

Course Code	TKEE163232													
Course Name	Systems Identification													
Course Instructors	Samiadji Herdjunanto; Sasongko Pramono Hadi; Adha Imam Cahyadi;													
Course Type	Required													
Course Classification	Engineering Topics													
Credit / Contact Hour per Week	3 / 150 minutes per Week													
Course Description	MK Identification System studies the modeling aspects of data observation. Aspects of uncertainty will be discussed in this course. Various estimation methods will be discussed in this course.													
Prerequisites Courses	-													
Covered Student Outcome	Development of Engineering Solution (b) Engineering Design (c)													
Learning Outcome	Students are able to know sampling, limited amount of data effects, time zone resolutions as well as frequency area resolution, random process introduction with white noise, correlation function, power spectral density, statistical signal modeling, persistent excitation concept, estimator concepts, estimator properties, performance, system order selection, parameter estimation, computation, validation													
Topic	<ol style="list-style-type: none"> 1. Random process, autocorrelation function 2. parameter estimation both offline and on line with RLS method. 3. the nature of the estimator: unbiased, efficient 4. the nature of orthogonality, projection. 													
Direct Asessment	<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Direct Asessment Plan</th> <th style="text-align: left;">Measured Learning Outcome</th> </tr> </thead> <tbody> <tr> <td>Special Assigment</td> <td>LO1</td> </tr> <tr> <td>Mid Term Exam</td> <td>LO1</td> </tr> <tr> <td>Final Term Exam</td> <td>LO1</td> </tr> <tr> <td>Quiz</td> <td>LO1</td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>		Direct Asessment Plan	Measured Learning Outcome	Special Assigment	LO1	Mid Term Exam	LO1	Final Term Exam	LO1	Quiz	LO1		
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Special Assigment	LO1													
Mid Term Exam	LO1													
Final Term Exam	LO1													
Quiz	LO1													
Indirect Assesment	Questionnaire (EDOM)													
References	<p>[1] Hayes, M. H, 1996, "Statistical Digital Signal Processing and Modeling", JohnWiley&Sons, Inc</p> <p>[2] Johansson, R, 1993, "System Modeling and Identification", Prentice-Hall International Editions</p> <p>[3] Kay ,S.M,1993,"Fundamentals of Statistical Signal Processing Estimation Theory",Prentice-Hall International,Inc., Yogyakarta</p>													