# NEW COURSE PROPOSAL
## Undergraduate Programs

**FLORIDA ATLANTIC UNIVERSITY**

**Department** Computer and Elctrical Eng and Computer Science

**College** Engineering and Computer Science

(*To obtain a course number, contact **erudolph@fau.edu***)

UUPC Approval _____

UFS Approval _____

SCNS Submittal _____

Confirmed _____

Banner Posted _____

Catalog _____

| | | | |
|---|---|---|---|
| **Prefix** COP <br> **Number** 2035 | *(L = Lab Course; C = Combined Lecture/Lab; add if appropriate)* <br> **Lab Code** | **Type of Course** <br> Lecture | **Course Title** <br> Introduction to Programming in Python |

**Credits** (*Review Provost Memorandum*)

3

**Effective Date** (*TERM & YEAR*)

Spring 2021

**Grading** (*Select One Option*)

Regular ⦿

Pass/Fail ◯

Sat/UnSat ◯

**Course Description** (*Syllabus must be attached; Syllabus Checklist recommended; see Guidelines*)

This class is an introduction to programming using the Python language for students who have no prior programming experience. It introduces programming fundamentals, problem-solving methods, algorithm development, unit testing, and debugging techniques. The course covers Python data types, control structures, functions, modules, exception handling, input/output, classes and elements of object-oriented programming.

| **Prerequisites, with minimum grade*** | **Corequisites** | **Registration Controls** (*Major, College, Level*) |
|---|---|---|
| None | | None |

***Default minimum passing grade is D-.** Prereqs., Coreqs. & Reg. Controls are enforced for all sections of course*

**WAC/Gordon Rule Course**

◯ Yes      ⦿ No

WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to proposal. See WAC Guidelines.

**Intellectual Foundations Program (General Education) Requirement** (*Select One Option*)

None

General Education criteria must be indicated in the syllabus and approval attached to the proposal. See GE Guidelines.

**Minimum qualifications to teach course**

PhD in Computer Science/Computer Engineering/Electrical Engineering or another related field

| **Faculty Contact/Email/Phone** | **List/Attach comments from departments affected by new course** |
|---|---|
| Hanqi Zhunag/Zhuang@fau.edu/561.297.3413 | NA |

**Approved by**

| | | **Date** |
|---|---|---|
| Department Chair | Hanqi Zhuang <br> Digitally signed by Hanqi Zhuang DN: cn=Hanqi Zhuang, o=FAU, ou=CEECS, email=zhuang@fau.edu, c=US Date: 2020.06.19 16:36:49 -04'00' | 6/19/2020 |
| College Curriculum Chair | *Dan Meeroff* | *9-3-20* |
| College Dean | | |
| UUPC Chair | *Jerry Haky* | 9-15-20 |
| Undergraduate Studies Dean | *Edward Pratt* | 9-15-20 |
| UFS President | | |
| Provost | | |

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.

### 1. Course title/number, number of credit hours

| COP 2035 Introduction to Programming in Python | 3 credit hours |
|---|---|

### 2. Course prerequisites, corequisites, and where the course fits in the program of study

Prerequisites: none
No programming experience is required.

### 3. Course logistics

*Term*: Spring 2021
*Lecture time and place*:
All course material and assignments are posted on Canvas, at http://canvas.fau.edu.

### 4. Instructor contact information

| *Instructor's name* | Dr. Ionut Cardei |
|---|---|
| *Office address* | EE 419 |
| *Contact telephone number* | 561-297-3401 |
| *Email address* | icardei@fau.edu |
| *Office hours:* | TBA |

### 5. Communication Policy

The preferred mode of communication for private messages to the instructor is using Canvas's Message tool. For questions or concerns related to the course, please check first the "Class Q&A" Discussion Board on Canvas. Expect answers within 48 hours from posting. For private messages sent via Canvas expect a reply within 24 hours, excluding the weekend period or holidays. For more urgent communication, contact the instructor via regular email from your FAU email account.

### 6. Course description

This class is an introduction to programming using the Python language for students who have no prior programming experience. It introduces programming fundamentals, problem-solving methods, algorithm development, unit testing, and debugging techniques. The course covers Python data types, control structures, functions, modules, exception handling, input/output, classes and elements of object-oriented programming.

### 7. Course objectives/student learning outcomes/program outcomes

| *Student learning outcomes & relationship to ABET objectives (computing programs)* | **ABET Outcomes:**<br>1. An Ability to identify, formulate, and solve complex computing/engineering problems by applying principles of computing, engineering, science, and mathematics.<br><br>6. 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 |
|---|---|

| | Learning Objectives |
|---|---|
| | 1. demonstrate and apply programming methods using the Python programming language; |
| | 2. demonstrate the ability to write programs with the Python language and use industry standard development tools; |
| | 3. use effectively Python data structures: lists, dictionaries, sets; |
| | 4. implement error handling with exceptions; |
| | 5. demonstrate the use of input/output mechanisms in Python. |

## 8. Course evaluation method

| | |
|---|---|
| Homeworks ....................................... 60 %<br>Two Exams ...................................... 35 %<br>Discussion Board................................ 5 % | The **homework** problems include multiple-choice type tests administered online using Canvas and programming problems in Python.<br><br>The **two exams** may require Browser Lockdown or similar proctoring technology.<br><br>**Discussion Board** points are given if the student posts a certain number of times during the semester non- trivial and relevant messages on the homework Q&A discussion board forums on Canvas. |

## 9. Course grading scale (tentative)

Grading Scale:
A: 100-95, A-: 94-90, B+: 89-85, B: 84-80, B-:79-75, C+: 74-72, C: 71-68, C- 67-60, D: 59-50, F:49-0

## 10. Policy on makeup tests, late work, and incomplete grades

*Late work* is not acceptable, except for special (e.g. medical) circumstances and with advance notice.

*Incomplete grades* are against the policy of the department. Unless there is solid evidence of medical or otherwise serious emergency situation incomplete grades will not be given.

***No*** *extra credit assignments* will be given. However, some homeworks have extra credit problems.

## 11. Computing Resources and Software

Students are responsible for applying proper backup procedures to preserve their work on homework assignments and the project. Common methods involve copying files periodically and as necessary to USB flash drives, the FAU drives, Google Drive, DropBox, or some other online service.

Students should have access to a PC running Windows, Linux, or Mac OS with internet access.
Students are **required** to download and install the **Anaconda Python 3.x software** from
https://www.continuum.io/download. This could take more than 2GB of disk space.

## 12. Attendance policy statement

All class material and assignments will be posted on Canvas. Students should log in at least three times per week to make sure they are up to date with announcements, postings, messages, and assignments.

Class attendance for students registered for the live section is mandatory.

Students are expected to attend all of 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.

Participation in University-approved activities or religious observances, with prior notice, will not be penalized.

## 13. Disability policy statement

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/.

## 14. Counseling and Psychological Services (CAPS) Center

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/ .

## 15. Code of Academic Integrity policy statement

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 unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and place high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. See University Regulation 4.001 at
www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf

**Class Policy for Academic Integrity:**

Late submissions will not be accepted or graded.

All assignments and exams in this course must be **INDIVIDUAL** effort. The best way to learn how to program in a new language is to write your own code. Sharing code is considered cheating. Students are NOT allowed to collaborate or share information during the exam periods.

Sharing code includes posting completed work (code) before or after the assignment official deadline onto sites such as GitHub, emailing code to other students, allowing any access to your work before or after the official deadline has passed. Other code sharing offenses include submitting another person's work as your own, including using code 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.

## 16. Required texts/reading

"How to Think Like a Computer Scientist: Learning with Python 3", by Peter Wentworth, Jeffrey Elkner, Allen B. Downey, and Chris Meyers
Available as an e-book at http://openbookproject.net/thinkcs/python/english3e/

## 17. Supplementary/recommended readings

1. Learn Python - Free Interactive Python Tutorial: https://www.learnpython.org/
2. Learning Python — The Hitchhiker's Guide to Python: https://docs.python-guide.org/intro/learning/
3. The Python documentation page: https://docs.python.org/3/
4. The Python tutorial: https://docs.python.org/3/tutorial/index.html

## 18. Course topical outline
(subject to change)

1. Introduction
2. Variables, expressions, and statements
3. The turtle graphics library
2. Functions
3. Control Structures
4. Python data types
5. Input/output
6. Classes and objects
7. Exception handling

## 19. Computer and Internet Requirements / Technical Skills

**Internet Connectivity Requirement**
Students need a reliable internet condition capable of streaming Webex lectures, taking exams on Canvas, etc. Recommended: broadband Internet connection (e.g. DSL, cable, 4/5G cellular) 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.).

**Computer Requirements**
*Operating System*
A computer that can run Linux, Mac OSX, or Windows 7 or higher. Minimum 4 GB RAM and 2G disk available.
*Peripherals*
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.
*Software*
Once logged in to Canvas, please visit the links located at the top of each Canvas page for LMS compatibility with your computer. Make sure your Internet browser is compatible and that you have all the recommended plug-ins installed.

**Required Technical Skills** [in addition to prerequisites]
Word editing and ability to export documents to the PDF format.

See Section 11 for additional software requirements.

## 20. Technical Problems

**Technical Problem Resolution Procedure**
In the online environment, there is always a possibility of technical issues (e.g., lost connection, hardware or software failure). Many of these can be resolved relatively quickly, but if you wait until the last minute before due dates, the chances of these glitches affecting your success are greatly increased. Please plan appropriately. If a problem occurs, it is essential you take immediate action to document the issue so your instructor can verify and take appropriate action to resolve the problem.

Please take the following steps when a problem occurs:

Contact the eSuccess Advisor for assistance:
eLearning Success Advisor - 561-297-3590
If you can, make a Print Screen of the monitor when the problem occurs. Save the Print Screen as a .jpg file. If you are unfamiliar with creating a Print Screen file, visit http://en.kioskea.net/faq/141-print-screen-screen-capture-windows-mac-os-x-and-unix-linux.
If the problem seems to be with Canvas or another system managed by FAU IRM or TSG complete a Help Desk ticket http://helpdesk.fau.edu/. Make sure you complete the form entirely and give a full description of your problem so the Help Desk staff will have the pertinent information in order to assist you properly. This includes:
Select "Canvas (Student)" for the Ticket Type.
Input the Course ID.
In the Summary/Additional Details section, include your operating system, Internet browser, and Internet service provider (ISP).
Attach the Print Screen file, if available.
If the problem is with the tools/code used in class then send an email to your instructor to notify him of the problem. Include all pertinent information of the problem – attach/paste course code or include the screenshot if it makes sense.
If you do not hear back from the Help Desk within a timely manner (48 hours), it is your responsibility to follow up with the appropriate person until a resolution is obtained.

In case you contacted your instructor and you don't get a reply in two days, please send the message again, call or stop by the instructor's office during office hours.

## 21. Selected University and College Policies

**Religious Accommodation Policy Statement**
In accordance with 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 with regard to admissions, registration, class attendance and the scheduling of examinations and work assignments. For further information, please see Academic Policies and Regulations.

**University Approved Absence Policy Statement**
In accordance with rules of the Florida Atlantic University, students have the right to reasonable accommodations to participate in University approved activities, including athletic or scholastics teams, musical and theatrical performances and debate activities. It is the student's responsibility to notify the course instructor at least one week prior to missing any course assignment.

**Incomplete Grade Policy Statement**
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.

**Withdrawals**
Any student who decides to drop is responsible for completing the proper paper work required to withdraw from the course.

**Grade Appeal Process**
A student may request a review of the final course grade when s/he believes that one of the following conditions apply:
There was a computational or recording error in the grading.
Non-academic criteria were applied in the grading process.
There was a gross violation of the instructor's own grading system.
The procedures for a grade appeal may be found in Chapter 4 of the University Regulations.

**Disruptive Behavior Policy Statement**
Disruptive behavior is defined in the FAU Student Code of Conduct as "*… activities which interfere with the educational mission within classroom."* Students who behave in the face-to-face and/or virtual classroom such that the educational experiences of other students and/or the instructor's course objectives are disrupted are subject to disciplinary action. Such behavior impedes students' ability to learn or an instructor's ability to teach. Disruptive behavior may include, but is not limited to: non-approved use of electronic devices (including cellular telephones); cursing or shouting at others in such a way as to be disruptive; or, other violations of an instructor's expectations for classroom conduct.

| | |
|---|---|
| Office of Information Technology Online Help Desk: | http://helpdesk.fau.edu |
| FAU Libraries Website: | http://www.fau.edu/library |
| Center for Learning and Student Success Website: | http://www.fau.edu/class |
| University Center for Excellence in Writing: | http://www.fau.edu/UCEW |
| Math Learning Center: | http://www.math.fau.edu/MLC |

| | | |
|---|---|---|
| Office of Undergraduate Research and Inquiry: | http://www.fau.edu/ouri | |
| Student Accessibility Services Office | http://www.fau.edu/sas/ | |
| Office of International Programs and Study-abroad: | www.fau.edu/goabroad | |
| Freshman Academic Advising Services: | http://www.fau.edu/freshmanadvising | |

**Faculty Rights and Responsibilities**

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

- To establish and implement academic standards
- To establish and enforce reasonable behavior standards in each class
- To refer disciplinary action to those students whose behavior may be judged to be disruptive under the *Student Code of Conduct*.

**The instructor reserves the right to adjust this syllabus as necessary.**