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|  | | **UNIVERSITAS NEGERI PADANG**  **FACULTY OF ENGINEERING**  **ELECTRONIC DEPARTMENT**  **INFORMATIC EDUCATION STUDY PROGRAM** | | | | | | | | | | | **Document Code** | | |
| **SEMESTER LEARNING PLAN (SLP)** | | | | | | | | | | | | | | | |
| **COURSES** | | | | | | **CODE** | | **Course Group** | | **Credit Point(s)** | | **SEMESTER** | | **Date Of Creation** | |
| **Practicum Object Oriented Programming** | | | | | | TIK.61.3302 | | Study Program Compulsory Courses | | 2 credits (practice) | | 3 | | July 2017 | |
| **AUTHORIZATION** | | | | | | **Lecturer** | | | | **Course Coordinator** | | **Coordinator of Study Program** | | | |
| **VeraIrma Deliyanti,S.Pd., M.Pd.T** | | | | **Thamrin, MT**  **NIP. 19770101 200812 100 1** | | **Ahmaddul Hadi, M.Kom**  **NIP. 19761 209 200 501 100 3** | | | |
| **Learning Outcomes (LO)** | | | **PLO** | | |  | | | | | | | | | |
| PLO-S1 | Have faith in God Almighty and able to show a religious attitude. | | | | | | | | | | | |
| PLO-S9 | Demonstrate an attitude of responsibility for work in their field of expertise independently | | | | | | | | | | | |
| PLO-PP6 | Understand the basic concepts of mathematics, electrical and electronic science in the field of computers | | | | | | | | | | | |
| PLO-KU5 | able to make decisions appropriately in the context of problem solving in their area of ​​expertise, based on the results of information and data analysis. | | | | | | | | | | | |
| PLO-KK6 | Ability to master the basic Python programming, Gauss computation method and LU Decomposition method computation | | | | | | | | | | | |
| **CO** | | | |  | | | | | | | | |
| CO-1 | Understand describe about Java (JDK, JRE, JVM), OOP, IDE | | | | | | | | | | | |
| CO-2 | Understand and describe the basic syntax of Java programming | | | | | | | | | | | |
| CO-3 | Understand, describe, apply Java Variables & Data Types | | | | | | | | | | | |
| CO-4 | Understand, describe, apply Java Operators | | | | | | | | | | | |
| CO-5 | Understand how to apply Java Decision Making | | | | | | | | | | | |
| CO-6 | Implement the Java Loop | | | | | | | | | | | |
| CO-7 | Applying Java Array & String | | | | | | | | | | | |
| **Course Description** | | | This course studies the Concept of Object Oriented Programming (OOP), and its application in solving a particular problem using a programming language. This course studies Java Programming, OOP, IDE and Installation, Java Basic Syntax, Java Variables & Data Types, Java Operators, Java Decision Making, Java Loop, Java Array & Strings, Java Class & Object, Java Functions & Methods, Inheritance, Polymorphism, Abstraction, Encapsulation .. | | | | | | | | | | | | |
| **Course Matter** | | | 1. Java programming, 2. OOP, 3. IDE, and Installation, 4. *Java Basic Syntax*, 5. *Java Variables & Data Types,* 6. *Java Operators,* 7. *Java Decision Making,* 8. *Java Loop, Java Array & String,* 9. *Java Class & Object,* 10. *Java Functions & Methods,* 11. *Inheritance,* 12. *Polymorphism,* 13. *Abstraction,* 14. *Encapsulation.* | | | | | | | | | | | | |
| **References** | | | **Main:** | | |  | | | | | | | | | |
| 1. Cipta Ramadhani. 2015. Dasar Algoritma & Struktur Data dengan Bahasa Java. Yogyakarta: ANDI. 2. Denny Kurniadi. 2017. Pemrograman Berorientasi Objek dengan Bahasa Pemrograman Java. Padang: UNP. | | | | | | | | | | | | |
| **Supporting:** | | |  | | | | | | | | | |
| 1. Wu, C. Thomas. 2010. *An Introduction to Object–Oriented Programming with Java 5th Edition.* C. USA: McGraw – Hill Education. 2. Nemeyer, Patrick and Luck, *Daniel.* 2013. *Learning Java 4th Edition*.O’Reilly 3. Sharan, Kishori. 2014. *Beginning Java 8 Fundamentals*. Apress. Schildt, Herbert. 2014. *Java: The Complete Reference 9th Edition*. McGraw – Hill Education. | | | | | | | | | | | | |
| **Media** | | | **Software:** | | | | | | | **Hardware :** | | | | | |
| Netbeans IDE, ppt, word app | | | | | | | LCD & Projector | | | | | |
| **Lecturer** | | | **VeraIrma Deliyanti,S.Pd., M.Pd.T** | | | | | | | | | | | | |
| **Prerequisites** | | | - | | | | | | | | | | | | |
| **Weeks-** | **Sub-CO**  **(Expected Final Ability in each learning stage)** | | | | **Assessment Indicator** | | | **Assessment Criteria** | **Learning Method, Students’ Learning Experience**  **[Time Allocation]** | | **Learning Material**  **[Topic from Reference]** | | | | **Score (%)** |
| **(1)** | **(2)** | | | | **(3)** | | | **(4)** | **(5)** | | **(6)** | | | | **(7)** |
| 1-2 | Students are able to describe Java (JDK, JRE, JVM), OOP, IDE, and install and configure Java and IDE, then create, compile, run, analyze errors from a simple Java program using the IDE. | | | | 1. Accuracy explains the introduction of OOP, Java: JDK, JRE, JVM, IDE, and Installation. | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 2x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 2x (2x70 Minutes)** | | 1. Introduction and Lecture Contract 2. Introduction to OOP, Java: JDK, JRE, JVM, IDE, and Installation. | | | | **5%** |
| 3 | Students are able to describe the basic syntax of Java programming using an IDE. | | | | 1. Accuracy of explaining Java Basic Syntax | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | Java Basic Syntax | | | | **5%** |
| 4 | Students are able to describe, apply Java Variables & Data Types in programming algorithms to solve certain problems with Java programming using an IDE | | | | 1. Accuracy explained *Java Variables* 2. Accuracy explained *Data Types* | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | 1. *Java Variables & Data Types* | | | | **5%** |
| 5 | Students are able to describe, apply Java Operators in programming algorithms to solve certain problems with Java programming using an IDE | | | | 1. Accuracy explained *Java Operators* | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | 1. *Java Operators* | | | | **5%** |
| 6 | Students are able to describe, apply Java Decision Making in programming algorithms to solve certain problems with Java programming using an IDE | | | | 1. Accuracy explained *Java Decision Making* | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | *Java Decision Making* | | | | **5%** |
| 7 | Students are able to describe, apply the Java Loop in programming algorithms to solve certain problems with Java programming using an IDE | | | | 1. Accuracy explained *Java Loop* | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | *Java Loop* | | | | **5%** |
| **8** | **Mid-Term Mid-Term Exam: Formative evaluation that is intended to improve the learning process based on the assessment that has been carried out** | | | | | | | | | | | | | |  |
| 9 | Students are able to describe, apply Java Array & String in programming algorithms to solve certain problems with Java programming using an IDE. | | | | 1. Accuracy explained *Java Array & String* | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | *Java Array & String* | | | | **10%** |
| 10 | Students are able to describe, apply Java Class & Object in programming algorithms to solve certain problems with Java programming using an IDE. | | | | 1. Accuracy explained *Java Class & Object* | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | 1. *Java Class & Object* | | | | **10%** |
| 11 | Students are able to describe, apply Java Functions & Methods in programming algorithms to solve certain problems with Java programming using an IDE. | | | | 1. Accuracy explained *Java Function & Method* | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | 1. *Java Function & Method* | | | | **10%** |
| 12 | Students are able to describe, apply Inheritance in programming algorithms to solve certain problems with Java programming using an IDE. | | | | 1. Accuracy explained *Inheritance* | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | *Inheritance* | | | | **10%** |
| 13 | Students are able to describe and apply Polymorphism in Java programming using an IDE. | | | | Accuracy explained *Polymorphism* | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | *Polymorphism* | | | | **10%** |
| 14 | Students are able to describe and apply Abstraction in Java programming using an IDE. | | | | Accuracy explained *Abstraction* | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | *Abstraction* | | | | **10%** |
| 15 | Students are able to describe and apply Encapsulation in Java programming using an IDE. | | | | Accuracy explained *Encapsulation* | | | Using the Assessment Rubric | 1. Presentation 2. Online 3. Practice   **TM: 1x (2 x 100 Minutes)**   1. Structured Assignments   **BM + BT: 1x (2x70 Minutes)** | | *Encapsulation* | | | | **10%** |
| **16** | **UAS / Semester Final Examination: Evaluation which is intended to determine the final achievement of student learning outcomes** | | | | | | | | | | | | | |  |