1. Faculty /Study Program : Mathematics and Natural Science/Mathematics Education
2. Course / Code   : Computer Programming, MAA 319
3. Credit : Theory : 2   Practice : 1
4. Semester/Time : Sem: V,  Time : 2 x 100 minutes
5. Basic Competence : Students are able to compose a program to solve a problem using Records
6. Indicator :
   ➢ Students are able to explain the difference between Record and other data types
   ➢ Students are able to use record data type to compose a program
7. Essential Concepts : RECORDS
8. Learning Activity : 25

<table>
<thead>
<tr>
<th>Component</th>
<th>Detail Activity</th>
<th>Time</th>
<th>Method</th>
<th>Media</th>
<th>References</th>
<th>Character</th>
</tr>
</thead>
</table>
| Opening        | • Lecturer greets the students  
• Lecturer asks some students to review the previous topic | 5’   | Explanation and Discussion   | Computer, LCD  | A:40-41, B.1, B.3  | Thinking logically, critically, creatively, and innovatively |
| Main Activities| • Lecturer explains the concepts of records  
• Lecturer gives example of a program using records  
• Students get the chance to try the program example using computer  
• In pair, students discuss to get the right program  
• Students share their result to others | 75’  | Explanation Demonstration, Discussion, practice, group work |                |                     | Caring about social matters and environment |
| Closure        | • Student and lecturer conclude the entire materials  
• Lecturer gives assignment | 10’  |                              |                |                     |                                             |
| Follow up      | Students are asked to study next topic and find many resources about them in the Internet | 10’  |                              |                |                     |                                             |
### Learning Activity : 26 (practice, 1 sks practice = 100’)

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Opening</td>
<td>Lecturer greets students, tells the objective of the meeting and deliver a lab sheet</td>
<td>5’</td>
<td>Explanation and Discussion</td>
<td>Computer, worksheet</td>
<td>worksheet / quiz</td>
<td>Thinking logically, critically, creatively, and innovatively</td>
</tr>
<tr>
<td>Main Activities</td>
<td>Students practice and do exercises to compose a program to solve problem in records</td>
<td>80’</td>
<td>Practice, by self/in a group</td>
<td>worksheet / quiz</td>
<td></td>
<td>Caring about social matters and environment</td>
</tr>
<tr>
<td>Closure</td>
<td>Lecturer gives feedback to the result of students’ work</td>
<td>10’</td>
<td>Explanation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Follow up</td>
<td>Lecturer describes the introduction of the next material Students are supposed to read the next material in handout and explore the Internet.</td>
<td>5’</td>
<td>Explanation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Assessment
Write down a program to calculate the GPA of student which has identity such as name, student_id, study program. the data includes some the name of courses have taken by student and its mark.

10. References
A. Compulsory :

B. Additional
2. [http://pascalprogramming.byethost15.com](http://pascalprogramming.byethost15.com)
3. [http://www.taovue.com](http://www.taovue.com)
4. [http://www.geocities.com/SiliconValley/Horizon/5444/](http://www.geocities.com/SiliconValley/Horizon/5444/)

Yogyakarta, 23 August 2010
Lecturer,

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