Python

Python Objects and Data Structures

Python Comparison Operators

Comparison Operators in Python

Chaining Comparison Operators in Python with Logical Operators

Python Statements

If and Else Statements in Python

For Loops in Python

While Loops in Python

Useful Operators in Python

List Comprehensions in Python

Methods and Functions

Methods and the Python Documentation

Introduction to Functions

Def Keyword

Basics of Python Functions

Logic with Python Functions

Tuple Unpacking with Python

Interactions between Python Functions

Lambda Expressions, Map and Filter Functions

Nested Statements and Scope

Object Oriented Programing

Object Oriented Programming Introduction

OOP Attributes and Class Keyword

OOP Class Object Attributes and Methods