

Course Code	TKIT163101													
Course Name	Computer Network													
Course Instructors	Warsun Najib; Sri Suning Kusumawardani; Sujoko Sumaryono													
Course Type	Required													
Course Classification	Engineering Topics													
Credit / Contact Hour per Week	2 / 100 minutes per Week													
Course Description	This course will discuss computer network focusses on OSI layer and protocols related to each layer. Students will use simulation tools to implement networking concept during the course.													
Prerequisites Courses	Fundamentals of Programming (TKIE161103)													
<b>Covered Student Outcome</b>	<b>Development of Engineering Solution (b)</b> <b>Engineering Design (c)</b> <b>Modern Tools Utilization (e)</b>													
Learning Outcome														
		Study Program Student Outcome												
No	Learning Outcome	SO (a) – SO (k)												
1.	Students are able to <u>explain</u> basic computer network concept.	Development of Engineering Solution (b)												
2.	Students able to <u>explain</u> the utilization of computer network technology in everyday life.	Development of Engineering Solution (b)												
3.	Students are able to <u>design</u> local area network including network topology and addressing.	Engineering Design (c)												
4.	Students are able to <u>configure</u> network device to <u>apply</u> routing concept.	Engineering Design (c)												
5.	Students are able to analyze and troubleshoot problems on computer networks.	Modern Tools Utilization (e)												
Topic	<ol style="list-style-type: none"> <li>1. Overview of computer network</li> <li>2. OSI Reference Model and TCP/IP model.</li> <li>3. Application layer function and protocol</li> <li>4. Transport layer function and protocol</li> <li>5. Network layer function and protocol</li> <li>6. IP Addressing</li> <li>7. Subnetting</li> <li>8. Data link layer characteristic</li> <li>9. Routing protocol</li> <li>10. Wide area network</li> <li>11. Virtual LAN</li> <li>12. Wireless LAN</li> <li>13. Computer network trend</li> </ol>													
Direct Asessment	<table border="1"> <thead> <tr> <th>Direct Asessment Plan</th> <th>Measured Learning Outcome</th> </tr> </thead> <tbody> <tr> <td>Assignment</td> <td>LO1, LO2, LO3</td> </tr> <tr> <td>Software Simulation</td> <td>LO5</td> </tr> <tr> <td>Mid Exam</td> <td>LO1, LO3, LO4</td> </tr> <tr> <td>Final Exam</td> <td>LO1, LO2, LO4</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>		Direct Asessment Plan	Measured Learning Outcome	Assignment	LO1, LO2, LO3	Software Simulation	LO5	Mid Exam	LO1, LO3, LO4	Final Exam	LO1, LO2, LO4		
Direct Asessment Plan	Measured Learning Outcome													
Assignment	LO1, LO2, LO3													
Software Simulation	LO5													
Mid Exam	LO1, LO3, LO4													
Final Exam	LO1, LO2, LO4													
Indirect Assesment	Questionnaire (EDOM)													
References	<p>[1] Andrew S Tanenbaum, David J Wetherall, 2011, Computer Networks, Edisi ke-5, Prentice Hall.</p> <p>[2] Todd Lammle, CompTIA Network+ Deluxe Study Guide, Wiley Publishing Inc, 2009.</p> <p>[3] Adolfo Rodriguez, John Gatrell, John Karas, Roland Peschke, "TCP/IP Tutorial and Technical Overview" seventh edition.. IBM Redbook, 2001.</p>													

# Panduan Penyusunan Silabus

## Dasar penyusunan

1. Silabus disarankan ditulis dalam Bahasa Inggris agar dapat digunakan untuk keperluan ABET dan BAN
2. Learning outcome disusun dengan aturan maksimum enam learning outcome
3. Direct assessment plan meliputi
  - a. Assignment (tugas)
  - b. Quiz (kuis)
  - c. Summative Assessment (Mid / Final Exam)

## Cara pengisian:

1. Course code: diisi dengan kode mata kuliah. Kode mata kuliah bisa dilihat didokumen kurikulum
  - a. Kurikulum TE <http://sarjana.iteti.ugm.ac.id/media/1825/dokumen-kurikulum-2016-te-v2.pdf>
  - b. Kurikulum TIF <http://sarjana.iteti.ugm.ac.id/media/1826/dokumen-kurikulum-2016-ti-v2-sp1.pdf>
2. Course Name: nama kuliah
3. Course instructors: dosen yang memiliki kesesuaian bidang ilmu dan terlibat dalam penyusunan. Apabila lebih dari satu dosen dipisahkan dengan tanda ‘;’ (titik koma)
4. Course Type: pilih sesuai tipe
  - a. Required: wajib prodi, departemen, dan Universitas
  - b. Required elective: wajib konsentrasi
  - c. Elective: pilihan
5. Course classification: pilih sesuai klasifikasi konten, DTETI menganut hubungan satu mata kuliah ke satu klasifikasi saja.
  - a. Basic Science & Matematika: Mata kuliah sains yang diperoleh di DTETI
  - b. Engineering Topics: Mata kuliah terkait dengan Program Studi dan Teknik
  - c. General Education: Mata kuliah yang berfokus pada soft skill dan Pengembangan karakter
6. Credit: jumlah SKS
7. Course Description: deskripsi mata kuliah.
8. Prerequisites Courses: mata kuliah yang menjadi dasar mata kuliah terdahulu
9. LO berisi detail learning outcome seperti yang sudah dijabarkan di workshop mengikuti aturan Bloom dan Student Outcome
10. Topik. Berisi aktivitas mata kuliah yang akan disampaikan dalam satu semester
11. Direct assessment meliputi pemetaan antara *assessment* yang akan dilakukan dengan LO yang akan diukur.
12. Indirect assessment mengikuti standar Universitas yakni melalui EDOM.
13. Referensi buku yang dapat dicari
  - a. Pearson Education <http://www.pearsoned.co.uk/bookshop/>
  - b. Wiley Bookshop <https://www.wiley.com/WileyCDA/Section/id-352010.html>
  - c. Amazon di <http://amazon.com>

Informasi lebih lanjut: <http://ridi.staff.ugm.ac.id/2018/01/14/5-cara-mudah-menyusun-learning-outcome/>