



# Satuan Acara Pengajaran

ENMT801205 - Prinsip Korosi

Pengajar

*Dr. Ir. Rini Riastuti M.Sc.*

## Minggu 1

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**Materi** Pengantar SAP, Pendahuluan

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**Media** LCD, Lap Top

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**Referensi**

1. Piron.DI, The Electrochemistry of Corrosion, NACE
2. Jones Denny A, Principle and Prevention of CORROSION, Mc Milan
3. Marcel Pourbaix, Atlas of Pourbaix

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**Aktivitas**

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## Minggu 2

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**Materi** Aspek Elektrokimia pada Proses Korosi

- Konsep Elektroda
- Konsep Sel Elektrokimia pada proses korosi
- Reference Electrode

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**Media** idem

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**Referensi** Piron, DI, The Electrochemistry of corrosion

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**Aktivitas**

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## Minggu 3

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**Materi** Aspek Termodinamika Korosi  
- Prediksi kecenderungan Korosi  
- Persamaan NERNST  
- Diagram Eh - pH

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**Media**

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**Referensi** 1. Piron DI, Electrochemistry of Corrosion, NACE  
2. M Pourbaix, Atlas of Pourbaix

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**Aktivitas** - Latihan D Pourbaix

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## Minggu 4

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**Materi** 1. Lanjutan Pourbaix Diagram  
- Aplikasi Diagram Pourbaix pada bidang Korosi  
  
2. Kinetika Korosi  
- menghitung Corrosion Rate dengan metoda Kehilangan berat, polarisasi, kurva Evans- Tafel

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**Media** idem

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**Referensi**

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**Aktivitas** - Konstruksi diagram Pourbaix  
  
- Latihan menghitung corrosion Rate through Weight Loss Methods

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## Minggu 5

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**Materi** 1. Review : Elektrokimia, Termodinamika dan Kinetika Korosi  
  
2. Lanjutan Kinetika Korosi (Mixed Potential Theory)

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**Media** idem

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**Referensi** Jones

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**Aktivitas**

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## Minggu 6

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**Materi** Metalurgical Aspect

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**Media** idem

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**Referensi** Sandvik

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**Aktivitas** Kuliah Tamu

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## Minggu 7

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**Materi** 1. Diagram Tafel, Pasivasi  
2. Jenis Korosi 1. ( Uniform Corr, Galvanic Corr, Localized Corr)

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**Media** idem

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**Referensi** Jones

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**Aktivitas**

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## Minggu 8

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**Materi** UJIAN TENGAH SEMESTER

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**Media**

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**Referensi**

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**Aktivitas**

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## Minggu 9

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**Materi** Lanjutan Jenis Korosi. (EIC, Environmental Induced Cracking)

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**Media** idem

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**Referensi**

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**Aktivitas** Kuliah + Studi kasus

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## Minggu 10

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**Materi** Lanjutan Jenis Korosi. HIC in pipe line corrosion

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**Media** idem

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## Referensi

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**Aktivitas** Visiting Lecturer  
Discussion

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## Minggu 11

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**Materi** -Jenis Korosi Lanjutan

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**Media** idem

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**Referensi** Jurnal terkait

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**Aktivitas** Presentasi Mahasiswa 1

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## Minggu 12

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**Materi** Jenis Korosi

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**Media** idem

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**Referensi** Jurnal Terkait

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**Aktivitas** Presentasi Mahasiswa 2

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## Minggu 13

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**Materi** Inspection dan corrosion Testing

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**Media** idem

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**Referensi**

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**Aktivitas** Kuliah

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## Minggu 14

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**Materi** Pengantar Proteksi Korosi  
-Electrokimia Proteksi Korosi (CP, Inhibitor dan Coating)

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**Media** idem

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**Referensi** M Asworth, Cathodic Protection  
Sastri, Inhibitor

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**Aktivitas** Kuliah

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Minggu 15

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**Materi** UJIAN AKHIR

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**Media**

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**Referensi**

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**Aktivitas** UJIAN

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