

**City University of Hong Kong  
Course Syllabus**

**offered by  
Department of Mechanical Engineering  
with effect from Semester A 2020 / 2021**

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**Part I Course Overview**

<b>Course Title:</b>	Advanced Research Topics
<b>Course Code:</b>	MNE8010
<b>Course Duration:</b>	Normally to be taken during Year 2-3 of full-time PhD candidature
<b>Credit Units:</b>	3 (1 CU per semester for 3 semesters of PhD candidature)
<b>Level:</b>	R8
<b>Medium of Instruction:</b>	English
<b>Medium of Assessment:</b>	English
<b>Prerequisites :</b> <i>(Course Code and Title)</i>	MBE8009/MNE8009 Research Methodology
<b>Precursors:</b> <i>(Course Code and Title)</i>	Nil
<b>Equivalent Courses:</b> <i>(Course Code and Title)</i>	MBE8010 Advanced Research Topics
<b>Exclusive Courses:</b> <i>(Course Code and Title)</i>	Nil

## Part II Course Details

### 1. Abstract

This course aims to provide PhD students with formal forums to -

- further broaden their research knowledge and expertise;
- learn about the recent advancement in mechanical, electro-mechanical and biomedical engineering research and methodologies
- present their research findings and discuss their learning experiences with their peers and academic staff;
- further strengthen their research mindset and scholarship and the research culture in the department.

These formal forums are in the form of regular Research Seminars which offer a cooperative learning environment in which PhD students from different cohorts and research themes can mix, interact, challenge and support each other during the very important formative years of their doctoral candidature.

### 2. Course Intended Learning Outcomes (CILOs)

No.	CILOs	Weighting (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	A2	A3
1.	<b>broaden</b> their knowledge and expertise beyond their PhD research topic		✓		
2.	<b>extend</b> their understanding of the latest trends and important developments in mechanical, electro-mechanical, and/or biomedical engineering research and methodologies		✓	✓	
3.	<b>communicate</b> with fellow peers regarding their own or others' research findings and experience scholarly and logically			✓	✓
		100%			

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 self-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.*

### 3. Teaching and Learning Activities (TLAs)

TLA	Brief Description	CILO No.			Hours/week (if applicable)
		1	2	3	
Attending Research Seminars and Technical Workshops	Each full-time PhD student is required to attend at least 15 of these research or technical seminars during their year 2 and 3 of their PhD candidature i.e. for full-time PhD students, nominally 5 seminars per semester for 3 semesters. (Part-time PhD students may be permitted to take up to three years of PhD candidature to fulfill this requirement.) Apart from the MNE research seminars, PhD students can also attend other officially sanctioned research or technical seminars held at CityU or other universities/professional institutions like HKIE, IIE, IEE, and IEEE. Participation in a relevant full-day technical workshop is equivalent to the attendance of 3 research seminars.	✓	✓		
Write-ups and reflections	Each PhD student has to present at least once (possibly with other teammates) the research progress or results to peers and faculty in class to meet the course requirements.		✓	✓	
Portfolio	Each student is required to submit a portfolio of brief write-ups and reflections of the research seminars attended and presented.	✓	✓		

#### 4. Assessment Tasks/Activities (ATs)

Assessment Tasks/Activities	CILO No.			Weighting	Remarks
	1	2	3		
Continuous Assessment:	✓	✓	✓	100%	
Examination: 0%				100%	

- The portfolio is a collection of critiques and reflections of the research seminars attended and presented.
- The assessment of the portfolio could include the student's qualifying panel's evaluation of the candidate's research seminar presentations.

## 5. Assessment Rubrics

Assessment Task	Criterion	Pass (P)	Failure (F)
Write-ups and reflections	Each PhD student has to present at least once each semester the research progress or results to peers and faculty in class to meet the course requirements. Inclusion of the relevant elements related to the research work being undertaken, quality of the report, and clarity in presenting the progress or results of the research study to peers and faculty in class.	Strong evidence of critical thinking through personal presentation, meetings with peers and faculty and the ability of self-learning for the development of their thesis proposals.	Little evidence of critical thinking and inability of development of their thesis proposals through literature review and self-learning.
Portfolio	Quality of the submitted portfolio of brief write-ups and reflections of the research seminars attended and presented.	Strong evidence for presenting the research work through write-ups with good clarity and self-consistency	Little evidence for presenting the research work through write-ups or these presentations lack good clarity and self-consistency

### **Part III Other Information**

#### **1. Keyword Syllabus**

Research design, research methodology, research progress, seminar attendance and presentation.

#### **2. Reading List**

##### **2.1 Compulsory Readings**

Nil

##### **2.2 Additional Readings**

The Presentation Secrets of Steve Jobs: How to Be Insanely Great in Front of Any Audience, Carmine Gallo, 2009.
Talk Like TED: The 9 Public-Speaking Secrets of the World's Top Minds, Carmine Gallo, 2014.

#### **Online Resources**

Online learning material is provided via University computer network.