UNIVERSITAS NEGERI YOGYAKARTA
FACULTY OF MATHEMATICS AND NATURAL SCIENCES
DEPARTMENT OF PHYSICS EDUCATION
PHYSICS STUDY PROGRAM
Colombo St. Number 1 Yogyakarta 55281
Telephone (0274)565411 Ext. 217, fax (0274) 548203
Web: http://fisika.fmipa.uny.ac.id/, E-mail: fisika@uny.ac.id

Bachelor of Physics **MODULE HANDBOOK**

Module name:	Measurement Systems
Module level, if applicable:	Bachelor Programme
Code:	FSK6340
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	
Module coordinator:	Agus Purwanto, M.Sc.
Lecturer(s):	Agus Purwanto, M.Sc.
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective Course
Teaching format / class hours per week during the semester:	150 minutes lectures and 180 minutes structured activities per week.
Workload:	Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes individual work to complete the project per week for 16 weeks.
Credit points:	3 SKS (4.86 ECTS)
Prerequisites course(s):	-
Course Outcomes	Students completing this course would be able to:

<table>
<tr><td></td><td>CO1. Understand the meaning of measurement systems
CO2. Identify the components of the measurement systems
CO3. Characterize the sensor as the front end of measurement system
CO4. Characterize the signal conditioning components
CO5. Characterize the display component
CO6. Design, assembly and realize one measurement system (as the end of semester Project)</td></tr>
<tr><td>Content:</td><td>This course discusses the basic concepts of measurement systems, general components of measurement systems (in block diagram), sensor characteristics, the need for signal conditioning components, and the component to display the result of measurement. As the end of semester Project, each student should design, assembly and realize one measurement system on his/her choice.</td></tr>
<tr><td>Study / exam achievements:</td><td>Assessment is carried out at each meeting by observing the progress of understandings and achievements of each student to realize the chosen measurement system. Each student should present his/her progress in every meeting of each week. At the end of semester each student should present the final report and to demonstrate the performance of the realize measurement system.

The final grade will be weighted as follow:
<table>
<tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr>
<tr><td>1</td><td>CO1, CO2, CO3, CO4 and CO5</td><td>Individual Assignments</td><td>Presentation of Progress Reports</td><td>40%</td></tr>
<tr><td>2</td><td>CO6</td><td>The measurement system realized</td><td>Presentation</td><td>60%</td></tr>
</table>
</td></tr>
</table>

				of Final Report and The Performance of Measurement System Built	
				Total	100%
Forms of media:	Board, LCD Projector, Laptop/Computer				
Literature:	Bentley, John P., Principles of Measurement Systems, 4th Ed. (Pearson Education Limited, 2005)				

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8
CO1		✔						
CO2		✔						
CO3			✔					
CO4					✔	✔		
CO5					✔	✔		
CO6						✔	✔	