

Course Syllabus

A. COURSE INFORMATION AND TEACHING STAFF

1. Course	Name	PROGRAMMING FUNDAMENTALS II						
	Code	240112001						
	Activity	Lecture						
	Credit hours	3						
	Semester	Spring 2023/2024						
	Pre-requisite	No Pre-Requisite						
2. Teaching staff, time and location	Section	Building	Room	Day	Time	Instructor	Office hours	
	102	Electron ic	Electron ic	M W	13:00-14:15	Nezar Mohmmmed Mustafa Shehab nizar.shehab@aaup.edu	NMW 14:30 - 15:20 NTTh 12:30 - 13:30	

B. COURSE POLICIES

1. Commitment and Attendance	<p>Attendance is required; and university regulations in this regard are strictly applied. It is important to note the following:</p> <ol style="list-style-type: none"> The student is expected to follow all announcements issued by the university, faculty, department as well as the course instructor through the official channels. It is the student's full responsibility to get aware of these announcements and to react accordingly. The student has to communicate electronically with the course instructor, whenever needed, through the official channels exclusively which are limited to the AAUP email and Moodle messages only. The student is expected to attend all classes* and to arrive at classroom on time. If the instructor is late for class, the student must wait for at least 10 minutes before leaving the classroom. Absence by more than 25% of classes leads to an automatic withdrawal from the course (the grade W is assigned). The use of mobile phones or any other smart electronic devices is strictly prohibited during classes. <p>*a class refers to a lab session in case of labs.</p>
	<p>The student must perform all course assessment activities, i.e. assignments, quizzes, exams etc. It is important to note the following:</p> <ol style="list-style-type: none"> Absence from an exam or a quiz other than the final exam leads to a zero mark in that exam or quiz. An exception allowing a makeup is made for a student submitting a legitimate excuse that is accepted by the instructor in a timely manner. Absence from the final exam leads to an FA grade that eventually turns to an F grade. An exception allowing a makeup exam is made if the student submits an official excuse that is accepted by the Academic Affairs in compliance with the university regulations. Late policy is applied if the student fails to submit his/her assignments and/or projects in due time.
2. Performance of assessment activities	

Course Syllabus

3. Academic Integrity

The student is expected to be honest during the performance of assessment activities. While not limited to the list below, the following actions are examples of cheating:

1. Copying from other students.
2. Using materials that are not authorized by the proctor during quizzes or exams.
3. Collaborating with other students during quizzes or exams.
4. Stealing or buying the content of exams, quizzes, and assignments.
5. Stealing ideas and work of others and presenting them as that of the student (known in academia as plagiarism).
6. Using mobile phones or any other smart electronic devices during quizzes or exams.

4. Grading

A	4.00
A-	3.67
B+	3.33
B	3.00
B-	2.67
C+	2.33
C	2.00
C-	1.67
D+	1.33
D	1.00
F	0.35

5. Learning and teaching methods

Lectures
Class sessions involve lectures, video shows, case studies, discussions, debates, and power-point presentations on topics and current issues related to the course contents.

C. COURSE DETAILS

1. Course description & purpose

This course demonstrates advance topics in C++ including: Pointers, Object Oriented Programming, String Manipulation, Templates, Exception Handling, and File Processing.

2. CSLOs

Upon the completion of the course, students will be able to achieve the following learning outcomes:

CSLO1 Discuss pointers include pointer concept, pointer declaration & initialization, NULL pointers, pointer to pointer, pointer arithmetic's, array pointers and function pointers

Course Syllabus

2. CSLOs		Upon the completion of the course, students will be able to achieve the following learning outcomes:
	CSLO2	Implement Pointers
	CSLO3	Recall the object oriented programming. Understand the class concept, class methods (set and get methods), differentiate b/w methods and constructors, Understand classes composition (aggregation), static members, inheritance, polymorphism and operator overloading.
	CSLO4	Build Classes, aggregation, inheritance and polymorphism

4. CSLOs assessment	Outcomes	CSLO 1	CSLO 2	CSLO 3	CSLO 4
	1 - First Exam	✓	✓		
	2 - Second Exam		✓	✓	
	3 - Assignment	✓	✓	✓	
	4 - Final Exam	✓	✓	✓	✓

5. Assessments	Assessment tool	Weight %	CSLOs	Due week
	First Exam	15%	1,2	
	Second Exam	15%	2,3	
	Assignment	20%	1,2,3	
	Final Exam	50%	1,2,3,4	
	Total	100%		

6. Course schedule	Week	Topics	Study material	Assignment	CSLOs
	1	Pointer Variable Declarations and Initialization			1,2

Course Syllabus

	Week	Topics	Study material	Assignment	CSLOs
6. Course schedule	2	Pass by reference using pointers/using const with pointers			1,2
	2	Pointer Expressions and Pointer Arithmetic/sizeof operator			1,2
	3	Array of Pointers/Function pointer			1
	4	Class string and String Stream Processing			2
	5	Class string and String Stream Processing			2
	6	Class string and String Stream Processing			2
	7	Classes: A Deeper Look, Part1			3
	8	Classes: A Deeper Look, Part1			3
	9	Classes: A Deeper Look, Part2			3,4
	10	Classes: A Deeper Look, Part2			3,4
	11	Object-Oriented Programming: Inheritance			4
	12	Object-Oriented Programming: Inheritance			4
	13	Object-Oriented Programming: Polymorphism			4
	14	Object-Oriented Programming: Polymorphism			4
	15	Operator Overloading			4

Course Syllabus

6. Course schedule	Week	Topics	Study material	Assignment	CSLOs
	16	Final Exam			1,2,3,4

D. COURSE MATERIAL

1. Textbook	C++ How to Program, Paul Deitel, Harvey Deitel , 8th Edition
2. Reference material	<ul style="list-style-type: none"> • <i>Effective C++</i>, Scott Meyers, 3'rd edition • The C++ Programming Language, Bjarne Stroustrup, Special Edition
3. Internet resources	