



UNIVERSITAS NEGERI YOGYAKARTA
POSTGRADUATE PROGRAM DEPARTMENT OF
ELECTRONICS AND INFORMATICS ENGINEERING
EDUCATION

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Master of Education in Electronics and Informatics Engineering

MODULE HANDBOOK

Module name:	Cellular Technology
Module level, if applicable:	Postgraduate
Code:	PTI 8218
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	2 nd
Module coordinator:	Dr. Drs. Pramudi Utomo, M.Si.
Lecturer(s):	Dr. Drs. Pramudi Utomo, M.Si.
Language:	Bahasa Indonesia
Classification within the curriculum:	Elective Courses
Teaching format / class Hours per week during the semester:	100 minutes minutes for face-to-face meetings or online meetings, 120 minutes for individual or group assignment, and 120 minutes for self-study per week.
Workload:	Total workload is 90 hours 40 minutes per semester which consists of 100 minutes minutes for face-to-face meetings or online meetings, 120 minutes for individual or group assignment, and 120 minutes for self-study per week for 16 weeks.
Creditpoints:	2
Prerequisites course(s):	-
Course outcomes:	After taking this course the students have ability to: CO1. Understand about Introduction to cellular communication technology CO2. Propagation in mobile communication systems, multipath fading and mitigation for multipath channels, Infrastructure and Network Architecture on mobile systems as well Cellular communication services CO3. Hardware and mobile Operating Systems as well Wireless technology

	CO4.Mobile web, Programming devices, mobile applications and Location Based Service. CO5.Mobile application trends and Level User Interface API																						
Content:	The Cellular Technology course provides communication applications that can provide communication services (data, voice, and video) to deal with human movement / movement in practical use of computers. This course provides an understanding of the concept of a mobile communication system using the concept of a cellular system, propagation of a mobile communication system, wireless channel and channel characterization, and understanding of cellular system standards.																						
Study/exam achievements:	<p>Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.</p> <p>The final mark will be weight as follow:</p> <table border="1" data-bbox="620 995 1393 1386"> <thead> <tr> <th>No</th> <th>CO</th> <th>Assessment Object</th> <th>Assessment Technique</th> <th>Weight</th> </tr> </thead> <tbody> <tr> <td rowspan="5">1</td> <td rowspan="5">CO 1 – CO 5</td> <td>a. Individual assignment</td> <td rowspan="5">Written test</td> <td>15%</td> </tr> <tr> <td>b. Group assignment</td> <td>15%</td> </tr> <tr> <td>c. Quiz</td> <td>10%</td> </tr> <tr> <td>d. Mid Exam</td> <td>30%</td> </tr> <tr> <td>e. Final Exam</td> <td>30%</td> </tr> <tr> <td colspan="3">Total</td> <td>100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO 1 – CO 5	a. Individual assignment	Written test	15%	b. Group assignment	15%	c. Quiz	10%	d. Mid Exam	30%	e. Final Exam	30%	Total			100%
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Total			100%																				
Forms of media:	Board, LCD Projector, Laptop/Computer																						
Literature:	<ol style="list-style-type: none"> 1. Rappaport, T.S., Wireless Communication Systems, Principles and Practices, Prentice Hall. 2. B. Noble, M. Price., M. Satyanarayanan, A Programming Interface for Application-aware Adaptation in Mobile Computing, TR CMU, 1995. 3. Yalcin, M.E., Ayhan, T., & Yeniceri, R. 2020. Reconfigurable Cellular Neural Networks and Their Applications. Springer International Publishing. 4. Bergman, J., Liberg, O., Sachs, J., Sundberg, M., & Wang, E. 2019. Cellular Internet of Things 2e : Technologies, Standards, and Performance. Elsevier Science & Technology. 5. Ahson, S.A., & Furht, B. 2016. Long Term Evolution : 3GPP LTE Radio and Cellular Technology. 6. Perez, A. 2018. Wi-Fi Integration to the 4G Mobile Network. Wiley-ISTE. 7. Mishra, A.R. 2018. Fundamentals of network planning and 																						

