

Basic Networking

Course Title: Basic Networking					
Course Code: CIT610 09	Student Workload: 8.50 Hours / Weeks	Credits: 3 Credits (4.50 ECTS)	Semester: 3 rd Semester	Frequency: Odd Semester	Duration: 16 Weeks/ Semester (<i>Lecture:</i> 14 weeks; <i>Midterm assessment</i> : 1 week; <i>Final assessment</i> : 1 week)
1	Types of Courses: Knowledge Specific Skills	Contact Hours: <i>Lecturing:</i> 1.67 Hours/ Week; <i>Practical Work:</i> 2.83 Hours/ Week	Independent Study: <i>Self-study:</i> 3.00 Hours/ Week; <i>Structured Assignment:</i> 3.00 Hours/ Week	Class Size: 40 Students	
2	Prerequisites for Participation (If Applicable): -				
3	Learning Outcomes: 1. M1: Able to explain the concept of communication in computer networks and the Internet. 2. M2: Able to explain the basic principles of network-based applications. 3. M3: Able to explain the concept of transport layer services in computer networks. 4. M4: Able to apply the concept of network layer services in computer networks. 5. M5: Able to explain the principles of the DataLink layer protocol. 6. M6: able to explain the concepts and services provided in the form of mobile services and wireless.				
4	Subject aims/Content: At the end of the course, students are expected: 1. L1: Able to explain the technology used in connecting devices and services in the network. 2. L2: Able to explain the concept of layering in network protocols. 3. L3: Able to explain protocol standards in networks and the Internet. 4. L4: Able to explain the interpretation of computer network performance using the amount of time delay, packet loss and throughput. 5. L5: Able to explain the concept of HTTP protocol in supporting web services. 6. L6: Able to explain the concept of DNS in supporting Internet services. 7. L7: Able to explain the concept of peer-to-peer-based application. 8. L8: Able to explain the working principle of the transport protocol in TCP/IP. 9. L9: Able to explain the standard UDP protocol in network-based communication mechanisms TCP/IP. 10. L10: Able to explain TCP protocol standards in network-based communication mechanisms TCP/IP. 11. L11: Able to explain the working principle of network protocol in TCP/IP. 12. L12: Able to explain the concept of IP protocol. 13. L13: Able to implement IPV4 addressing in a simple LAN design. 14. L14: Able to apply subnetting schemes in simple LAN design. 15. L15: Able to apply NAT mechanism in LAN. 16. L16: Able to explain and use ICMP protocol. 17. L17: Able to implement IPv6 addressing in a simple LAN design. 18. L18: Able to explain the concept of DHCP protocol. 19. L19: Able to explain the working principle of routing in the Internet. 20. L20: Able to explain the working principle of routers on TCP/IP-based networks. 21. L21: Able to define services in DataLink layer. 22. L22: Able to explain the principle of multiaccess and the protocol supporting multi-access.				

	<p>23. L23: Able to explain the working principle of 802.3 protocol-based network (Ethernet).</p> <p>24. L24: Able to explain the working principle of VLAN.</p> <p>25. L25: Able to explain the working principle of 802.11. protocol.</p> <p>26. L26: Able to explain the working principle of cellular networks.</p> <p>27. L27: Able to explain the working principle of mobile IP.</p> <p>28. L28: Able to explain the principle of internet connection using a wireless network.</p>
5	<p>Teaching Methods: Lecturing, Group Discussion, Case-Based Learning, Project-Based Learning</p>
6	<p>Assessment Methods: Essay, Multiple-Choice, Project Assessment, Anecdotal Record/Logbook, Product Assessment</p>
7	<p>This Course is Used in The Following Study Programme/s as Well: -</p>
8	<p>Responsibility for Course: 1. Dany Primanita Kartikasari, S.T., M.Kom.</p>
9	<p>Other Information: Bibliography: 1. Kurose, James, Ross, W., Computer Networking A Top-down Approach 6th Edition, Pearson, 2013 2. Forozan, Behrouz, TCP/IP Protocol Suite 4th Edition, McGraw Hill, 2010</p>