



# INTRODUCTION TO THE TEACHING SYSTEM

PRESENTED BY:

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# FACULTY OF ENGINEERING ACADEMIC PROGRAMMES

Ensure academic programme are relevant, current, **innovative and internationally recognized** to meet national and global needs.

Continually develop academic programmes that **inspire and challenge** students to achieve their full potential.

Ensure academic programmes are **accredited** by local and international engineering professional bodies.

Continually develop programmes that are **relevant** to industrial requirements.



Deputy Vice-Chancellor (Academic & International)  
11 February 2021

Online Learning Mode will continue in

# SEMESTER II, 2020/2021

until further notice.

**Note:** The learning activities in studios, laboratories and clinical training for all accredited and professional programs i.e. Faculty of Built Environment, Faculty of Pharmacy, Faculty of Engineering, Faculty of Dentistry and Faculty of Medicine can be conducted using the hybrid method (online and face-to-face).

For details of academic calendar, please visit

<https://aasc.um.edu.my/academic-calendar>

Alternatively, please regularly visit **UM Academic & International** website at  
<https://umacademic.um.edu.my>  
for latest updates on **Teaching & Learning** activities

# ONLINE TEACHING & LEARNING STRATEGIES

All courses are designed and implemented based on the principles of ***‘Student-Centred Learning’*** that encourage students to actively participate in the learning activities.

- For example collaborative learning, problem-based learning, and other suitable teaching and learning strategies.

The design and delivery of the online teaching and learning supports and constructively aligned with the predetermined Course Learning Outcomes (CLO).

**PENYELARASAN HASIL PEMBELAJARAN KEPADA KAEDAH PENILAIAN  
ALIGNMENT OF LEARNING OUTCOMES TO ASSESSMENT**


Nama Pensyarah / Name of Lecturer : Nazatul Liana Sukiman

Kod dan Tajuk Kursus / Course Code and Title : KIG4041 Kejuruteraan Karatan / Corrosion Engineering

Sesi Akademik / Academic Session : 2019/2020

Semester: 1 / 2 / 3

HASIL PEMBELAJARAN KURSUS (CLO) COURSE LEARNING OUTCOMES (CLO)	HASIL PEMBELAJARAN PROGRAM (PLO) PROGRAMME LEARNING OUTCOMES (PLO)			STRATEGI PEMBELAJARAN LEARNING STRATEGIES	KAEDAH PENILAIAN & PEMBERATAN PENILAIAN METHOD OF ASSESSMENT & ASSESSMENT WEIGHTAGE	KRITERIA PENCAPAIAN HASIL PEMBELAJARAN KURSUS CRITERIA FOR ACHIEVEMENT OF COURSE LEARNING OUTCOME
	PLO 1	PLO 2	PLO3			
1. Huraikan pelbagai jenis karatan secara kualitatif. <i>Describe qualitatively the different forms of corrosion.</i> Tahap taksonomi: C3, A3 <i>Taxonomy level: C3, A3</i>	√			Kuliah dan tutorial <i>Lecture and tutorial</i>	Tugasan (10%), Peperiksaan (20%)  Assignment (10%), Examination (20%)	70% daripada keseluruhan pelajar mendapat sekurang-kurangnya 55% daripada markah yang diperuntukkan  <i>70% of the students achieved at least 55% of the allocated marks</i>
2. Memahami aspek kinetik karatan, termasuk Rajah Pourbaix, teori potensi bercampur dan pasif. <i>Understand the kinetic aspects of corrosion, including Pourbaix Diagram, mixed potential theory and passivity.</i> Tahap taksonomi: C4 <i>Taxonomy level: C4</i>		√		Kuliah, perbincangan dan tutorial <i>Lecture, discussion and tutorial</i>	Peperiksaan(20%) Ujian (20%)  Examination (20%) Test (20%)	70% daripada keseluruhan pelajar mendapat sekurang-kurangnya 55% daripada markah yang diperuntukkan  <i>70% of the students achieved at least 55% of the allocated marks</i>
3. Kenal pasti amalan pencegahan dan pencegahan karatan. <i>Identify practices for the prevention and remediation of corrosion.</i> Tahap taksonomi: C5, A4 <i>Taxonomy level: C5, A4</i>			√	Kuliah dan tutorial <i>Lecture and tutorial</i>	Peperiksaan (20%) Pembentangan (10%)  Examination (20%) Presentation (10%)	70% daripada keseluruhan pelajar mendapat sekurang-kurangnya 55% daripada markah yang diperuntukkan  <i>70% of the students achieved at least 55% of the allocated marks</i>



The online teaching and learning activities are implemented using **SPeCTRUM** ([spectrum.um.edu.my](https://spectrum.um.edu.my)) as UM official Learning Management System

- Teaching and learning may also occur outside of SPeCTRUM, i.e. external applications such as Quizziz, Socrative, Loom, Facebook, etc.
- Other instructional strategies: online demonstrations, virtual laboratories, simulations, video- or audio-based feedback.

**Low-tech teaching** strategies for students with limited access to internet; i.e. WhatsApp or Telegram communication channel

# ONLINE TEACHING AND LEARNING DELIVERY

Delivery of instruction can be done in a mixture of: ***synchronous*** and ***asynchronous*** learning interactions.

Students should be informed about:

- teaching and learning activities and important dates for the semester
- types of assessment and detailed weightage for each assessment
- duration and scheduling of synchronous type of assessment

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# Synchronous Learning

Teaching and learning that occur in **real time** i.e. both learner and instructor are physically or virtually present at the same time, but not in the same place.

## Strategies

- Live online lectures
- Invite guest speaker(s) to the online session
- Live teaching sessions using other communication channels including WhatsApp and Telegram.

Microsoft Teams and/or Google Meet are the **official synchronous** teaching and learning interaction tools for UM.





The lecturer to conduct synchronous sessions **within the official class schedule**. This is to avoid course clashes.

Duration of the synchronous sessions may be **flexible** and can be divided into several sections; i.e. in a 3-hour class session;

- The first hour of the session is allocated for online lecture
- The second hour is dedicated for online group discussions; and
- The third hour is for online group presentations.

Lesson materials that are delivered in synchronous mode must also be **available for student to access asynchronously**.

# Asynchronous Learning

Teaching and learning that occur **not in real time**. It can occur not only at different locations, but also at different times.

## Strategies

- Pre-recorded lectures with interactive activities
- Screencasting i.e. video recording of your computer screens
- Slidecasting i.e. audio podcasts that are combined with slideshow and learning activities
- Going through a reading list and writing reflective notes/answering online quizzes
- Creating a lesson module in SPeCTRUM and have the student to go through the learning sequence

## Tools:

- Lesson module in SPeCTRUM (i.e. quiz, wiki, forum, etc.), Edpuzzle, Microsoft PowerPoint, Loom Screencast-o-matic, Adobe Captivate, Camtasia Studio, and Jing.
- Web conferencing application such as MS Teams, Google Meet and Zoom can also be used for lecture recording.

Lecturers are required to hold **virtual office hours** and **online consultation hours** during the asynchronous weeks to ensure that students have access to the lecturers and to establish online teaching presence

# Example of Online Teaching and Learning activities

Week	Component	Suggested Activities (lecturers)	Suggested Activities (students)
Week 1	Synchronous interaction e.g. Google Meet, Zoom, etc.	<ul style="list-style-type: none"><li>• Brief students on the structure of the online course</li><li>• Conduct online (live) session</li></ul>	Participate in online (live) lecture
Week 7 to 9	Asynchronous interactions	<ul style="list-style-type: none"><li>• Share teaching and learning materials in SPeCTRUM</li><li>• Assign homework or formative assessments</li></ul>	<ul style="list-style-type: none"><li>• Self-learn using the materials provided in SPeCTRUM</li><li>• Complete and submit assigned homework or work on the formative assessments</li></ul>
Week 10	Synchronous interaction e.g. Google Meet, Zoom, etc.	<ul style="list-style-type: none"><li>• Conduct online (live) lecture</li><li>• Host live Q&amp;A or discussion session</li></ul>	Participate in online (live) lecture

Week 11 to 13	Asynchronous interactions	<ul style="list-style-type: none"> <li>• Share teaching and learning materials in SPeCTRUM</li> <li>• Assign homework or formative assessments</li> <li>• Prepare end-of-course survey about students' experiences in online teaching and learning</li> </ul>	<ul style="list-style-type: none"> <li>• Self-learn using the materials provided in SPeCTRUM</li> <li>• Complete and submit assigned homework or work on the formative assessments</li> </ul>
Week 14	Synchronous interaction e.g. Google Meet, Zoom, etc.	<ul style="list-style-type: none"> <li>• Summarize class content</li> <li>• Do a course revision with students</li> <li>• Conduct online discussion session on the topics</li> </ul>	Participate in online (live) lecture

# ATTENDANCE

It is **compulsory** for lecturers to record students' attendance throughout the semester.

## Strategies

- SPeCTRUM attendance module
- Download the attendance list when using MS Teams for online (live) classes;
- Screen capture students who are present during the online (live) classes;
- Using electronic timestamp of students' online activities such as;
  - submission of assignments, homework, lab reports, etc.
  - participation in online discussions, forums, chats, etc.

# ONLINE TEACHING AND LEARNING ASSESSMENT

## **Formative Assessment**

Monitor student learning to provide ongoing feedback that can be used by lecturers to improve their teaching and by students to improve their learning.

## **Summative Assessments**

Evaluate student learning at the end of an instructional unit by comparing it against some standard or benchmark.

Alternative Assessment				
Formative/continuous			Summative	
Dimensions				
Self-assessment	Peer assessment	Group based assessment	Performance based assessment	Portfolio based assessment
Methods				
Case study	Per review	Skills demonstration	Performance	Essay
Online Quiz	Infographic	Short video	Portfolio of works	
			Learning reflections	Interview
			Sketchbook	Poster
			Oral presentation	Video presentation
			Online discussion	Studio/lab/clinical works
			Project work	

Mode of assessment can be the conventional method but **re-purposed to be conducted online**; i.e. online quiz, interview, written reflection, report writing etc.





#StayEngaged



Below are some essential links for you on various connected with community, researchers and get help if you need. You can find more resources and links under each sub-section

### General

E-Learning / E-Meeting

Microsoft Teams [View](#) | Lark [View](#) | Zoom [View](#)

Video Guide / Tutorial

A. Microsoft Office 365

1. Email guide [View](#)
2. How to sign up [View](#)
3. How to access OneDrive [View](#)

B. Microsoft Azure

1. Click on how to download the application [View](#)

### FAQ

- [FAQ Q&A](#)
- [FAQ ICT FTM](#)
- [FAQ U&A MED](#)
- [FAQ Perumahan](#)

### Software & Application

Software & Remote Access


Installation Guide

[View](#)

For Remote Access please submit your VPN request via the following

### Academic (teaching & Learning)

Academic, Instructional and Academic Development Centre (ADeC)  
Faculty of Engineering

**SPECTRUM**  
Enriching Learning To Give... *Wawasan, Wawasan*

**UMEXPERT**

For more info and links, please visit:

<https://engine.um.edu.my/stayengaged>



THANK YOU

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**GOOD LUCK!**