***LAB BASICS***

Course Title**: Computer Programming Lab**

Course Code**: CSL-113**

Credit Hours**: 3+1**

Prerequisite**: -**

Course**:** **BSE-1**

Section**:** A/**B**

Instructor**:** **Engr.Muhammad Faisal & Engr. Ramsha mashood**

Email**:** Ramshamashood.bukc@bahria .edu.pk

**Course Objectives & Description:**

*The objective of the course is to introduce a disciplined approach to Problem solving methods and algorithm development. The aim is to teach the syntax and vocabulary of C# Language. Key procedural programming topics like variables, arrays, strings, methods will be covered in detail. Simple programs will be coded, using logics, calculation and algorithm.*

**Course Learning Outcomes (CLOs):**

Upon completion of this course, students will be able to:

|  |  |  |  |
| --- | --- | --- | --- |
| CLO | Statement | Bloom’s Taxonomy | Associated PLO |
| 1 | Follow the instructions to implement different programming language constructs using high level programing language. | P3 | PLO5 |
| 2 | Display self-reliance when working independently or in group tasks involving design, architecture, and development. | A5 | PLO11 |
| 3 | Respond effectively on a variety of situations involving hands-on skills. | P2 | PLO5 |
| 4 | Manipulate computer programming tasks to improve or modify as needed for the situation at hand. | P4 | PLO 3 |

**Weekly Breakdown:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Lab Date** | **Lab** | **Tentative Course Plan** | |
| 1 | 26th -30th Sep | Lab:1 | Programming Basic | |
| 2 | 3rd -7th Oct | Lab:2 | variables and arithmetic operations | |
| 3 | 10th -14th Oct | Lab:3 | Operators and Expressions | |
| 4 | 17th -21st Oct | Lab:4 | Console I/O Formatting | |
| 5 | 24th -28th Oct | Lab:5 | Conditional Statements | |
| 6 | 31st Oct – 4th Nov | Lab:6 | Loops | |
| 7 | 7th -11th Nov | Lab:7 | While LOOPS | |
| 8 | 14th -18th Nov | Lab:8 | **Open-Ended Lab 1** | |
| **9** | 21st -25th Nov | **Theory Mid Term Exams** | | |
| **10** | 28th -2nd Dec | Lab:9 | Implementing Arrays | |
| **11** | 5th -9th Dec | Lab:10 | Implementing 2D Arrays | |
| 12 | 12th -16th Dec | Lab:11 | Designing on Graphical User Interface | |
| 13 | 19th -23th Dec | Lab:12 | Implementing Functions/Methods | |
| 14 | 26th -30th Dec | Lab:13 | Filing | |
| 15 | 2nd – 6th Jan | Lab:14 | | Implementing exception handling |
| 16 | 9th – 13th Jan | **Open-Ended Lab 2** | | |
| 17 | 16th -20th Jan | **Project Submission** | | |
| **18** | **23rd -27th Jan** | **Theory Final Term Exam** | | |

***NOTE:***

1. *This schedule is subject to revisions as conditions may warrant.*
2. *Topics will be covered in sequence no matter if city observes any planned or unplanned holidays.*
3. *The information in this course outline is subject to revision as conditions may warrant.*

***LAB ASSESMENT METHOD***

**Method of Evaluation and Structure:**

A student’s grade will be based on multiple measures of performance as mentioned below:

|  |  |
| --- | --- |
| **LAB EVALUATION** | |
| **Evaluation Instruments (EI)** | **Marks** |
| **LAB WORK** | **70** |
| * **LAB PERFORMANCE** * **OPEN ENDED LAB** * **LAB JOURNAL** | **39**  **18**  **13** |
| **PROJECT** | **30** |
| * **DEMONSTRATION** * **MANAGEMENT** | **20**  **10** |
| **Total:** | **100** |

***NOTE****: Any change in this scheme/format will be communicated well in time.*

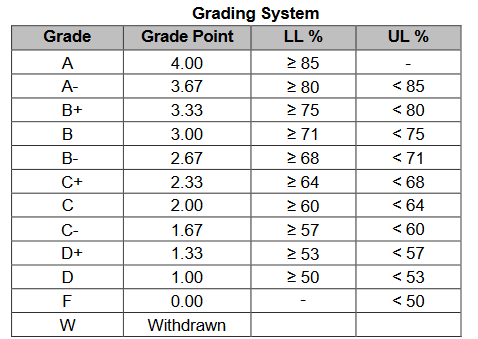
***Mapping of CLOs to PLOs (Program Learning Outcomes)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PLOs | CLOs | | | |
| CLO 1 | CLO 2 | CLO 3 | CLO 4 |
| PLO:1 (Engineering Knowledge) |  |  |  |  |
| PLO:2 (Engineering Problem Analysis) |  |  |  |  |
| PLO:3 (Designing and Development) |  |  |  |  |
| PLO:4 (Investigation) |  |  |  | ✓ |
| PLO:5 (Modern tool usage) | ✓ |  | ✓ |  |
| PLO:6 (Engineer and Society) |  |  |  |  |
| PLO:7 (Environment and Sustainability) |  |  |  |  |
| PLO:8 (Professionalism and Ethics) |  |  |  |  |
| PLO:9 (Individual and Team Work) |  |  |  |  |
| PLO:10 (Communication) |  |  |  |  |
| PLO:11 (Project Management) |  | ✓ |  |  |
| PLO:12 (Lifelong Learning) |  |  |  |  |  |

***Mapping of CLOs to Course Evaluation Instruments (EI)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| EI | CLOs | | | |
| CLO 1 | CLO 2 | CLO 3 | CLO 4 |
| Lab performance + Open Ended Labs | ✓ |  |  |  |
| Lab Journal |  | ✓ |  |  |
| Project Management |  |  |  | ✓ |
| Project Demonstration |  |  |  | ✓ |
| Assignment # 1 | ✓ |  |  |  |
| Assignment # 2 | ✓ |  |  |  |
| Lab Project Viva |  |  | ✓ |  |
| Lab Project Report |  | ✓ |  |  |
| Mid/final Exam | ✓ |  |  |  |

**Grading System:**



***NOTE*:** *The minimum consequence for submitting a plagiarized (copied) or falsified assignment, test, report, project, or any evaluated material will award zero marks on that material.*

**Counseling Hours:**

1. Students are encouraged to approach subject teacher beyond class hours to discuss academic or subject related problems.
2. Arrange and confirm an appointment through email at: [ramshamashood.bukc@bahria.edu.pk](mailto:ramshamashood.bukc@bahria.edu.pk) for an available time slot.
3. Ensure your presence in your allocated time slot.

***COURSE RESOURCES***

**Instructor:**

**Name: Engr.Muhammad Faisal**

**Designation: Sr. Assistant Professor**

**Office: room, 1st floor, SEAS**

**email:**mfaisal.bukc@bahria.edu.pk

**Lab Instructor:**

**Name: Eng. Ramsha Mashood**

**Designation: Lab Engineer**

**Office: lab engineer room, 1st floor, SEAS**

**email:** [ramshamashood.bukc@bahria.edu.pk/](mailto:ramshamashood.bukc@bahria.edu.pk/)

***Text Book***

1. Visual C# How to Program, 6/e, by Harvey M. Deitel & Paul J. Dietel.
2. Maureen Sprankle, Jim Hubbard, Problem Solving and Programming Concepts, 9th Edition 2012 Pearson.
3. Professional Visual Studio 2013 by Bruce Johnson

***Reference Books***

***Online Resources***