UNIVERSITAS MATARAM
(University of Mataram)
FAKULTAS TEKNIK
(Faculty of Engineering)
PROGRAM STUDI TEKNIK INFORMATIKA
(Department of Informatics Engineering)

MODULE HANDBOOK DESCRIPTION

Wireless Network (P22B07)

Module designation	Wireless Network
Semester(s) in which the module is taught	*8 / fourth year*
Person responsible for the module	*I Wayan Agus Arimbawa ST M.Eng*
Language	*Indonesian*
Relation to curriculum	*Electives*
Teaching methods	*Lectures, Discussions, Project*
Workload (incl. contact hours, self-study hours)	Contact Hours every week, each week of the 16 weeks/semester including Evaluation 2 x 50 minutes lecturer/week 2 x 60 minutes class exercise/week - Self Study hours = 120 minutes/week Total workload 340 minutes/week
Credit points	*2 (~ 3,2 ECTS)*
Required and recommended prerequisites for joining the module	-

Module objectives/intended learning outcomes	The main objective of PR courses is to provide students with knowledge, simulation techniques, application techniques, and analysis of a physical object/data/event in one or more categories. The learning outcomes of the Wireless Network course are: 1. To understand the concept about Wireless networks, protocol stack and standards 2. To understand and analyse the network layer solutions for Wireless networks 3. To study about fundamentals of 3G Services, its protocols and applications 4. To have in depth knowledge on internetworking of WLAN and WWAN 5. To learn about evolution of 4G Networks, its architecture and applications
Content	This course contains important topics: 1. Layered communication architecture: layers, services, protocols, layer entities, service access 2. points, protocol functions… 3. Advanced Routing algorithms 4. Advanced Network Congestion Control algorithms 5. Quality of service 6. Real Time Transport Protocol 7. Internetworking 8. Performance Issues 9. Overview on VPN networks 10. Overview on Wireless Networks and Mobile Networks: LAN, PAN, Sensor Networks, Ad_hoc 11. Networks 12. Mobile IP, Mobile TCP, IP Security
Examination forms	*Assignments, Quiz, Simulation, Project (Oral Presentation)*
Study and examination requirements	*Assignments 10%,* *Quiz 25%,* *Simulation 25%,* *Project 40%*

Reading list	1. Jochen Schiller, ‖Mobile Communications‖, Second Edition, Pearson Education 2012.(Unit I,II,III)
	2. Vijay Garg, ─Wireless Communications and networking‖, First Edition, Elsevier 2007.(Unit IV,V)
	3. Erik Dahlman, Stefan Parkvall, Johan Skold and Per Beming, "3G Evolution HSPA and LTE for Mobile Broadband‖, Second Edition, Academic Press, 2008.
	4. Anurag Kumar, D.Manjunath, Joy kuri, ─Wireless Networking‖, First Edition, Elsevier 2011.
	5. Simon Haykin , Michael Moher, David Koilpillai, ─Modern Wireless Communications‖, First Edition, Pearson Education 2013