MSC IN
Corrosion Engineering
JPT/BPP(N/527/7/0021)07/24
For programme enquiry:

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

* As at 30 June 2020
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 PETRONAS SKG 15 and 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 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

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 deep-tech collaborations with the industry. In addition to PETRONAS and Shell, we work closely with a wide range of process safety companies such as Company A and Company B for curriculum development and industry attachment placements.
## Course Structure

Candidates are required to complete total of 40 credit hours. The programme’s curriculum structure is as follows:

<table>
<thead>
<tr>
<th>Categorys</th>
<th>Modules</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core</td>
<td>Principles of Corrosion</td>
<td>4</td>
</tr>
<tr>
<td>Core</td>
<td>Engineering Materials, Fundamentals and Selection</td>
<td>4</td>
</tr>
<tr>
<td>Core</td>
<td>Corrosion Control and Management System</td>
<td>4</td>
</tr>
<tr>
<td>Core</td>
<td>Cathodic Protection and Protective Coating</td>
<td>4</td>
</tr>
<tr>
<td>Core</td>
<td>Engineering Failure Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Core</td>
<td>Corrosion Inhibition</td>
<td>3</td>
</tr>
<tr>
<td>Electives (Choose 2)</td>
<td>Oilfield and Process-related Corrosion</td>
<td>3</td>
</tr>
<tr>
<td>Electives (Choose 2)</td>
<td>Microbiologically Influenced Corrosion</td>
<td>3</td>
</tr>
<tr>
<td>Electives (Choose 2)</td>
<td>High Temperature Corrosion</td>
<td>3</td>
</tr>
<tr>
<td>Electives (Choose 2)</td>
<td>Pipeline Corrosion Management</td>
<td>3</td>
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<tr>
<td>University Requirement</td>
<td>Research Methodology</td>
<td>2</td>
</tr>
<tr>
<td>Project</td>
<td>Industrial-Based Project</td>
<td>10</td>
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<tr>
<td>TOTAL</td>
<td></td>
<td>40</td>
</tr>
</tbody>
</table>

## Mode of study

### Conventional

<table>
<thead>
<tr>
<th>Minimum</th>
<th>12 months</th>
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<tbody>
<tr>
<td>Maximum</td>
<td>36 months</td>
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</tbody>
</table>

On-demand tailored weekend programme

Busy working? Fret not. Special weekend classes can be arranged by the faculty to accommodate your busy schedule.

## 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.

2. Bachelor’s Degree in a relevant field from a recognised university with a CGPA of 2.00 - 2.49 or its equivalent will require 5 years of working experience and internal rigorous assessment.

3. Apply with your working experience. Candidates who satisfy APEL A requirements are eligible to enrol. Scan the QR code to learn more.

Applications with other relevant qualifications can also be considered subject to research and working experience as well as candidates’ capability to satisfy study requirements.

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 are required to:

1. Obtain a minimum cumulative grade point average (CGPA) of 3.00

2. Satisfy all the requirements approved by UTP Senate

Tuition fees

<table>
<thead>
<tr>
<th></th>
<th>Malaysian</th>
<th>International</th>
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</thead>
<tbody>
<tr>
<td>Conventional</td>
<td>RM39,500</td>
<td>RM40,000</td>
</tr>
<tr>
<td>Resource (every semester)</td>
<td>RM400</td>
<td>RM400</td>
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<tr>
<td>Registration</td>
<td>RM500</td>
<td>RM1,400</td>
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<tr>
<td>Commitment</td>
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<td>RM800</td>
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<tr>
<td>Personal bond</td>
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