



**YOGYAKARTA STATE UNIVERSITY
FACULTY OF MATHEMATICS AND NATURAL SCIENCE**

LESSON PLAN

**FRM/FMIPA/063-00
1 April 2010**

1. Faculty /Study Program : Mathematics and Science/Mathematics Education
2. Course & Code : Computer Application, MAA311
3. Credit : Theory : 2 sks Practice: 1 sks
4. Semester/Time : IV Time: 100 minutes
5. Basic competence : Students are able to make a program to solve mathematics problem that contain selection condition in MATLAB
6. Indicator :
Student can:
 - make a program to solve loop problem using switch-case command in MATLAB
 - explain the difference of usage of if-elseif-end command and switch-case command
7. Essential Concepts : Computer application for handle selection condition problems using switch-case command in MATLAB
8. Learning Activity : 27

Component	Detail Activity	Time	Method	Media	References	Character
Opening	<ul style="list-style-type: none"> • Lecturer greets the students and asks some students to tell some important points of the topic in the last meeting • Lecturer describes its relation to the next topic. 	5'	Explanation and Discussion	Computer, LCD	A:75	Thinking logically, critically, creatively, and innovatively
Main Activities	<ul style="list-style-type: none"> • Students try the commands to solve a problem using switch-case command by following the instruction in handout • In pair, students discuss the difference between if-elseif-end and switch-case command. • After 50 minutes, Lecturer ask students to make a group of 4 (2 pairs) to share their discussion results. • Lecturer facilitate students if they have some problems or questions about the topic 	80'	Explanation Demonstration, Discussion, practice, group work			Caring about social matters and environment Appreciative of works and achievements of others

Closure	<ul style="list-style-type: none"> Students get opportunity to visit the other group to share and compare their result. Students present their conclusion <p>Lecturer asks students to share their conclusion about the topic</p>	10'				
Follow up	Students get assignment to find or create their own problem to be solved using switch-case command	5'				

Learning Activity : 28 (practice, 1 sks practice = 100')

Component	Detail Activity	Time	Method	Media	References	Character
Opening	Lecturer greets students and asks some students to tell the main idea of last topic, and delivers a lab sheet	5'	Explanation and Discussion	Computer, worksheet		Thinking logically, critically, creatively, and innovatively
Main Activities	<ul style="list-style-type: none"> Students exchange their problem as the result of assignment in the last meeting Students work in a pair to solve their friend problems, i.e. to make some script m-file using switch-case command. Students share their results 	80'	Practicum using computer, by self/in a group		worksheet / quiz	Caring about social matters and environment Appreciating diversity Appreciative of works and achievements of others
Closure	Lecturer gives feedback to the result of students' work	10'	Explanation			
Follow up	Lecturer gives motivation to the students to explore the all discussed material by themselves	5'	Explanation			

9. Assessment

Quiz:

Write a script using switch-case command with the input and output as stated below:

The input are 2 numbers and 1 operator (+, -, /, *).

The output is a number as arithmetic operation of the 2 numbers using the operator.

10. Reference

Compulsory:

- A. Sri Andayani, Handout of Computer Application, FMIPA UNY 2009

Additional:

- B. Hanselman, D. & Littlefield, B. 2000. Mastering MATLAB, A Comprehensive Tutorial and Reference. Prentice-Hall International, Inc.
- C. <http://www.matworks.com/access/helpdesk/help/>
- D. <http://www.math.siu.edu/matlab/tutorial2.pdf>

Yogyakarta, 21 December 2010
Professor,

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