



**PROGRAM STUDI TEKNIK INDUSTRI
FAKULTAS SAINS DAN TEKNOLOGI
UNIVERSITAS PGRI YOGYAKARTA**

KONTRAK PERKULIAHAN

Nama Dosen : Guntur Samodro, S.T., M.T.
Mata Kuliah : Simulasi Komputer
Program Studi : Teknik Industri
Kelas/Angkatan : A1/2022
Semester : 6 (Enam)
Tahun Akademik : 2024/2025

Deksripsi Mata Kuliah :

Mata kuliah ini mempelajari tentang Simulasi Komputer

Capaian Pembelajaran/*Learning Outcome*:

Setelah mengikuti pembelajaran dengan tuntas, mahasiswa diharapkan mampu memahami konsep dan teori *System thinking* meliputi pengertian sistem, persepsi, fenomena, struktur. Kemudian model dan simulasi sistem. Pengantar *system dynamics* meliputi kompleksitas sistem, metodologi dan konseptualisasi sistem kompleks. *Discrete Event System Simulation* meliputi metodologi, simulasi Montecarlo. Statistik dalam simulasi: fungsi statistik dalam simulasi; metode chisquare; beberapa tipe distribusi; metode uji distribusi. Validasi dan Verifikasi: pengertian validasi dan verifikasi; metode-metode validasi; validasi kuantitatif dan kualitatif. Analisis Output: metode- metode analisis output; *Terminating vs Non terminating System*; *steady state vs Transient*, Membangun model sederhana & menengah dari *discrete event system simulation* dengan Promodel: *Locations*; *Entities*; *Processing*; *Arrivals*, Membangun model sederhana dari metode *system dynamics* dengan Powersim

***Softskills* :**

Mahasiswa dapat memahami konsep dan teori berkaitan dengan Simulasi Komputer.

Bahan Kajian:

System thinking meliputi pengertian sistem, persepsi, fenomena, struktur. Kemudian model dan simulasi sistem. Pengantar *system dynamics* meliputi kompleksitas sistem, metodologi dan konseptualisasi sistem kompleks. *Discrete Event System Simulation* meliputi metodologi, simulasi Montecarlo. Statistik dalam simulasi: fungsi statistik dalam simulasi; metode chisquare; beberapa tipe distribusi; metode uji distribusi. Validasi dan Verifikasi: pengertian validasi dan verifikasi; metode-metode validasi; validasi kuantitatif dan kualitatif. Analisis Output: metode- metode analisis output; *Terminating vs Non terminating*

System; steady state vs Transient, Membangun model sederhana & menengah dari *discrete event system simulation* dengan Promodel: *Locations; Entities; Processing; Arrivals*, Membangun model sederhana dari metode *system dynamics* dengan Powersim

Ketentuan:

1. Kehadiran perkuliahan tatap muka minimal 75% dari total tatap muka
2. Toleransi keterlambatan perkuliahan tatap muka maksimal 30 menit
 - a. Mahasiswa terlambat lebih dari 30 menit, tidak diperkenankan ikut kuliah (kecuali ada alasan yang diterima dosen)
 - b. Dosen terlambat lebih dari 30 menit, kuliah ditiadakan (kecuali ada pemberitahuan kepada mahasiswa) dan diganti hari lain
3. Dalam perkuliahan dan konsultasi dilakukan dengan sopan (cara berpakaian dan berkomunikasi)
4. Mahasiswa wajib mengikuti UAS
5. Penilaian Hasil Belajar total bobot 100%, dengan rincian sebagai berikut:

No	Uraian	Bobot
1	Quiz	10
2	Tugas & Presentasi	40
3	Kehadiran	10
4	Partisipasi & Keaktifan di Kelas	30
5	Ujian Akhir Semester (UAS)	10
	TOTAL	100

Ketua Program Studi



Ir. Yaning Tri Hapsari, S.T., M.Sc.
NIS. 198512092016042002

Dosen Pengampu



Guntur Samodro, S.T., M.T.
NIS. 198910262019101005

Yogyakarta, 05 Maret 2025
Ketua Kelas/Angkatan



Hani Ramadani
NPM. 22111200011



Universitas PGRI Yogyakarta

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DAFTAR HADIR KULIAH

Program Studi : TEKNIK INDUSTRI
Tahun Akademik : 2024/2025
Semester : GENAP
Dosen : GUNTUR SAMODRO [0526108903]

Kode Matakuliah : TKM12231
Matakuliah : SIMULASI KOMPUTER
Bobot : 3 SKS
Kelas : 22.A1

Semester : 6
Hari :
Pukul : 00:00 s.d. 00:00
Ruang :

No	NP Mahasiswa	Nama Mahasiswa	B/U/P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Jumlah Hadir	% Hadir
1	22111200004	ZAINULLAH BADAR		Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	15	100
2	22111200007	YUDHA FERDIANSYAH		Had	V	X	X	Had	Had	Had	Had	Had	Had	X	Had	Had	Had	Had	12	80
3	22111200008	IRSYAD SIDIQ		Had	Had	X	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	14	93
4	22111200009	AYUNDA DAMAYANTI		Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	15	100
5	22111200010	PRADIPTA ARYA PRIBADI		X	Had	Had	X	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	13	87
6	22111200011	HANI RAMADANI		Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	15	100
7	22111200005	Husfi Mawaniq		Had	Had	X	X	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	13	87
8	22111200013	Fardien Setya N		Had	V	Had	X	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	14	93
9	22111200015	ARIDH RAHMATU		Had	X	X	X	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	12	80
10	22111200011	Rangga Virgocumun		Had	X	X	X	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	13	87
11	22111200012	Alfan Kurniawan		Had	X	X	X	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	13	87
12	22111200021	Muhammad Abigyu Zury Huma		X	Had	Had	X	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	Had	14	93
13	22111200010	Muhammad zaidan E		Had	Had	Had	X	Had	Had	Had	Had	Had	X	-	-	-	-	-	7	47



PRESENSI DOSEN MENGAJAR

TA. 2024/2025 Sem. GENAP

Program Studi : TEKNIK INDUSTRI
Matakuliah : SIMULASI KOMPUTER [TKM12231]
Bobot : 3 SKS
Dosen : GUNTUR SAMODRO [0526108903]

Kelas : 22.A1
Hari :
Pukul : 00:00 s.d. 00:00
Ruang :

Pert	Tanggal	Pokok Bahasan	Sub-Pokok Bahasan	Jml Mhs	Paraf
I	05/12/25	Pendahuluan	- Penjelasan RP - Monitor Perkuliahan	13	A
II	12/03/25	Pengantar Simulasi	Pengantar Simulasi	13	A
III	19/03/25	Monte Carlo	Monte Carlo	13	A
IV	09/04/25	Konsep Probabilitas	Konsep Probabilitas	13	A
V	09/04/25	Pembangkitan Bilangan Random	Pembangkitan Bilangan Random	13	A
VI	16/04/25	Konsep Simulasi	Konsep Simulasi	13	A
VII	16/04/25	Quiz Tengah Semester	Quiz Tengah Semester	13	A
VIII	23/04/25	Verifikasi-Validasi	Verifikasi-Validasi	13	A
IX	30/04/25	Praktikum I - Pemodelan Sistem	Praktikum I - Pemodelan Sistem	13	A
X	07/05/25	Praktikum II - Basic Pramodel	Praktikum II - Basic Pramodel	13	A
XI	14/05/25	Praktikum III	Basic Shop floor I dan II	13	A
XII	21/05/25	Praktikum IV	Basic Shop floor III	13	A
XIII	28/05/25	Praktikum V	Basic Shop floor IV	13	A
XIV	04/06/25	Praktikum VI	verifikasi	13	A
XV	11/06/25	Praktikum VII	validasi dan Dokumentasi & Experiment	13	A



PRESENSI UJIAN AKHIR SEMESTER GENAP
TAHUN AKADEMIK 2024/2025

Program Studi : TEKNIK INDUSTRI – S1

Matakuliah : SIMULASI KOMPUTER

Kode MK : TKM12231

Dosen : GUNTUR SAMODRO, S.T.,M.T

Kelas : 22.A1

Ruang :

Hari/Tanggal : Senin, 23-06-2025

Waktu : 09:01 - 10:30

No	NPM	Nama Mahasiswa	B/U/P	Tanda Tangan	Nilai
1	21111200010	MUHAMMAD ZAIDAN ERVIANSYAH	B		B
2	21111200011	RANGGA VIRGIAWAN NUR	B		A-
3	22111200004	ZAINULLAH BADAR	B		B+
4	22111200005	HASHFI MAULANA	B		B+
5	22111200007	YUDHA FERDIANSYAH	B		A-
6	22111200008	IRSYAD SIDIQ	B		B+
7	22111200009	AYUNDA DAMAYANTI	B		A-
8	22111200010	PRADIPTA ARYA PRIBADI	B		A
9	22111200011	HANI RAMADANI	B		A
10	22111200012	ALFAN KURNIAWAN HARAHAP	B		A-
11	22111200013	FARDEEN SETYA NUGROHO	B		A-
12	22111200015	ARIDA RAHMAWATI	B		A-
13	24211200024	Muhammad Abiyyu Zaky Hutomo	B		B+
14	24211240021	Yudha Hermawan	B		B

Pengawas

1.

2.

3.

4.

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Yogyakarta, 23-06-2025

GUNTUR SAMODRO, S.T.,M.T