

Course Code	TKEE165121													
Course Name	Radar and Navigation													
Course Instructors	Iswandi; pak doni													
Course Type	Elective													
Course Classification	Engineering Topics													
Credit / Contact Hour per Week	3 / 150 minutes per Week													
Course Description	Radar and Navigation courses study the concepts and theories associated with the detection and allocation of objects with radio waves and satellite based positioning systems. Course structure is divided into three main parts namely radar, conventional navigation, and satellite-based navigation.													
Prerequisites Courses	-													
Covered Student Outcome	Development of Engineering Solution (b)													
Learning Outcome	<ol style="list-style-type: none"> 1. Students are able to calculate the radar characteristic parameters by using radar equation 2. Students are are able to understand the mechanism of various radar technology 3. Students are able to analyze the effect of wave propagation into radar performance 4. Students are able to understand and explain the mechanism and function of various navigation technology for aviation 5. Students are able to analyze some aspects that influence the performance global navigation satellite systems 													
Topic	<ol style="list-style-type: none"> 1. Basic Radar Principles 2. Pulse Doppler Radar and MTI 3. Tracking Radar 4. Detection of Radar Signals and Radar Noise 5. Propagation of Radar Waves 6. Radar Device 7. Secondary Radar 8. Conventional Navigation System 9. General Navigation System 10. Satellite Navigation System 11. Satellite Navigation Signaling and Processing 12. Distance Calculation in GPS 13. Development of GPSS System 14. Other GNSS systems 													
Direct Asessment	<table border="1"> <thead> <tr> <th>Direct Asessment Plan</th> <th>Measured Learning Outcome</th> </tr> </thead> <tbody> <tr> <td>Assignment</td> <td>LO1, LO2, LO3, LO4</td> </tr> <tr> <td>Mid Exam</td> <td>LO1,LO2,LO3</td> </tr> <tr> <td>Final Exam</td> <td>LO4,LO5</td> </tr> <tr> <td>Presentation</td> <td>?? pak doni</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>		Direct Asessment Plan	Measured Learning Outcome	Assignment	LO1, LO2, LO3, LO4	Mid Exam	LO1,LO2,LO3	Final Exam	LO4,LO5	Presentation	?? pak doni		
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Indirect Assesment	Questionnaire (EDOM)													
References	<p>[1] Merrill I. Skolnik, 2001, Introduction to Radar System, Third Edition, McGraw-Hill Book Co.</p> <p>[2] Merrill I. Skolnik, 2010, Radar Handbook, Third Edition, McGraw-Hill Book Co.</p> <p>[3] Anonim, Radar Tutorial, radartutorial</p> <p>[4] Hofmann-Wellenhof, B., Lichtenegger, H., dan Wasle, E., 2008 , "GNSS – Global Navigation Satellite Systems: GPS, GLONASS, Galileo, and more," Springer Wien, NewYork</p> <p>[5] Elliot D. Kaplan dan Christopher J. Hegarty, 2006, Understanding GPS, Principles and Applications, Second Editions, Artech House Inc., USA.</p>													