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| |  | | --- | | **ISHIK UNIVERSITY  FACULTY OF SCIENCE  Department of INFORMATION TECHNOLOGY, 2017-2018 Spring  Course Information for** **IT 119 PROGRAMMING FUNDAMENTALS** |  |  |  | | --- | --- | | **Course Name:** | PROGRAMMING FUNDAMENTALS | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **Code** | **Course type** | **Regular Semester** | **Theoretical** | **Practical** | **Credits** | **ECTS** | | IT 119 | 2 | 2 | 3 | 2 | 4 |  | | | | **Name of Lecturer(s)-Academic Title:** | Alaa Ghazi - MSc | | **Teaching Assistant:** | Mohammad Kamal | | **Course Language:** | English | | **Course Type:** | Main | | **Office Hours** | Thursday after 14:00 | | **Contact:** | Email:alaa.ghazi@ishik.edu.iq   Tel:- | | **Teacher's academic profile:** | BSc Degree in Software Engineering. MSc Degree in Software Engineering. IT Department Head. | | **Course Objectives:** | This is a foundation course on programming. The student will learn problem solving, algorithms, and programming in object oriented programming language C++. | | **Course Description (Course overview):** | Students will learn essential programming concepts, transferring the real basic problems in to flow charts and C++ programming language syntax. Also, they will learn how to write simple programs by using control structures, operands and arrays. | | **COURSE CONTENT**   |  |  |  |  | | --- | --- | --- | --- | | **Week** | **Hour** | **Date** | **Topic** | | **1** | 3 | 25-29/3/2018 | Introduction to Computers and Programming | | **2** | 3 | 1-5/4/2018 | Algorithms | |  |  |  |  | | **3** | 3 | 8-12/4/2018 | C++ Basics | | **4** | 3 | 15-19/4/2018 | Expressions and Interactivity | |  |  |  |  | | **5** | 3 | 22-26/4/2018 | Making Decisions | | **6** | 3 | 29/4-3/5/2018 | Midterm Exam | |  |  |  |  | | **7** | 3 | 6-10/5/2018 | Loops | | **8** | 3 | 13-17/5/2018 | Functions | |  |  |  |  | | **9** | 3 | 20-24/5/2018 | One Dimension Arrays | | **10** | 3 | 27-31/5/2018 | Review | |  |  |  |  | | **11** | 3 | 3-7/6/2018 | Final Exam | | **12** | 3 | 10-14/6/2018 | Final Exam | |  |  |  |  | | | | **COURSE/STUDENT LEARNING OUTCOMES**   |  |  | | --- | --- | |  |  | | **1** | Design solutions for introductory level problems using appropriate design methodology incorporating elementary programming constructs | | **2** | Create algorithms, code, document, debug, and test introductory level C++ programs. | | **3** | Read, analyze and explain introductory level C++ programs. | | **4** | Apply debugging techniques | | **5** | Read Language reference. | | | | **COURSE'S CONTRIBUTION TO PROGRAM OUTCOMES** (Blank : no contribution, I: Introduction, P: Profecient, A: Advanced )   |  |  |  | | --- | --- | --- | |  | **Program Learning Outcomes** | **Cont.** | | **1** | An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution | A | | **2** | An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs | A | | **3** | An ability to function effectively on teams to accomplish a common goal | P | | **4** | An understanding of professional, ethical, legal, security, social, and economic issues and responsibilities |  | | **5** | An ability to analyze the local and global impact of computing on individuals, organizations, and society |  | | **6** | An ability to use current techniques, skills, and tools necessary for computing practice | P | | **7** | An ability to use and apply current technical concepts and practices in the core information technologies of human computer interaction, information management, programming, networking, web systems and technologies | P | | **8** | An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems | P | | **9** | An ability to effectively integrate IT-based solutions into the user environment | I | | **10** | An ability apply problem solving skills, core IT concepts, best practices and standards to information technologies | P | | **11** | An ability to identify and evaluate organizational requirements and current and emerging technologies |  | | **12** | An ability to select, design, integrate and administer IT-based solutions into the organizational environment |  | | | | **Prerequisites (Course Reading List and References):** | NO | | **Student's obligation (Special Requirements):** | NO | | **Weekly Laboratory/Practice Plan:** | |  |  |  |  | | --- | --- | --- | --- | | **Week** | **Hour** | **Date** | **Topics** | | 1 | 2 | 25-29/3/2018 | LAB 01 – Scratch - Step by Step | | 2 | 2 | 1-5/4/2018 | LAB02 – Scratch – Decisions and Loops | |  |  |  |  | | 3 | 2 | 8-12/4/2018 | LAB03 - C++ Basics | | 4 | 2 | 15-19/4/2018 | LAB04 - Expressions, Input, and Output | |  |  |  |  | | 5 | 2 | 22-26/4/2018 | LAB05 - Conditional Statements | | 6 | 2 | 29/4-3/5/2018 | Midterm Exam | |  |  |  |  | | 7 | 2 | 6-10/5/2018 | LAB06 - Looping Statements | | 8 | 2 | 13-17/5/2018 | LAB07 - Functions | |  |  |  |  | | 9 | 2 | 20-24/5/2018 | LAB08 - Arrays | | 10 | 2 | 27-31/5/2018 | LABs Review | |  |  |  |  | | 11 | 2 | 3-7/6/2018 | Final Exam | | 12 | 2 | 10-14/6/2018 | Final Exam | |  |  |  |  | | | **Course Book/Textbook:** | Starting Out with C++ Early Objects 7th Edition | | **Other Course Materials/References:** | The Complete Reference C++ 3rd Edition | | **Teaching Methods (Forms of Teaching):** | Lectures, Practical Sessions, Excersises, Assignments | | **COURSE EVALUATION CRITERIA**   |  |  |  | | --- | --- | --- | | **Method** | **Quantity** | **Percentage (%)** | | Quiz | 2 | 5 | | Midterm Exam(s) | 1 | 20 | | Laboratory | 1 | 20 | | Lab/Practical Exam(s) | 1 | 10 | | Final Exam | 1 | 40 | | **Total** | | **100** | | **Examinations:**Fill in the Blanks, Multiple Choices, Matching |  |  | | | | **Extra Notes:** | | | **ECTS (ALLOCATED BASED ON STUDENT) WORKLOAD**   |  |  |  |  | | --- | --- | --- | --- | | **Activities** | **Quantity** | **Duration (Hour)** | **Total Work Load** | | Course Duration (Including the exam week: 16x Total course hours) |  |  | 0 | | Hours for off-the-classroom study (Pre-study, practice) |  |  | 0 | | Assignments Mid-terms |  |  | 0 | | Final examination |  |  | 0 | | Other |  |  | 0 | | **Total Workload** | | | **0** | | **ECTS Credit (Total workload/25)** | | | **0** | | |   **Peer review**   |  |  |  | | --- | --- | --- | | Signature: | Signature: | Signature: | | Name: | Name: | Name: | | Lecturer | Head of Department | Dean | |