# BME4116: CAPSTONE PROJECT II

**Effective Term**
Semester B 2025/26

## Part I Course Overview

**Course Title**
Capstone Project II

**Subject Code**
BME - Biomedical Engineering
**Course Number**
4116

**Academic Unit**
Biomedical Engineering (BME)

**College/School**
College of Biomedicine (BD)

**Course Duration**
Two Semesters

**Credit Units**
0-9

**Level**
B1, B2, B3, B4 - Bachelor's Degree

**Medium of Instruction**
English

**Medium of Assessment**
English

**Prerequisites**
BME3116 Capstone Project I with B+ grade or above

**Precursors**
Nil

**Equivalent Courses**
BME4068 Project (Individual) / BME4102 Final Year Project / BME4068C Project (Individual)

**Exclusive Courses**
Nil

## Part II Course Details

**Abstract**
This course offers a challenging opportunity for a final year student to integrate, apply and extend the knowledge gained from the various courses of his/her major study and embark on a course of discovery and innovation through an

individually guided capstone project. Specifically, this is the implemetation stage of the capstone project proposed by the student in MBE3116 Capstone Project I and approved by the department.

**Course Intended Learning Outcomes (CILOs)**

| | CILOs | Weighting (if app.) | DEC-A1 | DEC-A2 | DEC-A3 |
|---|---|---|---|---|---|
| 1 | Design the methodology and implementation plan to carry out the capstone project proposed in MBE3116. | | | x | |
| 2 | Apply and extend the theories and knowledge learned in the major study through the methodical implementation of the proposed capstone project. | | | x | x |
| 3 | Demonstrate communication skills in writing and oral presentation, the project process, experience and results. | | | x | x |

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

**Learning and Teaching Activities (LTAs)**

| | LTAs | Brief Description | CILO No. | Hours/week (if applicable) |
|---|---|---|---|---|
| 1 | T1 | Students will work closely with the supervisor to translate the methodology of the proposed capstone project into a realizable project action plan. | 1 | |
| 2 | T2 | Students will, with the guidance and advice of the supervisor, methodically carry out the project as planned, always challenging the norm and seeking for the breakthrough that would lead to discovery or innovation. | 2 | |

| | | | | |
|---|---|---|---|---|
| 3 | T3.1T3.2T3.3 | Students will document the research process, experience and results in the capstone project report. Students will write a scholarly paper that meets the standard for possible publication in a journal or presentation in a conference. Students will present the paper in the annual Capstone Projects Forum. | 3 | |

**Assessment Tasks / Activities (ATs)**

| | ATs | CILO No. | Weighting (%) | Remarks ("-" for nil entry) | Allow Use of GenAI? |
|---|---|---|---|---|---|
| 1 | Continuous assessment by supervisor and capstone project report | 1, 2, 3 | 50 | - | No |
| 2 | Publishable scholarly written paper | 3 | 30 | Assessed by course examiner | No |
| 3 | Oral presentation | 3 | 20 | Assessed by course examiner and supervisor | No |

**Continuous Assessment (%)**

100

**Examination (%)**

0

**Assessment Rubrics (AR)**

**Assessment Task**

Continuous assessment by supervisor and capstone project report

**Criterion**

Coverage of related literature, adoption or development of relevant methodologies to solve the problem, final outcomes, contribution to science and technology, and quality of written report.

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**
Not even reaching marginal levels

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**Assessment Task**
Publishable scholarly written paper

**Criterion**
A written paper of acceptable/publishable quality in proceedings of a conference or journal based on the results of the work independently carried out through this project.

**Excellent (A+, A, A-)**
High

**Good (B+, B, B-)**
Significant

**Fair (C+, C, C-)**
Moderate

**Marginal (D)**
Basic

**Failure (F)**
Not even reaching marginal levels

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**Assessment Task**
Oral presentation

**Criterion**
Oral presentation covering the related literature, relevant methodologies adopted to solve the problem, final outcomes, and contribution to science and technology.

**Excellent (A+, A, A-)**
High

**Good (B+, B, B-)**
Significant

**Fair (C+, C, C-)**
Moderate

**Marginal (D)**
Basic

**Failure (F)**
Not even reaching marginal levels

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# Part III Other Information

### Keyword Syllabus

The course is flexible, and has no specific syllabus.

### Reading List

### Compulsory Readings

| | Title |
|---|---|
| 1 | There are no specific compulsory readings. However, the student will have to explore and utilize some books and journal/conference/magazine publications depending on the selected topic being investigated and the relevant methodologies that could be explored to carry out this capstone project II. |

### Additional Readings

| | Title |
|---|---|
| 1 | Student initiative is compulsory to search the literature to gain knowledge on the techniques and methodologies associated with the project being undertaken through this course. |