



**MODULE HANDBOOK DESCRIPTION**

Module designation	Antenna	
Code	FBC4113	
Semester(s) in which the module is taught	7 / fourth year	
Person responsible for the module	Cahyo Mustiko Okta Muvianto, ST., Msc., Ph.D	
Language	Indonesian	
Relation to curriculum	Compulsory for Telecommunication System	
Teaching methods	Lectures, small group discussion, simulation and design, Quiz.	
Workload (incl. contact hours, self-study hours)	<p>Contact minutes every week, each week of the 16 weeks/semester:</p> <ul style="list-style-type: none"> <li>• Lectures: 2 x 50 minutes</li> <li>• Exercises and Assignments: 2 x 60 minutes</li> <li>• Private study: 2 x 60 minutes.</li> </ul> <p>total study hours = 5 hours 40 minutes/week</p>	
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 analyse the basic antenna, important parameters of antenna, types of antenna, antenna matching, and antenna array	PLO3
	2. Students are able to design a dipole antenna on CST	PLO4
	3. Students are able to experiment with antenna measurement technique	PLO5
Content	<ol style="list-style-type: none"> <li>1. Basic antenna</li> <li>2. Important parameters of antenna</li> <li>3. Types of antennas</li> <li>4. Antenna matching</li> <li>5. Design a dipole antenna design on CST</li> <li>6. Array antenna</li> <li>7. Measurement antenna patch</li> </ol>	
Examination forms	<ul style="list-style-type: none"> <li>- Essay</li> <li>- Presentation case study</li> <li>- Simulation</li> <li>- Midterm and final test</li> </ul>	

Study and examination requirements	The final grade in the module is composed of: a. Case I assessment: 15% b. Case II assessment: 15% c. Midterm assessment: 30% d. Final assessment: 40% Students must have a final grade of 65% or higher to pass
Reading list	<ol style="list-style-type: none"><li>1. C.A. Balanis, Antenna Theory, second edition, John Willey &amp; sons, 1996</li><li>2. R.E. Collon, Antenna and Radiowave Propagation, Mc Graw Hill, 1985</li></ol>

