Syllabus: COP 3337: Object Oriented Programming

Course Information

- **Course Number and Title:** COP 3337: Object Oriented Programming, section 1
- **Meeting time:** MWF 9:00am – 9:50am in BARC-2220
- **Credit Hours**: 3
- **Current Academic Term**: Spring 2026

Instructor Information

- **Instructor:** Igor Mirsalikhov, M.S.
- **Office Location**: IST-2027A
- **Email:** imirsalikhov@floridapoly.edu

- **Office Hours:**
    - MWF 11 am - 12:50 pm
    - or by appointment

Course Description

- **Official Catalog Course Description:** This is an intermediate programming course designed for students with prior programming experience. This course focuses on object-oriented programming concepts and techniques using C++. The covered topics will include streams, classes, recursion, template classes, file handling, and exception handling.
- **Prerequisites:** COP 2271 - Introduction to Computation and Programming (**must have C or greater than C**).
- **Required Text:** Y. Daniel Liang “Introduction to Programming with C++”, 5th Edition, 2022, ISBN-13: 9780137454181
- **Course Objectives:** The objective of this course is to provide the fundamental Object-Oriented programming concepts focusing on best practices in designing and writing efficient code.

Course Learning Outcomes (CLOs)

- **CLO 1: Recall** basic programming concepts including recursive functions.
- **CLO 2: Use** primitive data types and control structures to write simple computer programs in a high-level programming language (C++).
- **CLO 3: Create** user-defined data types applying Object-Oriented programming concepts.
- **CLO 4: Apply** pointers to use Dynamic Memory Management.
- **CLO 5: Experiment** different features of Object-Oriented Programming such as Templates and Operator Overloading.
- **CLO 6: Design** and implement medium-sized software with 3 fundamental pillars 1) Encapsulation, 2) Inheritance, and 3) Polymorphism.

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 to 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) **Communication Effectively:** Communicate effectively in a variety of professional contexts.
4) **Perform 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**	**CLO-5**	**CLO-6**
Analyzing a Problem	X		X			
Implementing a Solution		X	X	X	X	
Communication Effectively						
Perform Legal & Ethical Analysis						
Collaborating as a Team						
Applying Theory						X

Course Policies

Attendance

- Students in face-to-face courses are expected to attend all of their scheduled University classes and to satisfy all academic objectives as defined by the instructor. (University Policy, FPU-5.0010AP) (see also University Policy).
- *A+ Attendance* will be used to track attendance.
- Exceptions to any attendance requirements may be made on a case-by-case basis.
- Note: Falsifying attendance for yourself or for another student is an act of academic dishonesty and is considered a violation of the university's academic integrity policy.

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.

Late Work/Make-up work

Make-up exams will be given only in extreme circumstances with a documented excuse. If you will miss an exam because you are participating in a college-sponsored activity, inform your instructor at least 72

hours before the exam and provide them with documentation. Late homework will receive a 20% penalty if received up to one day late. Homework received more than one day after the due date will not receive credit.

Grading Scale

A	above 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**	below 60%

Assignment/Evaluation Methods

Assignments	20%
Quizzes	10%
Attendance	5%
Practice Assignments	10%
Midterm Exam 1	15%
Midterm Exam 2	20%
Final Exam	20%
Total	100%

Official Email Address

Florida Polytechnic University email is the official method of communication for the University. Students are required to check their email frequently.

Midterm Exams

Midterm exam dates will be finalized early in the semester and those dates/times will be posted to our Canvas course site once available. Exam dates are subject to change and you should refer to the Academic Calendar website for the most up-to-date exam schedules. Exam dates will also be announced in class at least one week prior to the scheduled event.

Course Schedule (tentative)

Week	Dates	Topics	Assignments
1	01/12/2026 - 01/18/2026	Introduction to C++ (Chapter-1) Elementary Programming (Chapter-2) Selections (Chapter-3)	**Practice-1** (Use console input/output in C++, basic arithmetic operations)
2	01/19/2026 - 01/25/2026	Loops (Chapter-5) Characters and Strings (Chapter-4) Functions (Chapter-6)	**Practice-2** (if-else statements, rand() and srand() functions, logical operators, reading strings, defining functions) **Assignment-1** (Basic programming concepts, Implement and solve mathematical problems)
3	01/26/2026 - 02/01/2026	Recursion (Chapter-17) Pointers (Chapter-11.1 – 11.7) Arrays (Chapter-7)	**Quiz-1** (Chapter-1 to Chapter-6)

4	02/02/2026 - 02/08/2026	Vectors (Chapter 12.6 – 12.7) Objects and Classes (Chapter-9)	**Quiz-2** (Recursion, Pointers and Arrays) **Practice-3** (Pointers and arrays) **Assignment-2** (Functions, recursive functions, and pointers)
5	02/09/2026 - 02/15/2026	Objects and Classes (Chapter-9) Cont'd	**Practice-4** (Describe objects and classes, create objects using constructors, Access data fields and invoke functions using the object member access operator, Separate a class definition from a class implementation) **Assignment-3** (Classes and Objects)
6	02/16/2026 - 02/22/2026	Objects and Classes (Chapter-9) cont'd **Midterm Exam-1**	**Exam-1** (Introduction to C++, Elementary Programming, Selections, Mathematical Functions, Characters and Strings, Loops, Functions, Recursion, Arrays, Pointers, and Objects and Classes) **Practice-5** (Separate a class definition from a class implementation, array of objects)
7	02/23/2026 - 03/01/2026	Object Oriented Thinking (Chapter-10)	**Quiz-3** (Objects and Classes) **Practice-6** (Constant functions, instance and static variables)
8	03/02/2026 - 03/08/2026	Dynamic Memory Management (Chapter-11)	**Practice-7** (Copy constructor, new and delete operators, destructors)
9	03/09/2026 - 03/15/2026	Dynamic Memory Management (Chapter-11) Cont'd Templates and Vectors (Chapter-12)	**Quiz-4** (Dynamic Memory Management, Templates, and Vectors)
10	03/16/2026 - 03/22/2026	**Spring Break – No classes**	
11	03/23/2026 - 03/29/2026	Templates and Vectors (Chapter-12) Cont'd	**Assignment-4** (Dynamic Memory Management, Templates, and Vectors)
12	03/30/2026 - 04/05/2026	Operator Overloading (Chapter-14)	**Practice-8** (Operator Overloading)
13	04/06/2026 - 04/12/2026	Inheritance and Polymorphism (Chapter-15) **Midterm Exam-2**	**Exam-2** (Objects and Classes, Constructors, Data Field Encapsulation, Dynamic Memory Allocation, Templates, Operator Overloading, and Exception Handling)
14	04/13/2026 - 04/19/2026	Inheritance and Polymorphism (Chapter-15) Cont'd	**Assignment-5** (Inheritance and Polymorphism)
15	04/20/2026 - 04/26/2026	File Input and Output (Chapter-13) Exception Handling (Chapter-16)	**Quiz-5** (Operator Overloading, Exception Handling, File Input and Output)
16	04/27/2026 - 04/28/2026	Final Exam Review	**Practice-9** (Inheritance and Polymorphism)
17		**Final Exam**	

Students are encouraged to read the rest of the topics in the textbook on their own.

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 (TLC):** 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 floridapoly.edu/writingcenter.

University Policies

Reasonable Accommodations

The University is committed to ensuring equal access to all educational opportunities. The University, through the Office of Disability Services (ODS), facilitates reasonable accommodation 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 accommodation.

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 accommodation must be made in advance. Accommodation is 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.

The Office of Disability Services (ODS):
DisabilityServices@floridapoly.edu
(863) 874-8770
The Access Point
ODS website: www.floridapoly.edy/disability

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.)

Academic Integrity

The faculty and administration take academic integrity very seriously. 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 an academic integrity hearing and sanctions against the accused student if found in violation. Sanctions range from receiving a zero on the exam or assignment, to expulsion from the university. Repeat offenders are subject to more severe sanctions and penalties.

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. You may speak to your professor, but your professors have an obligation 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 discussion resources and options available.

Student Record of 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 accidently, 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 other than class lectures, 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****.*

Disclaimer:

This syllabus is tentative and may be subject to change. Everything in the syllabus might change except for 1) Course Description; 2) Textbook; and 3) Grading Scale.