



# Satuan Acara Pengajaran

ENEF802005 - Divais Solid State

Pengajar

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*Prof. Dr. Ir. Djoko Hartanto M.Sc*

## Minggu 1

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**Materi** Review Semiconductor Technology

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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## Minggu 2

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**Materi** Understanding Bipolar Devices Concept on: device structure, carrier concentrations, tunnelling, avalancing, device operation

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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## Minggu 3

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**Materi** Understanding Unipolar Devices Concept on: device structure, carrier concentrations, tunnelling, avalancing, device operation

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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#### Minggu 4

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**Materi** Understanding Heterostructure Device concept on: device structure, band diagram, device operation

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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#### Minggu 5

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**Materi** Presentation assignment-1: to master the self-study capability and presentation technique

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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#### Minggu 6

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**Materi** Presentation assignment-2: to master the self-study capability presentation technique

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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## Minggu 7

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**Materi** "Presentation assignment-3: to master the self-study capability presentation technique"

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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## Minggu 8

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**Materi** Middle Test

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**Media** Lembar Ujian

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Ujian

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## Minggu 9

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**Materi** Understanding the quantum-well phenomenon on Heterostructure Device

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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## Minggu 10

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**Materi** Understanding Microwave Concept on: device structure, microwave phenomenon and device operation

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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## Minggu 11

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**Materi** Understanding Lasing Concept on: device structure, lasing phenomenon and device operation

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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## Minggu 12

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**Materi** Understanding Sensing Concept on: device structure, sensing phenomenon and device operation

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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## Minggu 13

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**Materi** Seminar-1: to master the design and operation of special device

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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## Minggu 14

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**Materi** Seminar-2: to master the design and operation of special device

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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## Minggu 15

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**Materi** Seminar-3: to master the design and operation of special device

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**Media** PPT

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Tatap muka dan diskusi

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## Minggu 16

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**Materi** Final Test

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**Media** Lembar Ujian

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**Referensi** S. M. Sze, & Kwok K. NG "Physics of Semiconductor Devices," John Wiley & Sons, Hoboken New Jersey, Canada, 2007

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**Aktivitas** Ujian

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