|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **UNIVERSITAS NEGERI PADANG**  **FACULTY OF ENGINEERING**  **Department of Electronic Engineering** | | | | | | | | | | | **Document Code** | | |
| **SEMESTER LEARNING PLAN** | | | | | | | | | | | | | | | |
| **Course** | | | | | | **Code** | | **Course Field** | | **Credits** | | **SEMESTER** | | **Compilation Date** | |
| **Computer Equipment Maintenance** | | | | | | TIK1.61.3304 | | Study Program Compulsory Courses | | 2 CP (Lab) | | 3 | | July 2017 | |
| **AUTHORIZATION** | | | | | | **Course Lecturers** | | | | **Course Coordinator** | | **Head of Study Program** | | | |
| **Drs. Legiman S, MT**  **NIP. 19621231 198811 100 5** | | | | **Thamrin, M.T.**  **NIP. 19770101 200812 100 1** | | **Ahmaddul Hadi, M.Kom**  **NIP. 19761209 200501 100 3** | | | |
| **Learning Outcomes** | | | **Learning Outcomes (LO)** | | |  | | | | | | | | | |
| LO – S1 | Devote to God Almighty, Pancasila minded, and aware of the interest of the nation. | | | | | | | | | | | |
| LO – S9 | Have responsibility, confidence, emotionally mature, ethics, and lifelong learner principle. | | | | | | | | | | | |
| LO – PP15 | Have profound knowledge in a theory of (pure) multimedia as the core and able to apply the theory to solve problems related to graphic design and 3D animation. | | | | | | | | | | | |
| LO – KK15 | Ability to create multimedia products and graphic products using various design methods and technologies. | | | | | | | | | | | |
|  |  | | | | | | | | | | | |
| **Course Outcomes (CO)** | | | |  | | | | | | | | |
| CO1 | Able to describe the services provided in the operating system | | | | | | | | | | | |
| CO2 | Able to distinguish between single thread and multi-thread | | | | | | | | | | | |
| CO3 | Identify multiple scheduling algorithms on CPU realtime | | | | | | | | | | | |
| CO4 | Able to explain basic concepts of hardware I/O and I/O interface | | | | | | | | | | | |
|  |  | | | | | | | | | | | |
| **Course Description** | | | It is a fundamental material at Universitas Komputer Indonesia with the hope that all students can understand the performance of a PC, know the components of a PC, understand the functions of each component, be able to install hardware and software, be able to detect computer problems, be able to solve computer problems (Troubleshooting), understand the types of computers and computer applications, and utilize internal and external windows utilities. | | | | | | | | | | | | |
| **Course Materials** | | | 1. Computer History, Basic Concepts of Computer Hardware, Types and Specifications of Computer Hardware, Computer Hardware Installation, Hard disk Partition, Installation of the operating system windows, Installation of applications in windows, Basic Concepts of Networks, Servers and network clients, network topology, TCP/IP, Computer Maintenance and Repair | | | | | | | | | | | | |
| **Reading List** | | | **Main Books:** | | |  | | | | | | | | | |
| 1. PC Assembly Practicum Module, Electronics Lecturer Team  2. Guidebook, Team of Electronics Lecturers | | | | | | | | | | | | |
| **Additional Books:** | | |  | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Learning Media** | | | **Software:** | | | | | | | **Hardware:** | | | | | |
| ppt, word app, seperangkat PC | | | | | | | LCD & Projector | | | | | |
| **Course Lectures** | | | Drs. Legiman S, MT | | | | | | | | | | | | |
| **Recommended prerequisites** | | | - | | | | | | | | | | | | |
| **Week** | **Sub-Learning Outcomes** | | | | **Assessment Indicators** | | | **Criteria & Assessment Form** | **Learning Method & Assignment**  **[Estimated time]** | | **Learning Content & Course Materials [Reading List]** | | | | **Weighted Value**  **(%)** |
| **(1)** | **(2)** | | | | **(3)** | | | **(4)** | **(5)** | | **(6)** | | | | **(7)** |
| 1-5 | Students can explain understanding the Basic Components of computers and the mechanisms of work between  Components  Understanding the functions of each  Basic Computer Components  Understanding the Computer Hardware Device Installation Process | | | | 1. Accuracy explaining Know the history of computer development  Accuracy explained Able to explain the basic components of computer hardware 2. Accuracy explaining Able to explain the main components contained in the Mainboard 3. Accuracy explains Understanding the mechanism of work of each relationship between components of computer hardware 4. Accuracy explaining Able to explain the function of each computer hardware 5. Accuracy explainIng Able to recognize the specifications and characteristics of each computer hardware 6. Accuracy explaining Able to explain the steps and preparation needed during the installation of computer hardware (assembling a computer) | | | **Form:**   1. Quiz 2. Assignment | 1. Presentation 2. Online 3. Practice   TM : 5x ( 2 x 100 Minutes)   1. Structured Assignments   BM+BT : 5 x (2x70 Minutes) | | 1. Computer History  2. Basic Concepts  3. Computer Hardware  Types and Specifications  4. Computer Hardware  Hardware Installation  Computer | | | | **25%** |
| 6-7 | Students can describe software installation (Windows Application)  Understand about software and technical installation of windows on the computer Know the application of internal and external tools  Windows | | | | 1. Accuracy explaining Capable of partitioning and installing windows operating system 2. Accuracy explainIng Able to install application tools in windows operating system 3. Accuracy explaining the type of operating system and applications running windows operating system 4. Accuracy explaining Know the types of application tools and anti-virus to repair/maintain the operating system windows 5. Accuracy explains the installation process of Windows operating system | | | **Form:**   1. Quiz 2. Assignment | 1. Presentation 2. Online 3. Practice   TM : 2 x (2 x 100 Minutes)   1. Structured Assignments   BM+BT : 2x(2x70 Minutes) | | 1. Hard disk partition  2. Installation of windows operating system  3. Installation of applications in windows | | | | **25%** |
| **8** | **UTS / Mid Test** | | | |  | | |  |  | |  | | | |  |
| 9-11 | Students can describe Know the main components of network hardware Know the UTP cable Know the RJ45 connector  Get to know network tools  (creaming pliers and  LAN Tester) | | | | 1. Understand the basic concepts of computer networks 2. Accuracy describes installing server and client computers 3. Accuracy of explaining applying network topology in building a computer network 4. Accuracy of explaining and applying TCP/IP in the process of computer network development | | | **Form:**   1. Quiz 2. Assignment | 1. Presentation 2. Online 3. Practice   TM : 3 x ( 2 x 100 Minutes)   1. Structured Assignments   BM+BT : 3 x (2 x 70 Minutes) | | 1. Basic Concepts of Networking 2. Network server and client network topology 3. TCP/IP | | | | **25%** |
| 12-14 | Students can describe the symptoms of computer problems and computer troubleshooting techniques | | | | 1. Accuracy explains recognizing and analyzing problems - problems that occur on the computer 2. Accuracy explains providing solutions in solving computer problems 3. Accuracy explain Understand the technology of computer hardware maintenance and repair | | | **Form:**   1. Quiz 2. Assignment | 1. Presentation 2. Online 3. Practice   TM : 3 x (2 x 100 Minutes)   1. Structured Assignments   BM+BT : 3 x (2x70 Minutes) | | Computer Maintenance and Repair | | | | **15%** |
| 15 | Students can describe  development and  computer technology | | | | Accuracy explains applying the knowledge that has been obtained in completing case studies in the field | | | **Form:**   1. Quiz 2. Assignment | 1. Presentation 2. Online 3. Practice   TM : 1x(2 x 100 Minutes)   1. Structured Assignments   BM+BT : 1 x ( 2 x70 Minutes) | | Case Test | | | | **10%** |
| 16 | **Final Test** | | | | | | | | | | | | | | |