



MODULE HANDBOOK DESCRIPTION

Module designation	Optical Fiber Communication System	
Code	FBC0007	
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	Optional for Telecommunication System	
Teaching methods	Lectures, small group discussion, Quiz.	
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 review analyse of latest technology of fiber optic, the fiber waveguides, transmission characteristics of optical fibers, light sources for optical fibers, optical detectors, modulation, and optical networking	PLO3
	2. Students are able to be experience with optic fiber communication device, and design case study ; design of network planning	PLO4
	3. Students are having basic knowledge in designing of fiber optic communication link and networking for life-long learning optical fiber communication	PLO9

Content	<ol style="list-style-type: none"> 1. Optical Fiber Communications and the latest technology 2. Optical fiber waveguides 3. Transmission characteristics of optical fibers 4. Fiber fabrication 5. Optical fiber connections 6. Joints and couplers 7. Light sources for optical fibers, 8. Optical detectors 9. Modulation 10. Optical networking 11. Design of network planning
Examination forms	<ul style="list-style-type: none"> - Essay - Presentation case study - Planning design of network fiber optic - 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. Case I assessment: 15% b. Case II assessment: 15% c. Midterm assessment: 30% d. Final assessment: 40% <p>Students must have a final grade of 65% or higher to pass</p>
Reading list	<ol style="list-style-type: none"> 1. John M. Senior, "Optical Fiber Communications" second editon. 2. Subir Kumar, "Optical Fibers and Fiber Optic Communication Systems" 3. Gerd Keiser, "Optical Fiber Communication 3rd Edition", McGraw-Hill.