

## MODULE HANDBOOK

|                                                              |                                                                                                                                                                                             |                                                                                                                                                                 |        |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <b>Module Name</b>                                           | Communication and Computer Network                                                                                                                                                          |                                                                                                                                                                 |        |
| <b>Module level, if applicable</b>                           | Undergraduate                                                                                                                                                                               |                                                                                                                                                                 |        |
| <b>Code, if applicable</b>                                   | 02143142008                                                                                                                                                                                 |                                                                                                                                                                 |        |
| <b>Subtitle, if applicable</b>                               | -                                                                                                                                                                                           |                                                                                                                                                                 |        |
| <b>Courses, if applicable</b>                                | -                                                                                                                                                                                           |                                                                                                                                                                 |        |
| <b>Semester(s) in which the module is taught</b>             | 1                                                                                                                                                                                           |                                                                                                                                                                 |        |
| <b>Person responsible for the module</b>                     | Puspanda Hatta, S.Kom., M.Eng. (hatta.puspanda@staff.uns.ac.id)                                                                                                                             |                                                                                                                                                                 |        |
| <b>Lecturer</b>                                              | Puspanda Hatta, S.Kom., M.Eng.                                                                                                                                                              |                                                                                                                                                                 |        |
| <b>Language</b>                                              | Indonesian and English                                                                                                                                                                      |                                                                                                                                                                 |        |
| <b>Relation to curriculum</b>                                | Undergraduate degree program, compulsory course in 1st semester                                                                                                                             |                                                                                                                                                                 |        |
| <b>Type of teaching, contact hours</b>                       | Undergraduate degree program, < 40 students                                                                                                                                                 |                                                                                                                                                                 |        |
| <b>Workload</b>                                              | Lectures: 2 x 50 = 100 minutes (1 hours 40 minutes) per week<br>Exercise and Assignments: 2 x 60 = 120 minutes (2 hours) per week<br>Private study: 2 x 60 = 120 minutes (2 hours) per week |                                                                                                                                                                 |        |
| <b>Credit points</b>                                         | 2 SKS                                                                                                                                                                                       |                                                                                                                                                                 |        |
| <b>Requirements according to the examination regulations</b> | A student must have attended at least 75% of the lectures to sit in the exams                                                                                                               |                                                                                                                                                                 |        |
| <b>Recommended Prerequisites</b>                             | -                                                                                                                                                                                           |                                                                                                                                                                 |        |
| <b>Module objectives/intended learning outcomes</b>          | After completing this module, a student is expected to:                                                                                                                                     |                                                                                                                                                                 |        |
|                                                              | No                                                                                                                                                                                          | Course Learning Outcome                                                                                                                                         | PLO    |
|                                                              | 1                                                                                                                                                                                           | Students can explain the application of data communication on computer networks according to the TCP/IP protocol standard                                       | PLO-11 |
|                                                              | 2                                                                                                                                                                                           | Students can apply Internet Protocol (IP) addressing, network subnet sharing, and routing protocols on computer networks according to TCP/IP protocol standards | PLO-11 |
|                                                              | 3                                                                                                                                                                                           | Students can analyze the needs of computer network devices on a Local Area Network                                                                              | PLO-11 |
|                                                              | 4                                                                                                                                                                                           | Students can design computer networks on a local area network based on TCP/IP protocols                                                                         | PLO-11 |
| <b>Content</b>                                               | This course contains the concept of data communication and its application in computer networks using the TCP/IP protocol. After taking                                                     |                                                                                                                                                                 |        |

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|                                                                    | the course. In this study, students are expected can explain the concepts of data communication and computer networks on the TCP/IP protocol, perform IP calculations, Subnets, and routing protocols on computer networks, as well as being able to design computer networks on a local area network scale.                            |                                                                                                                                                                 |                                               |
| <b>Study and examination requirements and forms of Examination</b> | Forms of examination:                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                 |                                               |
|                                                                    | No                                                                                                                                                                                                                                                                                                                                      | Course Learning Outcome                                                                                                                                         | Examination                                   |
|                                                                    | 1                                                                                                                                                                                                                                                                                                                                       | Students can explain the application of data communication on computer networks according to the TCP/IP protocol standard                                       | Structured Task (10%)<br>Cognitive Test (15%) |
|                                                                    | 2                                                                                                                                                                                                                                                                                                                                       | Students can apply Internet Protocol (IP) addressing, network subnet sharing, and routing protocols on computer networks according to TCP/IP protocol standards | Structured Task (10%)<br>Cognitive Test (15%) |
|                                                                    | 3                                                                                                                                                                                                                                                                                                                                       | Students can analyze the needs of computer network devices on a Local Area Network                                                                              | Structured Task (10%)<br>Cognitive Test (15%) |
|                                                                    | 4                                                                                                                                                                                                                                                                                                                                       | Students can design computer networks on a local area network based on TCP/IP protocols                                                                         | Structured Task (10%)<br>Cognitive Test (15%) |
| <b>Media employed</b>                                              | LCD, Whiteboard, PowerPoint Slide Presentation, Practical Guidance Video, websites, etc.                                                                                                                                                                                                                                                |                                                                                                                                                                 |                                               |
| <b>Reading list</b>                                                | <ol style="list-style-type: none"> <li>1. Tanenbaum, A. S. (2003). Computer networks, 4-th edition. ed: Prentice Hall.</li> <li>2. Lammle, T. (2011). CCNA Cisco Certified Network Associate Deluxe Study Guide. John Wiley &amp; Sons.</li> <li>3. Askari, A. (2011). Debian GNU/Linux. Informatika, Bandung ISBN, 978-602.</li> </ol> |                                                                                                                                                                 |                                               |