



Department of Mathematic

College of Science Education

University of Salahaddin

Subject: Advance Programming (C++)

Course Book – Year 4

Lecturer's name Dr. Salar Mustafa Majeed

Academic Year: 2019/2020

Course Book

1. Course name	Advance Programming (C++)
2. Lecturer in charge	
3. Department/ College	Mathematic/Education
4. Contact	e-mail: salar.majeed@su.edu.krd Tel: (optional)
5. Time (in hours) per week	Theory: 2 Practical: 2
6. Office hours	Sunday 10:30-12:30
7. Course code	
8. Teacher's academic profile	PhD University of Glamorgan-Faculty of Advanced Technology-Math&computing/UK Specific Specialization: Operations Research Subjects under teaching: C++,C#, Matlab, Applied Mathematics and Data Analysis Research Methods: Clustering, GIS, simulation of queuing modeling.
9. Keywords	
10. Course overview:	<p>This course introduces the fundamental concepts of structured programming, and provides a comprehensive introduction to programming for computer science and technology majors. The course will provide students with an overview of programming and its role in problem solving and strategies for designing solutions to programming problems with reference to an imperative programming language. This will lead to build up the required basic knowledge that is needed for the future study in programming.</p> <p>At the end of the course students will be expected to be able to use and write programs using C++ like or any modern programming language in different areas of application.</p>
11. Course objective:	<p>The aim of the course is provide students a thorough grounding in those programming languages. Application domains; levels of language, different philosophies to solve problem, language improvement.</p> <p>At the end of the course students will be expected to be able to use and write programs using C++ in different areas of application .</p>
12. Student's obligation	The students are required to do two theoretical tests on 27 marks and practical test 13 marks .

The final grad will be the 40% theoretical plus 20% practical, so together 40% and final exam 60%

13. Forms of teaching

I have only needed a blackboard to explain the programs step-by step with the command of students. That will help the students to understand the concepts of C++ programming.

14. Assessment scheme

As we mentioned above the students are required to do practical test every week in the lab. This will encourage the student to put their theory that they have learnt in the previous lessons into practice to write programs with new idea. The structures of the subject require writing a C++ program as in worked examples and exercises.

15. Student learning outcome:

The course provides a good foundation that will help the students to use the previous skills that they have gained in different area of application.

16. Course Reading List and References:

Cross references in the course study allow the student to fill any gaps that might arise.

Nassir,H.S.2009.C++ Programming with 469 solved problems.

Deitel,H.M. 2005. C++ How to Program

Note: C++ Programming for any other authors

17. The Topics:

Lecturer's name

Week 1(22/9): Introduction: what is a programming language, overviews of the history of programming languages.

Week 2-3(29/9-6/10): The programming process: Algorithms, great number of worked examples.

Week 4(13/10): Flowchart , Great number of worked examples.

Week 5(20/10): Programming in C⁺⁺ , program structure, data

(2 hrs)

<p>types, variables, expressions.</p> <p>Week 6-7(27/10-3/11): Input, output statements, character string, worked examples.</p> <p>Week 8-10(10-24/11): Relational expressions, the if statement, if-else statement, examples.</p> <p>Week 11-14(1-22/12): For loop, while loop. Great number of worked examples.</p> <p>Week 15-16: First Mid Exam</p> <p>Week 16-17(12-19/1): Continue Selection Statements: The Switch . Selection Statement and Conditional Statement, Break and Continue Control Statements.</p> <p>Week 18(26/1): Great number of worked examples.</p> <p>Week 19-22(2-23/2): Arrays: One-Dimension, worked example.</p> <p>Week 23-25(1-15/3): Two-Dimension, worked example.</p> <p>Week 26-30(12/4-10/5): Functions: Introduction, defining a function, return statement, types of functions, worked example.</p>	
<p>18. Practical Topics (If there is any) As above but in the lab</p>	<p>2 hrs</p>
<p>19. Examinations: Write a C++ program to ... Draw a flowchart to.. What are the output of the below program..</p>	
<p>20. Extra notes: Here the lecturer shall write any note or comment that is not covered in this template and he/she wishes to enrich the course book with his/her valuable remarks.</p>	

21. Peer review

پیداچونہوہی ھاوہل

This course book has to be reviewed and signed by a peer. The peer approves the contents of your course book by writing few sentences in this section.

(A peer is person who has enough knowledge about the subject you are teaching, he/she has to be a professor, assistant professor, a lecturer or an expert in the field of your subject).

ئەم كۆرسبووكە دەبىتت لەلایەن ھاوھلێكى ئەكادىمىيەو سەير بكرىت و ناوھروكى بابەتھكانى كۆرسەكە پەسەند بكات و جەند وشەيەك بنوسىتت لەسەر شياوى ناوھروكى كۆرسەكە و واژووى لەسەر بكات. ھاوھل ئەو كەسەيە كە زانبارى ھەبىتت لەسەر كۆرسەكە و دەبىتت پلەى زانستى لە ماموستا كەمتر نەبىتت.