



MODULE HANDBOOK DESCRIPTION

Module designation	Mobile Communication	
Code	FBC0002	
Semester(s) in which the module is taught	7 / fourth year	
Person responsible for the module	Abdullah Zainuddin, ST., MT.	
Language	Indonesian	
Relation to curriculum	Elective course for Telecommunication System	
Teaching methods	Lectures, small group discussion, case base method.	
Workload (incl. contact hours, self-study hours)	Contact minutes every week, each week of the 16 weeks/semester: <ul style="list-style-type: none"> • Lectures: 2 x 50 minutes • Exercises and Assignments: 2 x 60 minutes • Private study: 2 x 60 minutes. total study hours = 5 hours 40 minutes/week	
Credit points	2 SKS (~ 3.2 ECTS)	
Required and recommended prerequisites for joining the module	-	
Module objectives/intended learning outcomes	1. Students are able to select and apply actual modelling, calculating, and testing methods to quantitatively analyse the performance of mobile communication	PLO3
	2. Students are able to design mobile communication system to achieve performance objectives	PLO4
	3. Students are able to recognise the need for, and have the ability to engage in independent, lifelong learning.	PLO9

Content	<ol style="list-style-type: none"> 1. Propagation Characteristics 2. Channel Parameters 3. Channel Modeling 4. Conventional and Modern Mobile Communication Systems 5. Multiple Access and Modulation Performance 6. Network Architecture 7. Evolution of Technological Standards 8. Interference 9. Capacity Factor 10. Multiple Access Methods 11. Frequency Determination Strategy 12. Mobile Communication Planning
Examination forms	<ul style="list-style-type: none"> - Assignment - Written case study - Midterm and final test
Study and examination requirements	<p>The final grade in the module is composed of:</p> <ol style="list-style-type: none"> a. Assignment : 10 % b. Case I assessment: 15% c. Case II assessment: 15% d. Midterm assessment: 30% e. Final assessment: 30% <p>Students must have a final grade of 65% or higher to pass</p>
Reading list	<ol style="list-style-type: none"> 1. K. Pahlavan, A.H. Levesque, "Wireless Information Networks", 2nd ed., John Wiley and Sons, 2005. D. Tse, P. Viswanath, "Fundamentals of Wireless Communications", Cambridge University Press, 2005. 2. W.C.Y. Lee, "Mobile Communications Design Fundamentals", John Wiley and Sons, 1993. 3. W.C. Jakes, "Microwave Mobile Communications", IEEE Press, 1994. 4. T.S. Rappaport, "Wireless Communications Principles and Practices", 2nd ed., Prentice-Hall, 2002.