BME6045: INDUSTRIAL CASE STUDY

Effective Term
Semester A 2025/26

Part I Course Overview

Course Title
Industrial Case Study

Subject Code
BME - Biomedical Engineering
Course Number
6045

Academic Unit
Biomedical Engineering (BME)

College/School
College of Biomedicine (BD)

Course Duration
One Semester

Credit Units
3

Level
P5, P6 - Postgraduate Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil (Special approval by the Course Examiner is required)

Precursors
Nil

Equivalent Courses
MBE6045 Industrial Case Study

Exclusive Courses
Nil

Part II Course Details

Abstract

The course aims to expose students to mainstream research and/or investigation methods for tackling practical engineering or engineering management problems in the real-life environment and developing feasible solutions for these specific problems.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Define the problem(s) and conduct analysis of causes		x	x	
2	Distinguish various research methodologies and select the appropriate method(s) for the problem(s) at hand		x	x	
3	Define the scope of project work and Formulate project proposal			x	x
4	Implement the proposal within a specific time span and report project outcomes and evaluate project success			x	x
5	Communicate the investigation process and finding, using written, oral and visual media.			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	Student centred learning activities:	There are no formal class activities such as regular lectures or tutorials. Consultation sessions with academic supervisors will be scheduled based on each student's individual progress.	1, 2, 3, 4, 5	13 week (one Semester)

2	No. 1	Students visit the company sponsoring the project and discuss with industrial advisor(s) to learn about the problem and its context. Library research should be conducted simultaneously to identify similar problems and their solutions.	1, 2, 3	
3	No. 2	Students will identify relevant methodologies for solving the problems and list the merits of each of them. Students report to academic supervisor and industrial advisor and justify their choice.	1, 2, 3	
4	No. 3	Students will start an industrial attachment at the industrial advisor's company (i.e., sponsor) and implement their proposal.	1, 2, 3, 4, 5	
5	No. 4	Students will prepare a written report which summarizes their findings and conduct an oral presentation at the end of the industrial attachment.	1, 2, 3, 4, 5	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Proposal: 1. Define the problem(s) and conduct analysis of causes 2. Distinguish various research methodologies and select the appropriate method(s) for the problem(s) at hand 3. Define the scope and the aims of project work	1, 2, 3, 5	25	-	Yes

2	Final report: Document the investigation process, the analysis, the results and conclude the findings	1, 2, 3, 4, 5	60	-	Yes
3	Presentation: Use visual media to give an oral presentation of the study.	5	15	-	Yes

Continuous Assessment (%)
100

Assessment Rubrics (AR)

Assessment Task
Proposal (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
The ability of formulating a feasible proposal

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

Assessment Task
Final report (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
The ability of reporting the entire investigation, discussing the findings and drawing the conclusions

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

Assessment Task
Presentation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion
The effectiveness of communicating the investigation process, results, findings and handling questions using oral and visual media

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

Assessment Task
Proposal (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion
The ability of formulating a feasible proposal

Excellent
(A+, A, A-) High

Good
(B+, B) Significant

Marginal
(B-, C+, C) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task
Final report (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion
The ability of reporting the entsssssire investigation, discussing the findings and drawing the conclusions

Excellent
(A+, A, A-) High

Good
(B+, B) Significant

Marginal
(B-, C+, C) Basic

Failure
(F) Not even reaching marginal levels

Assessment Task
Presentation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion
The effectiveness of communicating the investigation process, results, findings and handling questions using oral and visual media

Excellent
(A+, A, A-) High

Good
(B+, B) Significant

Marginal
(B-, C+, C) Basic

Failure
(F) Not even reaching marginal levels

Part III Other Information

Keyword Syllabus
N.A.

Reading List

Compulsory Readings

	Title
1	There are no textbooks for this course. Reading assignments will be provided by the academic supervisor and the industrial supervisor of each project.

Additional Readings

	Title
1	N.A.