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|  | **RENCANA PEMBELAJARAN SEMESTER GANJIL 2017/2018** |
|  | **PROGRAM STUDI SISTEM INFORMASI FAKULTAS ILMU KOMPUTER** |
|  | **UNIVERSITAS ESA UNGGUL** |
|  |
| **Mata kuliah** | **:** | System Engineering | **Kode MK** | **:** | XXXxxx |
| **Mata kuliah prasyarat** | **:** | 1. -
 | **Bobot MK** | **:** | 3 sks |
| **Dosen Pengampu** | **:** | DR. Ir. Husni S. Sastramihardja | **Kode Dosen** | **:** |  |
| **Alokasi Waktu** | **:** | Tatap muka 14 x 100 menit, ada tugas latihan menyusun contoh proposal, tidak ada online  |
| **Deskripsi Ringkas** | **:** | *System Engineering as a state of thinking, System engineering as a profession, the power of system engineering, system engineering landscape, perspective of system engineering, system enginering fields, system engineering appraches, system engineering activities and products, structures and hierarchy of complex system, system environment and boundaries: the context diagram, intreface and interaction, complexity in modern systems, enterprise system engineering, System development process, system engineering life cycle, system engineering method, system engineering management,*  |
| **Capaian Pembelajaran** | **:** | 1. understand the concept and methodology of system engineering (SE) in general;
2. have experience in conducting a simple exploration of a system
 |
| **Buku Acuan** | **:** | Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011 |

| **SESI** | **KEMAMPUAN****AKHIR** | **MATERI** **PEMBELAJARAN** | **BENTUK PEMBELAJARAN**  | **SUMBER** **PEMBELAJARAN** | **INDIKATOR****PENILAIAN** |
| --- | --- | --- | --- | --- | --- |
| **1** | Student understand the idea of system engineering (SE) for Undergraduate Student | *Introduction:* *Course Plan;**System Engineering (SE) as a state of thinking,*  | 1. Methode: *contextual instruction*
2. Media : class room, computer, *LCD, whiteboard,*
 | Alexander Kossiakoff, et al, John Wiley and Sons, Inc, 2011, Chapter 1 | Describe what is first view of SE |
| **2** | Student know about the *profession and the power of SE,*  | *SE as a profession, the power of SE*  | 1. Methode: *contextual instruction*
2. Media : class room, computer, *LCD, whiteboard,*
 | Alexander Kossiakoff, et al, John Wiley and Sons, Inc, 2011, Chapter 1 | Describe what is the profession of SE |
| **3** | Student understand the *landscape, perspective and system enginering fields,* | *Landscape, perspective system enginering fields,*  | 1. Methode: *contextual instruction*
2. Media : class room, computer, *LCD, whiteboard,*
 | 1. Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011
 | Describe what is *Landscape, perspective system enginering fields,* |
| **4** | Student understand the *approaches, activities and product of system engineering,* | *system engineering approaches, system engineering activities and products,*  | 1. Methode: *contextual instruction*
2. Media : class room, computer, *LCD, whiteboard,*
 | 1. Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011
 | Describe what is the *approaches, activities and product of system engineering,* |
| **5** | Student understand the *structures of complex system and hierarchy of complex system* | *structures of complex system, hierarchy of complex system,*  | 1. Methode: *contextual instruction*
2. Media : class room, computer, *LCD, whiteboard,*
 | 1. Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011
 | Describe what is *structures of complex system, hierarchy of complex system* |
| **6** | Student understand the *system building blocks and system environment* | *system building blocks, system environment* | 1. Methode: *contextual instruction*
2. Media : class room, computer, *LCD, whiteboard,*
 | 1. Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011
 | Describe what is *system building blocks and system environment* |
| **7** | Student understand the *system boundaries and the context diagram,* | *system boundaries: the context diagram,*  | 1. Methode: *contextual instruction*
2. Media : class room, computer, *LCD, whiteboard,*
 | 1. Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011
 | Describe what is the *system boundaries and the context diagram* |
| **8** |  | *Mid-semester Examination* |  |  |  |
| **9** | Student has experience in exploring *types of environmental interactions,interface and interaction,* | *types of environmental interactions,interface and interaction, ,* | 1. Methode: *contextual instruction*
2. Media : class room, computer, *LCD, whiteboard,*
 | 1. Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011
 | Describe the comprehension of *types of environmental interactions,interface and interaction* |
| **10** | Student could understand the *complexity in modern systems and enterprise system engineering*  | *complexity in modern systems, enterprise system engineering,*  | 1. Methode: *contextual instruction*
2. Media : class room, computer, *LCD, whiteboard,*
 | 1. Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011
 | Describe about the *complexity in modern systems, enterprise system engineering* |
| **11** | Student could uderstand and define a *System development process, system engineering life cycle, system engineering method, system engineering management* | *System development process, system engineering life cycle, system engineering method, system engineering management* | 1. Methode: *contextual instruction*
2. Media : class room, computer, *LCD, whiteboard,*
 | 1. Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011
 | Describe how to develop a system |
| **12** | Presentation of the result of exploration | Discussion and Presentation |  | 1. Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011
 | Present and explain the argument |
| **13** | Presentation of the result of exploration | Discussion and Presentation |  | 1. Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011
 | Present and explain the argument |
| **14** | Presentation of the result of exploration | Discussion and Presentation |  | 1. Alexander Kossiakoff, William N. Sweet, Samuel J. Seymour, Steven M. Biemer, John Wiley and Sons, Inc, 2011
 | Present and explain the argument |

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**Mengetahui,**

**Ketua Program Studi, Dosen Pengampu,**

**Nama dan tanda tangan Nama dan tanda tangan**

**EVALUASI PEMBELAJARAN**

| **SESI** | **PROSE-DUR** | **BEN-TUK** | **SEKOR > 77** **( A / A-)** | **SEKOR > 65****(B- / B / B+ )** | **SEKOR > 60****(C / C+ )** | **SEKOR > 45****( D )** | **SEKOR < 45****( E )** | **BOBOT** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | *Pre test* | Non test | Describe what is the view of system engineering and could make a specific example | Describe what is the view of system engineering and could make a broad example | Describe what is the view of system but could not make an example | Could not distinguish the system even in broad sense | Not capable to describe what is the object  |  |
| 2 | *Progress test* | Non test | Describe what is the profession of SE, and could make some examples in detail | Describe what is the profession of SE, and could make an example | Describe what is the profession of SE, and could make an example | Could not describe what is the profession of SE, and do not know any example | Do not have the idea about the profession of SE,  | 5 |
| 3 | *Progress test* | Non test | Describe what is *Landscape and perspective of system enginering fields* | Describe what is the *Landscape and perspective of system enginering fields*; and could make an example  | Describe what is the the *Landscape or perspective of system enginering fields* | Could not describe what is the the *Landscape and perspective of system enginering fields*;  | Do not have the idea about the the *Landscape and perspective of system enginering fields*; | 5 |
| 4 | *Progress test* | Non test | Describe what is the *approaches, activities and product of system engineering,* | Describe what is the *approaches, activities and product of system engineering* | Describe what is the *approaches, activities and example of product of system engineering* | Could not describe what is the *approaches, activities and product of system engineering* | Do not have the idea about the *approaches, activities and product of system engineering* | 5 |
| 5 | *Progress test* | Non test | Describe what is *structures of complex system, and hierarchy of complex system* | Describe what is *structures and example of complex system,*  | Describe what is *structures of complex system, but do not have any example* | Could not describe what is *structures of complex system,*  | Do not have any idea of *structures of complex system* | 5  |
| 6 | *Progress test* | Non test | Describe what is *system building blocks and system environment in comprehensive way* | Represent *system building blocks and system environment* and could make an example | Represent *system building blocks and system environment*  | Could not represent *system building blocks and system environment* | Do not have the idea about the *system building blocks and system environment*  |  |
| 7 | *Progress test* | Non test | Describe what is the *system boundaries and the context diagram* | Describe what is the *system boundaries and the context diagram* and could make an example | Describe what is the *system boundaries and the context diagram* | Could not describe what is the  | Do not have any idea about the *system boundaries and the context diagram* |  |
| 8 | *Post test* | UTS |  |  |  |  |  | 30 |
| 9 | *Progress test* | Non test | Describe the comprehension of *types of environmental interactions,interface and interaction* | Describe the *types of environmental interactions,interface and interaction* | Describe the *types of environmental interactions and interface*  | Could not describe the *types of environmental interactions and interface* | Do not have the idea about the *types of environmental interactions and interface* | 5 |
| 10 | *Progress test* | Non test | Describe about the *complexity in modern systems, enterprise system engineering* | Represent concept of *complexity in modern systems, enterprise system engineering* | Describe example of *complexity in modern systems, enterprise system engineering* | Could not describe *complexity in modern systems, enterprise system engineering* | Do not have idea about *complexity in modern systems, enterprise system engineering* | 5 |
| 11 | *Progress test* | Non test | Describe how to develop a system in comprehensive way | Describe how to develop a simple system | Describe how to develop a simple system and an example | Could not describe how to develop a simple system | Do not have idea about how to develop a simple system |  |
| 12 | *Progress test* | Non test | Present and explain the argument sytematicaly | Present and explain the argument | Present and explain example of the argument | Could not describe and explain the argument | Do not have idea about the argement |  |
| 13 | *Progress test* | Non test | Present and explain the argument sytematicaly | Present and explain the argument | Present and explain example of the argument | Could not describe and explain the argument | Do not have idea about the argement |  |
| 14 | *Post test* | UAS | Present and explain the argument sytematicaly | Present and explain the argument | Present and explain example of the argument | Could not describe and explain the argument | Do not have idea about the argement | 40 |

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Bobot penilaian

Tugas : 30%

UTS : 30%

UAS : 40%