****

**ZU/WI/7/11**

|  |  |
| --- | --- |
| Unit Code: | **DIT 0201/ DCS 0205/ CIT 0201** |
| Unit Title: | **INTRODUCTION TO PROGRAMMING** |
| Program(s): | ZU |
| Lecturer Name: | MR BETT WESLEY |
| Lecturer Contacts: | Email: Wesley.bett@zetech.ac.ke Phone No.: 0727 463 330 |
| Consultation Hours: | Friday’s 9:00-11:00AM |

**UNIT PURPOSE/DESCRIPTION**

To enable the learner to understand fundamentals of programming & structured programming.

**OBJECTIVES OF THE UNIT**

Upon completion of the course the students should be able to:

Demonstrate understanding of key programming concepts and techniques

2. Demonstrateunderstandingofprinciplesofstructureddesignofcomputersoftware, using a high-level structured programming such as C.

3. Use the acquired knowledge and skills, and apply the concepts of structured programming to develop software solutions for a given problem specification.

**COURSE OUTLINE AND SCHEDULE**

|  |  |  |  |
| --- | --- | --- | --- |
| Class/Week | Dates | Topic | Requirements |
| *1-2* |  | Introduction to programming concepts | * Meaning of programming * History of programming * Types of programming languages. * Modules and modularity |
| *3-4* |  | Programming tools | * Algorithms * Flow-charts * pseudo-code * Decision tables and other tools |
| *4-5* |  | Program elements | * + Data types   + Variables and identifiers   + Components of C program   + Writing Simple C program |
| *5-6* |  | Operators & Operator Precedence | * Meaning * Types of operators * Operator Precedence |
| *6-7* |  | Decision Making/ Control Structures | * + Types of control structures   + If statement   + If…else   + Nested if   + Loop statement e.g. do…while, while loop & for loop |
| *7-8* |  | Functions | * Meaning of functions * Types of function * Components of function * Writing programs using functions |
| *9-10* |  | Pointers & strings | * Meaning of pointers * implementation |
|  |  | Arrays | * Meaning * Types of array * Implementation of arrays |

**INSTRUCTIONAL MATERIAL AND EQUIPMENT**

* Textbooks/ manuals
* Whiteboards
* Whiteboard markers and

**TEACHING/LEARNING METHODOLOGY**

Lectures, Practical and Tutorial Sessions in Computer Room, Individual and Group Assignments

**CourseTextBooks**

1. Kernighan, B. W, 2003, The Practice of Programming, Addison-Wesley,

2. H.M. Deitel and P.J. Deitel, C: How to Program, 2nd ed, Prentice Hall

**ReferenceTextBooks**

1. The Practice of Programming, Kernighan, B. W Addison-Wesley, 2003 020161586X

2. C: How to Program, 2nd ed, H.M. Deitel and P.J. Deitel, Prentice Hall

**ASSESSMENT CRITERIA**

|  |  |  |
| --- | --- | --- |
| ***Assessment Type*** | ***Frequency*** | ***Percentage*** |
| *Assignment* | *2* | *10%* |
| *CATs* | *2* | *20%* |
| *Term Paper* | *1* | *10%* |
| *Final Examination* | *1* | *60%* |
| *Total* |  | *100%* |

Approval for circulation by:

Unit lecture Name: Bett Wesley Signature:……………… Date: 12/09/2019

HOD Name: Josephine Magu Signature:……………… Date: 12/09/2019