**SEMESTER LEARNING PLAN** 

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| **Courses** | **Course Code** | **Field Course** | **Credits** | **Semester in** | **Editorial Date** |
| Visual Programming | TIK199 | Required course |  2 Credits (Practice) | 4  | Juli 2017 |
| **Authorization**  | **Lecturer Team** | **Courses Coordinator** | **Head of Learning Center** |
| 1. Yeka Hendriyani, S.Kom., M.Kom
2. Rizkayeni Marta, S.Pd, M.Pd.T.
 | **Yeka Hendriyani, S.Kom., M.Kom****NIP.** 198405202010122003 | **Ahmaddul Hadi, S.Pd,M.Kom****NIP. 197612092005011003** |
| **Learning Outcomes (LO)** | **Learning Outcomes (LO)- University** |
| S8 | Internalizing academic values, norms and ethics |
| S9 | Demonstrate an attitude of responsibility for work in their field of expertise independently. |
| P3 | Able to formulate various real problems based on concepts related to the field of information and programming. |
| KU1 | Able to apply logical, critical, systematic and innovative thinking in the context of developing or implementing science and technology that pays attention to and applies humanities values by their field of expertise. |
| 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. |
| KU9 | Capable of documenting, storing, securing, and recovering data to ensure validity and prevent plagiarism |
| KK1 | Able to apply information technology to solve real problems in the era of the industrial revolution 4.0. |
| **Subject Learning Outcomes** |
| CPMK1 | Students can recognize and use basic components in Visual Java, able to create new Projects, Packages and Forms. able to create simple programs with the NetBeans IDE 6.5 |
| CPMK2 | Students can recognize and use basic components in Visual Java (jButton, jTextField, jTextArea) |
| CPMK3 | Students can recognize and use basic components in Visual Java (jRadioButton, jButtonGroup, |
| CPMK4 | Students can recognize and use basic components in Visual Java (jComboBox). |
|  | CPMK5 | Students can recognize and use basic components in Visual Java (jList). |
|  | CPMK6 | Students can create Projects, Packages, and New Forms. And able to create and complete programs using arithmetic operations. |
|  | CPMK7 | Students can create and complete programs using all existing components and by existing regulations. |
|  | CPMK8 | Students can connect Java with MySQL, Students can save data to MySQL via the NetBeans GUI |
|  | CPMK11 | Students can create programs that are equipped with a database |
|  | CPMK12 | Students can make print buttons in the application. |
|  | CPMK13 | Students can print data in the application via available printers. |
|  | CPMK14 | Students can create multiuser login forms Students can create an admin and user forms in one program |
| **Course Description** | This course provides students with an understanding of the concept of visual programming, as well as providing basic skills to use it. |
| **Learning materials** | 1. GUI with Java NetBeans 6.5
2. Basic Visual Components
3. Advanced Visual Components
4. Java MySQL connection
5. Program With Database
6. Print Files
7. MultiUser Login Form

8. Executable files |
| **References** | **Core References** |
| 1. Wahana Komputer. 2010. Membangun GUI dengan Java Netbeans 6.5. Andi . Yogyakarta.
2. Wahana Komputer. 2010. Pengembangan Aplikasi Database Berbasis JavaDB dengan Netbeans. Andi .Yogyakart
3. Alb.V.Dian Sano, 2005. 24 Jam Menguasai HTML, JSP dan MySQL .Andi.Yogyakarta.
4. Ir. Yuniar Supardi, 2002. Semua Bisa Menjadi Programmer Web Java Basic. Elek Media Komputindo. Jakarta.
5. L.N. Harnaningrum, 2009. Algoritma dan Pemrograman Menggunakan Java. Graha Ilmu. Yogyakarta.
6. Rosa A.S, 2010. Modul Pembelajaran Pemrograman Berorientasi Objek. Modula. Bandung.
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| **Learning Media** | **Software Needs** | **Hardware Needs** |
| 1. Java 2 SDK → jdk-1\_5\_0\_07-windows-i586-p.exe)
2. Editor: NetBeans 6.5 and above
 | Laptop, LCD & Projector |
| **Lecturer** | Visual Programming Lecturer Team |
| **Course Requirements** | No |

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| **Lecture to** | **Sub of Lecture Outcomes** | **Assessment Indicators** | **Criteria & Form of Assessment** | **Criteria & Form of Assessment****[ Estimated time]** | **Learning materials** **[References]** | **Percentage of Assessment (%)** |
| **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** |
| 1 | Students can recognize and use basic components in Visual Java, able to create new Projects, Packages and Forms. able to create simple programs with the NetBeans IDE 6.5 | a) The accuracy of using basic visual components in java.b) Accuracy in making skillsc) Simple programming, and create new Project, Package and Forms with the NetBeans IDE. | Criteria:Grading criteria rubricNon-test form:● Practice creating new Project, Package and Form Report practice; | **Lectures and Discussions** **[TM: 1x(3x100”)]**Task-1a: create a simple program to display a bio.Task-1b: create a simple program to activate a key based on the number type.**[BT+BM:(1)x(3x70”)]** | GUI dengan Java NetBeans 6.5 | **10** |
| 2 | Students can recognize and use basic components in Visual Java (jButton, jTextField, jTextArea) | Accuracy in craftsmanshipprogram and Implementation(jButton, jTextField, jTextArea) onapplication. | Criteria:Grading criteria rubricNon-test form:● Practice creating a simple program to change the background colour;● Practice reports; | **Lectures and Discussions** **[TM: 1x (3x100”)]*** Task-2a: create a simple program to change the background colour.
* Task-2b: create a simple program using predefined basic visual components.

**[BT+BM:(1)x(3x70”)]** | Basic Visual Components | **15** |
| 3 | Students can recognize and use basic components in Visual Java (jRadioButton, jButtonGroup, jCheckBox, jDateChooser) | Accuracy in craftsmanshipprogram and Implementation(jRadioButton, jButtonGroup, jCheckBox, jDateChooser) onapplication. | Criteria:Grading criteria rubricNon-test form:● Practice making Student Biodata programs using basic visual components;● Practice reports; | **Lectures and Discussions**  **[TM: 1x(3x100”)]**Task-3: Make a Student Biodata program using predetermined basic visual components. **[BT+BM:(1)x(3x70”)]** | Basic Visual Components | **15** |
| 4 | Students can recognize and use basic components in Visual Java (jComboBox). | Accuracy in craftsmanshipprogram and Implementation(jComboBox) .on application. | Criteria:Grading criteria rubricNon-test form:● Practice making the main menu form and linking them to the exercises that have been made.● Practice reports; | **Lectures and Discussions**  **[TM: 1x(3x100”)]*** Task-4a: create the main menu form and link it to the training that has been made.
* Task-4b: create a form using all the visual components that have been learned; jLable, jTextfield, jRadioButton, jCheckBox, jComboBox, jDateChooser then added 3 jbuttons for print, close, and clear.

 **[BT+BM:(1)x(3x70”)]** | Basic Visual Components | **5** |
| 5 | Students can recognize and use basic components in Visual Java (jList). | Accuracy in craftsmanshipprogram and Implementation(jList) .onapplication. | Criteria:Grading criteria rubricNon-test form:● Practice making forms using all visual components that have been learned and worked on according to their respective creativity.● Practice reports; | **Lectures and Discussions**  **[TM: 1x(3x100”)]*** Task-5: create a form using all visual components that have been studied and worked on according to their respective creativity.

 **[BT+BM:(1)x(3x70”)]** | Basic Visual Components |  |
| 6 | Students can create Projects, Packages, and New Forms. And able to create and complete programs using arithmetic operations. | Accuracy in craftsmanshipThe program uses arithmetic operations. | Criteria:Grading criteria rubricNon-test form:● Practice making simple programs with predefined input components;● Practice reports; | **Lectures and Discussions**  **[TM: 1x(3x100”)]****●** Task-6a: create a simple program with predefined input components.● Task-6b: create a simple program with predefined input components. **[BT+BM:(1+1)x(3x60”)]** | Arithmetic Operations | **5** |
| 7 | Students can create and complete programs using all existing components and by existing regulations. | Accuracy in Programming Skills by applying all predetermined basic visual components. | Criteria:Grading criteria rubricNon-test form:● Practice making a program to calculate pook salary, allowances, overtime pay, and net salary;* Practice reports;
 | **Lectures and Discussions**  **[TM: 1x(3x100”)]**● Task-7: make a calculation program for pook salary, allowances, overtime pay, and net salary. **[BT+BM:(1)x(3x70”)]** | Arithmetic Operations | **15** |
| 8 | **Mid-Semester Evaluation: Validating the results of the assessment, evaluating and improving the subsequent learning process** |  |
| 9 | Students can connect Java with MySQL, Students can save data to MySQL via the NetBeans GUI | 1. Accuracy in using database skills in creating applications using Java.
2. The accuracy in connecting java skills with MySQL.

c) Accuracy in the skills of storing data to MySQL via the NetBeans GUI | Criteria:Grading criteria rubricNon-test form:● Practice creating a java connection program with MySQL;* Practice reports;
 | **Lectures and Discussions**  **[TM: 1x(3x70”)]**● Task-9: create a java connection program with MySQL**. [BT+BM:(1)x(3x70”)]** | Java MySQL connection | **30** |
| 10 | Students can create programs that are equipped with a database | 1. Accuracy in using database skills in creating applications using Java.
2. The accuracy in connecting java skills with MySQL.
3. Accuracy in the skills of storing data to MySQL via the NetBeans GUI
 | Criteria:Grading criteria rubricNon-test form:● Practice making programs for futsal field rental with the database.* Practice reports;
 | **Lectures and Discussions**  **[TM: 1x(3x100”)]**● Task-10: create a program to rent futsal court with the database**. [BT+BM:(1)x(3x70”)]** | Program With Database |  |
| 11 | Students can create programs that are equipped with a database | 1. Accuracy in using database skills in creating applications using Java.
2. The accuracy in connecting java skills with MySQL.
3. Accuracy in the skills of storing data to MySQL via the NetBeans GUI
 | Criteria:Descriptive rubricTest form:● Presentation of applications madeNon-test form:* Project report document
 | **Lectures and Discussions**  **[TM: 1x(3x100”)]**Task 11: create a program for leasing futsal courts with a database. **[BT+BM:(1)x(3x70”)]** | Program With Database |  |
| 12 | Students can create programs that are equipped with a database | 1. Accuracy in using database skills in creating applications using Java.
2. The accuracy in connecting java skills with MySQL.

c) Accuracy in the skills of storing data to MySQL via the NetBeans GUI | Criteria:Grading criteria rubricNon-test form:● Practice making programs for futsal field rental with the database. And add 2 jbuttons for Update and Delete;* Practice reports;
 | **Lectures and Discussions**  **[TM: 1x(3x100”)]**● Task: create a program to rent futsal court with the database. And add 2 jbuttons for Update and Delete. **[BT+BM:(1)x(3x70”]** | Program With Database |  |
| 13 | Students can make print buttons in the application.Students can print data in the application via available printers. Students can save data in the application in pdf format. | 1. Accuracy in the skills of making print buttons in the application.
2. Accuracy in skills to create programs that can print data in the application via the available printers. And save the data in the application in pdf format.
 | Criteria:Grading criteria rubricNon-test form:● Practice adding a print button for each exercise using the database;* Practice reports;
 | **Lectures and Discussions** **[TM: 1x(3x100”)]**● Task13: add a print button for each exercise that uses the database. **[BT+BM:(1)x(3x70”]** | Printing Files  |  |
| 14 | Students can create multiuser login forms Students can create an admin and user forms in one program | 1. Accuracy in programming skills equipped with multiuser login.
2. Accuracy in the skills to create an admin and user forms in one program
 | Criteria:Grading criteria rubricNon-test form:● Practice creating a new multiuser program whose users consist of an admin and 5 users;* Practice reports;
 | **Lectures and Discussions** **[TM: 1x(3x100”)]****●** Task 14: create a new multiuser program whose users consist of an admin and 5 users. **[BT+BM:(1)x(3x70”]** | MultiUser Login Form |  |
| 15 | Students can change the .java existence program to .exe. Students can make the program run without using an editor tool | 1. Accuracy in the skills to change the program existence.java to.exe.
2. The accuracy in running the program skills using the tool editor
 | Criteria:Grading criteria rubricNon-test form:● Practice making 3 .exe files from programs that have been completed in the previous job sheet.● Practice reports; | **Lectures and Discussions** **[TM: 1x(3x100”)]**Task15: create 3 .exe files from programs that have been completed in the previous job sheet. **[BT+BM:(1)x(3x70”]** | File Executable |  |
| 16 | Students can design Information Systems with their respective creativity and use all the components that have been learned.Students can load the Information System by using all the components that have been learned. Students can run the Information System they have made. | The accuracy in the skills to make a system using all the components that have been learned, and run the system. | Criteria:Grading criteria rubricNon-test form:● The practice of designing an information system consisting of several frames using all the visual components that have been learned. Use the database to hold all the data that has been inputted;* Practice reports;
 | **Lectures and Discussions**  **[TM: 1x(3x100”)]*** Task 16: design an information system consisting of several frames using all the visual components that have been learned. Use the database to store all the data that has been inputted. **[BT+BM:(1)x(3x70”]**
 | Application creation |  |
| **17** | **Final Semester Evaluation: Validating the final assessment and determining student graduation** |  |

**Padang, juli 2017**

 **Editorial Date**

 **Head of Learning Center**

 **Yeka Hendriyani, S.Kom., M.Kom**

 **NIP.** 198405202010122003