



FLORIDA POLYTECHNIC
UNIVERSITY

COP 4020 Programming Languages Syllabus - Spring 2026

Course Information

- **Course Number and Title:** COP 4020 Programming Languages
- **Credit Hours:** 3 (3 lecture / 0 lab)
- **Current Academic Term:** Spring 2026

Instructor Information

- **Instructor:** Dr. Mahmoud Elish
- **Office:** BARC-2234
- **Office Hours:** MWF 11:00AM-12:00PM, or by appointment
- **E-mail:** melish@floridapoly.edu

Course Details

- **Section:** 2
- **Class delivery mode:** Face-to-face (in-person/in-class)
- **Class Meeting Day, Time & Location:** MWF 10:00am – 10:50am, IST-1028
- **Course Website:** Canvas
- **Official Catalog Course Description:** This course provides students with the fundamental skills of creating new programming languages with particular emphasis on the essential design concepts of the four major programming paradigms: the imperative programming paradigm, object-oriented programming paradigm, functional programming paradigm, and logical programming paradigm.
- **Prerequisite(s):** COP 3337 - Object Oriented Programming or COT 4210 - Formal Languages & Automata
- **Required Textbook:**
“Concepts of Programming Languages”, 12th Edition, by Sebesta, Pearson, ISBN: 978-0134997186.
- **Equipment and Materials:** none.
- **Course Objectives:** To introduce fundamental concepts of designing programming languages and apply different programming paradigms to solve computer science problems.
- **Course Learning Outcomes:**
 1. Understand lexical analysis.
 2. Understand syntactical analysis.
 3. Apply functional programming to solve problems.
 4. Apply logic programming to solve problems.

- **Alignment with Program Outcomes (ABET):**

The Computer Science program at Florida Polytechnic University has aligned its Program Outcomes with the ABET Students Outcomes 1-6 from the ABET General Criterion 3 and the ABET Program Criteria. The table shown below summarizes how the CLOs stated above align with the Program Outcomes (ABET 1-6).

These outcomes are:

1. **Analyzing a Problem:** Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions
2. **Implementing a Solution:** Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program’s discipline
3. **Communicating Effectively:** Communicate effectively in a variety of professional contexts
4. **Performing Legal & Ethical Analysis:** Recognize professional responsibilities and make informed judgments in computing practice based on legal and ethical principles
5. **Collaborating as a Team:** Function effectively as a member or leader of a team engaged in activities appropriate to the program’s discipline
6. **Applying theory:** Apply computer science theory and software development fundamentals to produce computing-based solutions.

| Program Outcome (ABET) | CLO-1 | CLO-2 | CLO-3 | CLO-4 |
|-------------------------------------|-------|-------|-------|-------|
| Analyzing a Problem | X | X | | |
| Implementing a Solution | | | | |
| Communicating Effectively | | | | |
| Performing Legal & Ethical Analysis | | | | |
| Collaborating as a Team | | | | |
| Applying theory | | | X | X |

Academic Support Resources

- **Library:** Students can access the Florida Polytechnic University Library through the University website and [Canvas](#), on and off campus. Students may direct questions to library@floridapoly.edu.
- **Tutoring and Learning Center:** The Tutoring and Learning Center (The TLC) provides tutoring to all Florida Poly students who may need additional academic support. The TLC is staffed by students who have excelled in the courses they tutor. They offer support by reviewing concepts and materials from class, clarifying points of confusion and providing assistance with learning strategies. While the focus of TLC is to provide support to students in freshman-level courses, upper-level courses are also tutored at the Center. The TLC is located in the IST Commons (second floor).
- **Knack Tutoring:** Students looking for additional assistance outside of the classroom are advised to consider working with a peer tutor through Knack. Florida Polytechnic University has partnered with Knack to provide students with access to verified peer tutors who have previously aced this course. To view available tutors, visit floridapoly.joinknack.com and sign in with your student account.
- **Academic Success Coaches:** All students at Florida Poly are assigned an Academic Success Coach. Your Academic Success Coach can assist you with academic success strategies. Please visit the Student Success Center on the second floor of the IST building to meet with an Academic Success Coach.

- **Writing Center:** Located on the second floor of the IST (2059/2061), the Writing Center helps students to develop their writing and presentation skills. Consultations are available in person and virtually. For more detail, visit <https://floridapolytechnic.libguides.com/writingservices>

Course Policies:

1. Contact Policy:

Florida Polytechnic University email is the official method of communication for the University. Students are required to check their email frequently. The subject of your emails must start with "COP 4020:" followed by the topic. Fail to provide the correct subject, will result in ignoring the email. Any email received from an address other than the one with flpolypoly.edu domain will not be replied to.

2. Attendance:

Please see the [University Policy](#), "Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as defined by the instructor".

- This class requires "in-person/in-class attendance".
- The attendance is part of the final grade (see next section).
- The attendance will be taken through "A+ attendance" tool in Canvas.
- In case of absence, please inform the instructor of absence in advance, if possible, or as soon as possible afterward.
- A student with an excused absence will get more time to make up missed work without any reduction in the assigned work or final course grade given that the student provides an official/documented excuse.
- Standard excused absence reasons: religious observances; legal responsibilities (jury duty, court obligations); military obligations; university-sponsored events; death or serious illness within their immediate family, or their own illness, or other reasonable circumstances.
- Exceptions to any attendance requirements may be made on a case-by-case basis.
- Campus CARE Services are available to work with students with serious or unusual circumstances. Contact care@floridapoly.edu

3. Participation:

Students are expected to participate in the classroom experience. The use of earbuds/headphones during class is specifically not allowed and students who engage in this behavior may be asked to leave the class for the day (noting exceptions for authorized accommodations). In addition, students who routinely do not bring materials to class that are required for participation, will not be given credit for class attendance, and if this becomes a pattern of behavior, may be asked to leave the class for the day. Persistent problems with participation may result in a code of conduct referral.

4. Late Work/Make-up work:

Late submission will be graded out of 90% of the total in the first 24 hours, and out of 80% of the total in the second 24 hours. No late submission is allowed after the 48 hours, no exceptions. This policy does not apply for excused absence, and exceptions may be made on a case-by-case basis. In general, there is no make-up for quizzes or exams. A make-up for a missed quiz or exam will be provided given that an official excuse is presented.

5. Assignment/Evaluation Methods:

| <i>Item</i> | <i>Percentage</i> |
|--------------------------------------|-------------------|
| Attendance/Participation | 10% |
| Homework and Programming Assignments | 25% |
| Exam 1 | 20% |
| Exam 2 | 20% |
| Final Exam | 25% |
| Total | 100% |

6. Grading Scale: (See also [University Grading Policy](#)).

| | | | | | | | |
|----|-------|----|-------|----|-------|----|-------|
| A | ≥ 93 | B | 83-86 | C | 73-76 | D | 63-66 |
| A- | 90-92 | B- | 80-82 | C- | 70-72 | D- | 60-62 |
| B+ | 87-89 | C+ | 77-79 | D+ | 67-69 | F | < 60 |

7. Individual work:

For coursework (assignments, exams, quizzes), you are expected to do your own work individually and privately without any discussion with other students, the use of previously graded academic work, or the use of outside resources. Failing to do so will result in treating this as a violation of the Academic Integrity policy and your penalty will be a F grade in the course.

Major Exams

Two full period major exams will cover material from lectures in class prior to the exam. Major exams are closed book. You are responsible for relevant information from the textbook, even if it is not covered fully in class. You are also responsible for reading the required reference materials.

Final Exam

Final exam will be comprehensive and will cover all the material from the semester. Final exam is closed book. You are responsible for relevant information from the textbook, even if it is not covered fully in class. You are also responsible for reading the required reference materials.

[University Policies](#)

Reasonable Accommodations

The University is committed to ensuring equal access to all educational opportunities. The Office of Disability Services (ODS), facilitates reasonable accommodations for students with disabilities and documented eligibility. It is the student's responsibility to self-identify as a student with disabilities and register with ODS to request accommodations. If you have already registered with ODS, please ensure that you have requested an accommodation letter for this course through the [ODS student portal](#), and communicate with your instructor about your approved accommodations as soon as possible. Arrangements for testing accommodations must be made in advance. Accommodations are not retroactive. If you are not registered with ODS but believe you have a temporary health condition or permanent disability requiring an accommodation, please contact ODS as soon as possible: DisabilityServices@floridapoly.edu; (863) 874-8770; <https://floridapoly.edu/student-affairs/health-wellness/disability-services.php>.

Accommodations for Religious Observances, Practices and Beliefs

The University will reasonably accommodate the religious observances, practices, and beliefs of individuals in regard to admissions, class attendance, and the scheduling of examinations and work assignments. (See [University Policy](#).)

Title IX

Florida Polytechnic University is committed to ensuring a safe, productive learning environment on our campus that prohibits sex discrimination and sexual misconduct, including sexual harassment, sexual assault, dating violence, domestic violence and stalking. Resources are available if you or someone you know needs assistance. Any faculty or staff member you speak to is required to report the incident to the Title IX Coordinator. Please know, however, that your information will be kept private to the greatest extent possible. You will not be required to share your experience. If you want to speak to someone who is permitted to keep your disclosure confidential, please seek assistance from the Florida Polytechnic University [Ombuds Office](#), BayCare's Student Assistance Program, 1-800-878-5470 and locally within the community at [Peace River Center](#), 863-413-2707 (24-hour hotline) or 863-413-2708 to schedule an appointment. The Title IX Coordinator is available for any questions to discuss resources and options available.

Academic Integrity

Violations of [academic integrity regulation](#) include actions such as cheating, plagiarism, use of unauthorized resources (including but not limited to use of Artificial Intelligence tools), illegal use of intellectual property, and inappropriately aiding other students. Such actions undermine the central mission of the university and negatively impact the value of your Florida Poly degree. Suspected violations will be fully investigated, possibly resulting in sanctions up to and including expulsion from the university.

Recording Lectures

Students may, without prior notice, record video or audio of a class lecture for a class in which the student is enrolled for their own personal educational use. Recordings may not be used as a substitute for class participation or class attendance. Recordings may not be published or shared in any way, either intentionally or accidentally, without the written consent of the faculty member. Failure to adhere to these requirements is a violation of state law (subject to civil penalty) and the student code of conduct (subject to disciplinary action). *Recording class activities including, but not limited to, lab sessions, student presentations (whether individually or part of a group), class discussion (except when incidental to and incorporated within a class lecture), and invited guest speakers is **prohibited**.*

Important Dates

| | |
|---|---|
| Jan. 19 th : | Martin Luther King Jr. Holiday - No Classes |
| Feb. 10 th : | Career Day - No Classes |
| Mar. 16 th -20 th : | Spring Break - No Classes |
| April 17 th : | Withdrawal Without Academic Penalty Deadline (W assigned) |
| April 28 th : | Last Day of Classes |
| TBD by Registrar: | Final Exam |

Tentative Schedule*

- The following timetable is tentatively scheduled and subject to change by the instructor.
- Important Dates: <https://floridapoly.edu/academics/academic-calendar/index.php>

| Week | Class (MWF) / Topic | Activity |
|-----------------------|--|--------------|
| Week 1 (1/12 – 1/16) | PL domains, evaluation criteria and implementation methods | |
| Week 2 (1/19 – 1/23) | <i>Martin Luther King Jr. Holiday, no class on Jan. 19 (M)</i> PL domains, evaluation criteria and implementation methods | |
| Week 3 (1/26 – 1/30) | Describing Syntax and Semantics | Assignment 1 |
| Week 4 (2/2 – 2/6) | Describing Syntax and Semantics | |
| Week 5 (2/9 – 2/13) | Lexical and Syntax Analysis | Assignment 2 |
| Week 6 (2/16 – 2/20) | Names, Bindings, and Scopes | Exam 1 |
| Week 7 (2/23 – 2/27) | Functional Programming Languages | |
| Week 8 (3/2 – 3/6) | Functional Programming Languages | |
| Week 9 (3/9 – 3/13) | Data Types | Assignment 3 |
| Week 10 (3/16 – 3/20) | <i>Spring Break, no classes</i> | |
| Week 11 (3/23 – 3/27) | Expressions and Assignment Statements | |
| Week 12 (3/30 – 4/3) | Logic Programming Languages | Exam 2 |
| Week 13 (4/6 – 4/10) | Logic Programming Languages | |
| Week 14 (4/13 – 4/17) | Statement-Level Control Structures | Assignment 4 |
| Week 15 (4/20 – 4/24) | Subprograms | |
| Week 16 (4/27 – 5/1) | Review <i>April 29 - May 1: Reading Days (No Classes)</i> | |

*I reserve the right to modify this schedule as required by the progression of the class.