

## 21B33C607 – Network Administration

Module designation	Network Administration (Undergraduate)
Semester(s) in which the module is taught	6 <sup>th</sup>
Person responsible for the module	Dr. Eng. Ir. Jumadi M Parenreng, S.ST., M. Kom, IPM
Language	Indonesia – English
Relation to curriculum	This course is a compulsory course
Teaching methods	Lecture, Presentation
Workload (incl. contact hours, self-study hours)	CH: 09.00-17.00 Face to face: 2x50 minutes / week Independent Study: 2x50 minutes / week Structured assignment: 2x50 minutes / week
Credit points	2 SKS (equivalent 3.4 ECTS)
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<p><b>Program Learning Outcomes (PLO)</b></p> <p>PLO 3: Demonstrate a responsible attitude towards work in their field of expertise independently;</p> <p>PLO 3: Internalize academic values, norms and ethics;</p> <p>PLO 7: able to apply logical, critical, creative, systematic and innovative thinking in the context of science development or implementation knowledge and technology that pays attention to and applies humanities values in accordance with their field of expertise;</p> <p>PLO 8: Able to demonstrate independent, quality and measurable performance;</p> <p>PLO 10: Able to apply mathematics, science, and engineering principles to solve engineering problems Demonstrate ability in the field of computer system applications</p> <p><b>Course Learning Objectives (CLO)</b></p> <p>The Computer Systems and Network Analysis course is a course that provides an overview of Requirements Analysis, Flow Analysis, Network Architecture, Routing and Addressing Architecture, Network Management Architecture, Performance Architecture, Security and Privacy Architecture,</p>

	<p>and Network Design. The lecture will provide an explanation to students about the concepts of architectural analysis and network design, how to carry out architectural analysis and network design based on existing concepts.</p> <p><b>Sub CLO:</b></p> <p>Sub-CLO 1: Students are able to know about the concepts of network analysis, architecture and design</p> <p>Sub-CLO 2: Students are able to understand the concept of needs analysis</p> <p>Sub-CLO 3: Students are able to understand the needs analysis process</p> <p>Sub-CLO 4: Students are able to understand flow analysis</p> <p>Sub-CLO 5 Students are able to understand network architecture</p> <p>Sub-CLO 6 Students are able to understand routing and addressing architecture</p> <p>Sub-CLO 7 Students are able to understand network management architecture</p> <p>Sub-CLO 8 Students are able to understand performance architecture</p> <p>Sub-CLO 9 Students are able to understand security and privacy architecture</p> <p>Sub-CLO 10 Students are able to understand network design</p>
Content	<p>Students will learn about:</p> <ul style="list-style-type: none"> <li>● Network Analysis, Architecture and Design Process</li> <li>● Concept of Needs Analysis</li> <li>● Requirements Analysis Process</li> <li>● Flow Analysis</li> <li>● Network Architecture</li> <li>● Routing and Addressing Architecture</li> <li>● Network Management Architecture</li> <li>● Performance Architecture</li> <li>● Security and Privacy Architecture</li> <li>● Network Design</li> </ul>
Examination forms	<p>Assessment Techniques: Exam, Presentation, Case Based Learning</p> <p>Assessment Forms: Assignment, Presentation Assessment</p>
Study and examination requirements	<ul style="list-style-type: none"> <li>● Students have to inform the lecturer when they are not able to attend the class due to sickness etc</li> <li>● Active in making projects by showing participation in making projects in class</li> <li>● Able to present and answer questions that exist during project presentations</li> </ul>
Reading List	<ul style="list-style-type: none"> <li>● (The Morgan Kaufmann Series in Networking) James D. McCabe - Network Analysis, Architecture, and Design-Morgan Kaufmann, 2007</li> <li>● LTE, WIMAX, and WLAN network design, optimization, and performance analysis / Leonhard Korowajczuk. 2011</li> </ul>

