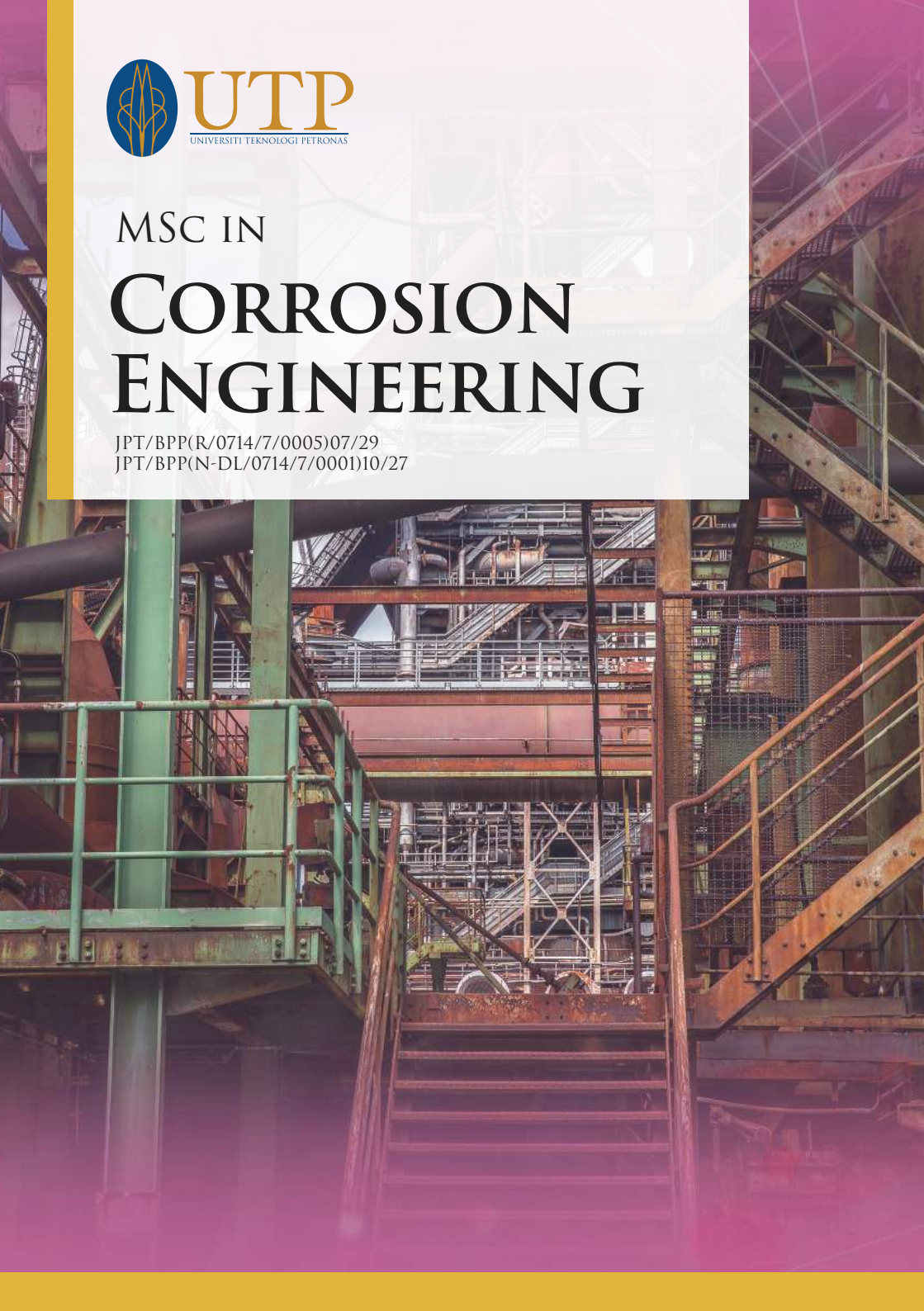
UTP
UNIVERSITI TEKNOLOGI PETRONAS

MSc in
Corrosion Engineering

JPT/BPP(R/0714/7/0005)07/29
JPT/BPP(N-DL/0714/7/0001)10/27



Energising future value chain's course

Corrosion inflicts damage to numerous key industries such as utilities, transportation, infrastructure, asset and manufacturing. According to a 2016 National Association of Corrosion Engineers (NACE) study, the cost of managing corrosion was US$2.5 trillion worldwide, equating to 3.4% global Gross Domestic Product (GDP). And investing in corrosion control can save global industries between 15 to 35% (USD375 - 875 Billion) of their operating cost. However, these savings are hindered by a lack of competency to embed the latest corrosion management technologies and practices. The first in South East Asia, MSc in Corrosion Engineering at UTP was jointly developed with industry expert panels to offset the industry's talent shortage. Ultimately, the programme seeks to build a future workforce of impact-driven professionals in corrosion control and management. At UTP, students will experience world class lab facilities such as electrochemistry and high pressure high temperature autoclave, multiphase flow loop/TCFC, MIC labs under our Centre for Corrosion Research.

Building a talent pipeline of corrosion control professionals!

Benefit from learning objectives tied to the contours of reality-based industry situations and changes

Join a leading feeder university for the corrosion management industry!

Get in touch with the latest industry thinking.

Grow your industry perspective with subjects grounded in day-to-day industry challenges, opportunities and outcomes.

Learn how to leverage real industry data and research evidence to provide solutions through cutting edge technology tools and management techniques.

Who is the programme for?

Currently, global industries are being reconfigured as people and new Industry 4.0 driven technologies collaborate. At the heart of the next industrial revolution, corrosion management professionals will be a key cog to improve critical sectors, such as oil and gas, utilities and transportation's operations. Against this background, innovative and resourceful corrosion control professionals will be highly sought after to spur a strong growth in corrosion management performance.

4 reasons to join MSc in Corrosion Engineering in UTP!

1 Modular-based programme jointly developed with PETRONAS' industry expert panels!

Reap the benefits of an industry-backed programme that supports the global mission of the industry!

2 Leverage our vast industry network!

Grow your technical expertise through industry-specific projects with any one of our renowned industry partners.

3 Get a sneak peek at the future with maximum industry exposure!

Boost your industry preparedness and take advantage of a diverse range of career opportunities.

4 **World class corrosion labs**

- High pressure, high temperature autoclave, multiphase flow loop lab
- Electrochemistry lab
- TCFC & MIC labs
- Corrosion under insulation lab
- Coating test lab
- Stress corrosion cracking lab
- Characterisation lab

APPLY NOW

The industry is our classroom

1	Curriculum jointly developed with PETRONAS' industry expert panels and well-known corrosion control institutions as well as experts.
2	Programme subjects delivered by senior industry experts and adjunct lecturers.
3	Project-based assignments: Capture real industry-derived analytical data resources.

Get your hands in the industry with our vast network

Benefit from our close collaborations with a wide range of industry partners mapped across our curriculum development and adjunct lecture series.

Course structure

Candidates are required to complete all credit hours as below:
Full Time 41 credit hours
Full Time (ODL) 40 credit hours

Full Time (Conventional)

Category	Module	Credit Hour
Core	Principles of Corrosion	4
	Engineering Materials Fundamentals and Selection	4
	Corrosion Control, Monitoring and Management	4
	Corrosion Inhibition, Cathodic Protection and Protective Coating	3
	Engineering Failure Analysis and Inspection	3
Electives (Choose 2)	Oilfield and Process-related Corrosion	3
	Pipeline Corrosion Management	3
	Microbiologically Influenced Corrosion	3
	High Temperature Corrosion	3
University Requirement	Data Analytics	3
	Project Management	2
National Requirement	Research Methodology	2
Project	Industrial-Based Project 1	3
	Industrial-Based Project 2	7
TOTAL		41

Full Time ODL

Category	Module	Credit Hour
Core	Principles of Corrosion	4
	Engineering Materials Fundamentals and Selection	3
	Corrosion Control, Monitoring and Management	4
	Corrosion Inhibition, Cathodic Protection and Protective Coating	4
	Engineering Failure Analysis and Inspection	3
Electives (Choose 2)	Oilfield and Process-related Corrosion	3
	Pipeline Corrosion Management	3
	Microbiologically Influenced Corrosion	3
	High Temperature Corrosion	3
University Requirement	Data Analytics	3
	Project Management	2
National Requirement	Research Methodology	2
Project	Industrial-Based Project I	3
	Industrial-Based Project II	6
TOTAL		40

As per requirement by Malaysian Qualification Agency (MQA), candidates coming from non-discipline into MSc in Corrosion Engineering programme (such as sciences) have to take TWO pre-requisite courses before enrolling for the MSc programme. The two pre-requisite courses are (1) Dynamics and (2) Heat Transfers

Mode of study

Conventional

Minimum 12 months
Maximum 36 months

Flexible arrangement for Full Time Open and Distance (ODL) Learning mode:

- 100% online with self-instructional materials (SIMS)
- 8 hours minimum of online live class session for each course per semester
- Classes after working hours/over the weekend
- Online open book final exam

Medium of Instruction

English

Intake

January/May/September

Entry requirements

Academic

1	Bachelor's Degree in a relevant field from a recognised university with a minimum CGPA of 2.50 or its equivalent OR;
2	Bachelor's Degree in a relevant field from a recognised university with a minimum CGPA of 2.00 - 2.49 or its equivalent will require 5 years of working experience and internal rigorous assessment.
3	Bachelor's Degree from different discipline, must undergo pre-requisite courses in Engineering or Engineering Technology.
4	No Bachelor's Degree? Apply with your working experience. Candidates who satisfy APEL A requirements are eligible to enrol. Scan the QR code to learn more.

APEL A

English language proficiency

International students are required to be proficient in written and spoken English with a minimum TOEFL score of 500 OR a minimum IELTS score of 5.0 or its equivalent.

Exemptions may be provided for candidates who are native English speakers or degree holders with English as the medium of instruction.

Graduation requirements

In order to graduate with MSc in Corrosion Engineering degree, candidate is required to:

1	Obtain a minimum cumulative grade point average (CGPA) of 3.00
2	Satisfy all the requirements approved by UTP Senate
3	Fulfill the required credit hours and pass Research Methodology course

Tuition fees

	Local	International
Application Fee	RM50	RM200 / USD50

Registration as a student

Bond	None	RM3,000
Registration Fee	RM500	RM1,400
Commitment Fee	RM500	RM800
Total	RM1,000	RM5,200

Commitment throughout studies

Semester Fee	RM400		RM400	
Tuition Fee	**Conventional**	**ODL**	**Conventional**	**ODL**
	28,350	21,900	37,400	28,800

Rankings & ratings

2022 SETARA COMPETITIVE

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THE World University Rankings 2025 WORLD TOP 250

RANKED 53 QS WORLD UNIVERSITY RANKINGS ASIA IN THE TOP 100 2025

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For admission enquiry:

www.utp.edu.my

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Universiti Teknologi PETRONAS, 32610 Seri Iskandar, Perak Darul Ridzuan, Malaysia

For further details on the application, visit www.utp.edu.my

UTPOfficial

** As of January 2025*