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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.*
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| **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.
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| **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** |  |