



MODULE HANDBOOK DESCRIPTION

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| 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 |

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| 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. |