

**American International University-Bangladesh (AIUB)**

**Faculty of Engineering (FE)**

**Department of Electrical and Electronic Engineering (EEE)**

**Course Capstone Project Report Outline (Microprocessor and Embedded Systems)**

**Download the IEEE template for report writing from the link given in TEAMS.**

1. **Title, Abstract (at least 150 words but not more than 300 words), and Keywords (3-6 keywords separated by a comma).** [1 + 2 + 1 marks]
2. **Introduction**

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| --- |
| * 1. Background of Study and Motivation [1 mark] |
| * 1. Project Objectives [1 mark] |
| * 1. A brief Outline of the Report [1 mark] |

1. **Literature Review *(At least 5 project-related published journal papers within the year 2019 to 2025)*** 🡪 [**Part under OBE assessment]** [6 marks]
2. **Methodology and Modeling**

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| --- |
| * 1. Introduction [1 mark] |
| * 1. Working Principle of the Proposed Project [2 marks] |
| * + 1. Process of Work (experimental and simulation processes) [2 marks] |
| * 1. Description of the Components [2 marks] |
| * 1. Test/Experimental Setup [2 marks] |

1. **Results and Discussions**

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| * 1. Simulation/Numerical Analysis [2 marks] |
| * 1. Measured Response/Experimental Results [2 marks] |
| * 1. Comparison between Numerical and Experimental Results [2 marks] |
| * 1. Cost Analysis [2 marks] |
| * 1. Limitations in the Project [1 mark] |

1. **Conclusion and Future Endeavors** [2 marks]

**References** [2 marks]

**Appendix (if any, optional)**

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| AIUB | | **American International University-Bangladesh (AIUB)**  **Faculty of Engineering (FE)**  **Department of Electrical and Electronic Engineering (EEE)** | | | |
|  | | |  |  |  | |
| **Course Name:** | | | Microprocessor and Embedded Systems | **Course Code:** | EEE 4103 | |
| **Semester:** | | | Spring 2024-2025 | **Section:** |  | |
| **Faculty Name:** | | | **Prof. Dr. Engr. Muhibul Haque Bhuyan** | | | |
|  | | |  |  |  | |
| **Capstone Project Title:** | | |  | | | |
| **Project Group #:** | | |  | | | |
|  | | |  |  |  | |
| **SL #** | **Student Name** | | | **Student ID #** | | |
| **1.** |  | | |  | | |
| **2.** |  | | |  | | |
| **3.** |  | | |  | | |
| **4.** |  | | |  | | |
| **5.** |  | | |  | | |
| **6.** |  | | |  | | |

***Assessment Materials and Marks Allocation:***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CO/**  **CLO Number** | **CO/CLO Statement** | **K** | **P** | **A** | **Assessed Program Outcome Indicator** | **BNQF Indicator** | **Teaching-Learning Strategy** | **Assessment Strategy** |
| **3** | **Demonstrate** a course project using microcontrollers, sensors, actuators, switches, display devices, etc. that can solve a complex engineering problem in the electrical and electronic engineering discipline through appropriate research. | **K8** | **P1**  **P3**  **P7** |  | **P.d.1.P3** | **FS.3** | **Discussion** | **Project Report (Literature Review)** |
| **4** | **Explain** the complex engineering activities of a course project solving a complex engineering problem of the electrical and electronic engineering discipline through an effective presentation. |  |  | **A1**  **A2** | **P.j.3.A4** | **SS.2** | **Discussion** | **Project Presentation** |

***Assessment Rubrics:***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **COs** | **Excellent to Proficient [5-4]** | **Good [3]** | **Acceptable [2]** | **Unacceptable [1]** | **No Response [0]** | **Secured Marks** |
| **CO3**  **P.d.1.P3** | The outcome of the project demonstrates a course project utilizing microcontrollers, sensors, actuators, switches, display devices, and more, which can address a complex engineering problem in the electrical and electronic engineering field through appropriate research. | The outcome of the project demonstrates a course project utilizing microcontrollers, sensors, actuators, switches, display devices, etc., and also addresses a complex engineering problem in the electrical and electronic engineering discipline through research. | The outcome of the project demonstrates a course project using microcontrollers, sensors, actuators, switches, display devices, etc. but cannot solve a complex engineering problem properly in the electrical and electronic engineering discipline through appropriate research. | The outcome of the project does not demonstrate a course project using microcontrollers, sensors, actuators, switches, display devices, etc. It also could not solve a complex engineering problem in the electrical and electronic engineering discipline through appropriate research. | No Response at all/copied from others/ identical submissions with gross errors/image file printed |  |
| **Comments** |  | | | | **Total Marks (5)** |  |