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MODULE HANDBOOK

Module name	**Industrial Automation**
Module level	Undergraduate
Code	MII-3312
Courses (if applicable)	**Industrial Automation**
Semester	Fall (Odd)
Contact person	Dr. R. Sumiharto, S.Si., M.Kom
Lecturer	Dr. R. Sumiharto, S.Si., M.Kom
Language	Bahasa Indonesia
Relation to curriculum	Undergraduate degree program, mandatory, 6th semester
Type of teaching, contact hours	Lectures, < 60 students, 180 minutes
Workload	1. Lectures: 3 x 50 = 150 minutes (2 hour and 30 minutes) per week. 2. Exercises and Assignments: 3 x 50 = 120 minutes (2 hours and 30 minutes) per week. 3. Private study: 3 x 60 = 180 minutes (3 hours) per week.
Credit points	3 credit points (sks)
Requirements according to the examination regulations	A student must have attended at least 75% of the lectures to sit in the exams
Mandatory prerequisites	MII 1303
Learning outcomes and their corresponding PLOs	After completing this module, a student is expected to: CO-1 Students understand the basic concept of instrumentation in the industry and recognize the control system in an industrial instrumentation. CO-2 Students understand the characteristics of each instrumentation device. CO-3 Students understand the process of automation in the industry. CO-4 Students are able to analyze the needs of sensors and transducers associated with instrumentation in the industry. CO-5 Students are able to analyze the needs of sensors and transducers and control systems related to industrial automation. CO-6 Students are able to make simulations of an industrial automation system.

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<tr><th colspan="2">PLO</th><th>CO 1</th><th>CO 2</th><th>CO 3</th><th>CO 4</th><th>CO 5</th><th>CO 6</th></tr>
<tr><td rowspan="5">Program Learning Outcome (PLO)</td><td>PLO1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PLO2</td><td>√</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>PLO3</td><td></td><td>√</td><td>√</td><td></td><td></td><td></td></tr>
<tr><td>PLO4</td><td></td><td></td><td>√</td><td>√</td><td>√</td><td></td></tr>
<tr><td>PLO5</td><td></td><td></td><td></td><td></td><td></td><td>√</td></tr>
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<tr><td>Content</td><td>This course sstudents are given concepts and descriptions of instrumentation and automation processes in the industry. Study various things related at each stage of the industrial automation process.</td></tr>
<tr><td>Study and examination requirements and forms of examination</td><td>

Quizzes (2)
Assignments (2)
Project
Mid-term examination
Final examination

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<tr><td>Media employed</td><td>LCD, whiteboard, websites (eLisa).</td></tr>
<tr><td>Assessments and Evaluation</td><td>
<table>
<tr><th>Type</th><th>Percentage</th><th>CO1</th><th>CO2</th><th>CO3</th><th>CO 4</th><th>CO5</th><th>CO6</th></tr>
<tr><td>Quiz</td><td>10 %</td><td>√</td><td>√</td><td>√</td><td></td><td></td><td></td></tr>
<tr><td>Individual Task</td><td>20 %</td><td>√</td><td>√</td><td>√</td><td></td><td></td><td></td></tr>
<tr><td>Group Task</td><td>20</td><td></td><td></td><td></td><td>√</td><td>√</td><td>√</td></tr>
<tr><td>Midterm Exam</td><td>25 %</td><td>√</td><td>√</td><td>√</td><td></td><td></td><td></td></tr>
<tr><td>Final Exam</td><td>25%</td><td></td><td></td><td></td><td>√</td><td>√</td><td>√</td></tr>
<tr><td>Total</td><td>100%</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>Reading List</td><td>Richard L. Shall, Handbook of Industrial Automation,Marcel Dekker , 2000

S. Sen, Industrial Automation and Control, NPTEl, 2017.</td></tr>
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