



# Satuan Acara Pengajaran

ENMT800005 - Karakterisasi Material + Lab

Pengajar

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## Minggu 1

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**Materi** Pengenalan SAP  
INTRODUKSI:  
- Penjelasan SAP, Sistem Perkuliahan & penilaian  
- Pengantar Pengujian Material

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**Media** LCD

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**Referensi** Untuk DT :

1. Davis, H.E, Troxell, G.E, Hauck, GFW. ?The Testing of Engineering Materials?, 1982
2. John, V.B, Engineering Materials, Macmillan, 1990
3. G.E. Dieter, Mechanical Metallurgy, 3rd edition, McGraw-Hill, 1986

Untuk NDT & SEM / TEM / XRD  
? Davis, H.E, Troxell, G.E, Hauck, GFW. ?The Testing of Engineering Materials?, 1982  
? Cullity, B.D. ? An Introduction of X-ray Diffraction?  
? Hearle, JWS, Sparrow, JT, Cross PM, ?The Use of SEM?, Pergamon, 1972  
? Louis Cart, ?Non Destructive Testing?, ASM, 1995  
? ASM : Metallography

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**Aktivitas**

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## Minggu 2

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**Materi** - Peranan Pengujian  
- Klasifikasi Sifat Material Teknik

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**Media** LCD

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**Referensi** ? Davis, H.E, Troxell, G.E, Hauck, GFW. ?The Testing of Engineering Materials?, 1982

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**Aktivitas**

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### Minggu 3

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**Materi** - Signifikansi Pengujian Material  
- Spesifikasi Material Teknik  
- Badan-badan Standarisasi Pengujian  
- Prosedur Pengujian & Penyajian Hasil Uji

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**Media** LCD

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**Referensi** ? Davis, H.E, Troxell, G.E, Hauck, GFW. ?The Testing of Engineering Materials?, 1982

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**Aktivitas** Kuliah and assignment

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### Minggu 4

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**Materi** Advanced Metalography,  
Optical Microscope dan microstructural nalysis  
SEM

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**Media** LCD

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**Referensi** ? Hearle, JWS, Sparrow, JT, Cross PM, ?The Use of SEM?, Pergamon, 1972

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**Aktivitas** Kuliah dan diskusi

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### Minggu 5

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**Materi** Managemen, Analisa Data & Laporan (Report)

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**Media** LCD

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**Referensi**

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## Aktivitas

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### Minggu 6

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**Materi** lanjutan and assignment

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**Media** LCD

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**Referensi**

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**Aktivitas**

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### Minggu 7

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**Materi** Review Sifat-sifat Mekanik Material

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**Media** LCD

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**Referensi**

1. Davis, H.E, Troxell, G.E, Hauck, GFW. ?The Testing of Engineering Materials?, 1982
2. John, V.B, Engineering Materials, Macmillan, 1990
3. G.E. Dieter, Mechanical Metallurgy, 3rd edition, McGraw-Hill, 1986

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**Aktivitas** Kuliah dan diskusi

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### Minggu 8

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**Materi** Uji tarik, Kekerasan dan Impak

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**Media** LCD

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**Referensi**

1. Davis, H.E, Troxell, G.E, Hauck, GFW. ?The Testing of Engineering Materials?, 1982
2. John, V.B, Engineering Materials, Macmillan, 1990
3. G.E. Dieter, Mechanical Metallurgy, 3rd edition, McGraw-Hill, 1986

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**Aktivitas** Diskusi dan presentasi

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### Minggu 9

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**Materi** Microstructure Analysis

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**Media** LCD

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**Referensi**

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**Aktivitas**

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Minggu 10

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**Materi**      Advanced Metalografi, SEM, EDAX

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**Media**        LCD

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**Referensi**

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**Aktivitas**

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Minggu 11

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**Materi**        Review NDT

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**Media**        LCD

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**Referensi**    ? Louis Cart, ?Non Destructive Testing?, ASM, 1995

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**Aktivitas**    Kuliah dan diskusi

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Minggu 12

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**Materi**        TEM and preparation, XRD

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**Media**        LCD

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**Referensi**    Journal, paper

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**Aktivitas**

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