Subject Description Form

<table>
<tr><td>Subject Code</td><td>BME5158</td></tr>
<tr><td>Subject Title</td><td>Advanced Topics in Health Technology</td></tr>
<tr><td>Credit Value</td><td>3</td></tr>
<tr><td>Level</td><td>5</td></tr>
<tr><td>Responsible staff & Department/School</td><td>Dr Youhua TAN (BME, Subject Coordinator)</td></tr>
<tr><td>Pre-requisite / Co-requisite/ Exclusion</td><td>Nil</td></tr>
<tr><td>Objectives</td><td>To enable students to explore specific scientific and technological areas of their interest that are related to their professional discipline or personal development.</td></tr>
<tr><td>Intended Learning Outcomes</td><td>Upon completion of the subject, students will be able to:
a. investigate further a topic in biomedical engineering and health technology, that is worth pursuing
b. demonstrate the ability for in-depth discussion in the area of the chosen topic
c. integrate the area of study with professional practice
d. critically appraise applications of the topic to professional practice</td></tr>
<tr><td>Contribution to Programme Outcomes (Refer to Part I Section 2)</td><td>Programme Learning Outcome (a): Acquire and apply advanced levels of knowledge and skills in BME professions (Teach, Practice, and Measure)

Programme Learning Outcome (b): Apply critical analysis and problem-solving skills for situations relating to their professional practice. (Teach, Practice, and Measure)

Programme Learning Outcome (d): Develop analytical and research skills that will help them incorporate evidence-based practice in the delivery of healthcare services and industry (Teach, Practice, and Measure)

Programme Learning Outcome (e): Demonstrate their abilities to continuously develop themselves in their professional practice (Teach, Practice, and Measure)</td></tr>
<tr><td>Subject Synopsis/ Indicative Syllabus</td><td>The student will choose a topic of his/her interest in biomedical engineering / health technology and discuss with a potential supervisor. When the supervisor is confirmed, the student and supervisor will establish a tailored course of study that adheres to the academic workload and assessment criteria specified for the student.</td></tr>
<tr><td>Teaching/Learning Methodology</td><td>Students will be required to undertake guided independent study in depth on a topic mutually agreed upon with the supervisor. The student will read widely on the scientific issues and, in specific areas, also in depth. Students may be arranged into small groups and share their information in presentations.
<table>
<tr><td rowspan="2">Teaching/learning methodology</td><td colspan="6">Intended subject learning outcomes</td></tr>
<tr><td>a</td><td>b</td><td>c</td><td>d</td><td></td><td></td></tr>
<tr><td>1. Guided study</td><td>√</td><td>√</td><td>√</td><td>√</td><td></td><td></td></tr>
<tr><td>2. Presentations</td><td>√</td><td>√</td><td>√</td><td>√</td><td></td><td></td></tr>
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</td></tr>
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Assessment Methods in Alignment with Intended Learning Outcomes

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed					
		a	b	c	d		
1. Tutorial participation	10 %	√	√	√			
2. Presentation	60 %		√	√	√		
3. Report	30 %			√	√		
Total	100 %						

Regular tutorials with the student (in small group) will encourage the students to read and think more deeply about the topic.

Presentation will allow students to organize his ideas and knowledge and make his thought clear to himself and the audience. It also allows interaction and discussion between the student as a presenter and the audience and this will trigger broader and deeper thoughts into the topic.

The report facilitates the integration of and reflection in the topic with professional practice, and enables students to more critically appraise the applications of the topic area to their professional practice independently.

Student Study Effort Expected		
	Class contact:	
	▪ Guided Study	6 Hrs.
	Other student study effort:	
	▪ Self-study	71 Hrs.
	▪ Assignments and presentations	40 Hrs.
	Total student study effort	117 Hrs.

Reading List and References

- Frank G. Giuseffi. Emerging self-directed learning strategies in the digital age, Hershey PA : Information Science Reference ; 2018.
- Micheal Van Wyk. Student support toward self-directed learning in open and distributed environments. Hershey PA : Information Science Reference ; 2019.
- Literature of specific topics can be accessed from the library.

Date of Last Major Revision	29 July 2021
Date of Last Minor Revision	24 June 2022

MSc in Biomedical Engineering

Application for Registration of Advanced Topics in Health Technology (BME5158)

Part I (to be completed by student)

Student Name: _____ Student Number: _____

1. Through self-study, I would like to explore into:
   (Please provide two to three areas that are of interest to you in order of preference.)

   i) _____

   ii) _____

   iii) _____

2. □ I have discussed my proposed area of study with _____
   (Name of academic staff)

   □ I have not discussed any of the areas with any academic staff.

Other comments/requests:

Signature of student: _____ Date: _____

Part II (to be signed by proposed supervisor and Subject Coordinator)

1. I agree to be supervisor of the student's study.

   Name of proposed supervisor: _____

   Signature of proposed supervisor: _____ Date: _____

2. I approve registration of the subject for the student.

   Subject Coordinator: Dr Youhua TAN

   Signature of Subject Coordinator: _____ Date: _____

This form should be submitted to BME General Office in person or by fax at 2334 2429 for subject registration after endorsed by the proposed supervisor and approved by the Subject Coordinator.