**Module name** | Introduction to Control Theory  
---|---  
**Module level, if applicable** | Bachelor  
**Code, if applicable** | MMM-3312  
**Subtitle, if applicable** | -  
**Courses, if applicable** | Introduction to Control Theory  
**Semester(s) in which the module is taught** | 6th (sixth)  
**Person responsible for the module** | Chair of the Lab. of Applied Mathematics  
**Lecture(s)** | Dr. Ari Suparwanto, M.Si.  
**Language** | Bahasa Indonesia  
**Relation to curriculum** | Elective course in the third year (6th semester) Bachelor Degree  
**Type of teaching, contact hours** | 150 minutes lectures and 180 minutes structured activities per week.  
**Workload** | Total workload is 136 hours per semester, which consists of 150 minutes lectures per week for 14 weeks, 180 minutes structured activities per week, 180 minutes individual study per week, in total is 16 weeks per semester, including mid exam and final exam.  
**Credit points** | 3  
**Requirements according to the examination regulations** | Students have taken Introduction to Control Theory course (MMM-3312) and have an examination card where the course is stated on.  
**Recommended prerequisites** | Students have taken the module of Introduction to System Theory (MMM-3310) and have participated in the final exam of the module.  
**Module objectives/intended learning outcomes** | After completing this course, the students have ability to:  
CO 1. analyze control theory problems, the open-loop and closed-loop control and determine the feedback control and the observer design.  
CO 2. analyze the separation principle of feedback control and the observer.  
CO 3. solve the decoupling problem by state feedback.  
CO 4. Apply some methods to determine the solution of the open-loop and closed-loop linear quadratic optimal control.  
**Study and examination requirements and forms of examination** | The final mark will be weighted as follows:  
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<tr>
<th>Assessment methods (components, activities)</th>
<th>Weight (percentage)</th>
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<tr>
<td>1 Final Examination</td>
<td>40%</td>
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<tr>
<td>2 Mid-Term Examination</td>
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<td>3 Quiz and Homework (Project)</td>
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| The initial cut-off points for grades A, B, C, and D should not be less than 80%, 70%, 50%, and 40%, respectively.  
**Media employed** | Board, LCD Projector, Laptop/Computer  

### PLO and CO Mapping

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