RENCANA PEMBELAJARAN SEMESTER (RPS)
PROGRAM STUDI S1 PENDIDIKAN TEKNIK BANGUNAN
JURUSAN TEKNIK SIPIL, FAKULTAS TEKNIK, UNIVERSITAS NEGERI PADANG

COURSES	CODE	GROUP OF COURSES	SCU		SEM	VERSION
			Theory	Pract		
Health and Safety at Work	**SIP1.61.4102**	**Study Program Compulsory Courses**	2		3	1

Responsible Lecturer	**Fitra Rifwan, S.Pd., M.T.**	**the signature of the responsible lecturer**

Information	**Dean of the Faculty of Engineering**	**Head of the Civil Engineering Department**	**Study Program Coordinator Building Engineering Education**
	Dr. Fahmi Rizal, M.Pd., M.T NIP. 195912041985031004	Faisal Ashar, Ph.D. NIP. 19750103 200312 1001	Drs. Revian Body, MSA. NIP. 19600103 198503 1003

Graduate Learning Outcomes	**Learning Achievement of Graduate Study Programs**
	1. Able to apply basic science knowledge (mathematics, natural sciences) and other multidisciplinary disciplines which become the foundation for the field of Building Engineering Vocational Education in carrying out professional work in their respective areas (Knowledge and Understanding). 1.1. Able to show good understanding and implement basic mathematical concepts to solve various problems in the field of building engineering. 1.2. Have a high understanding and can implement basic concepts of physics and chemistry (natural sciences) in the field of building engineering. 1.3. Have a high understanding and can implement the basic principles of basic engineering (mechanics, engineering drawings) in the field of building engineering 2. Able to think critically and creatively in identifying, formulating, problem-solving,

	evaluating various problems in the field of Building Engineering Vocational Education with the most appropriate and effective scientific method (Engineering analysis, investigations and assessment). 2.1. Able to identify various technical problems in the field of building engineering 2.2. Able to analyze various technical problems in the field of building engineering 2.3. Able to evaluate various technical problems in the building sector 2.4. Able to communicate Engineering Analysis, Investigation and Assessment materials to students/training. 3. Have a reliable ability in designing, implementing and supervising engineering design works. 3.1. Able to realize work drawings in collaboration with various related parties. 3.2. Able to manage building engineering work by paying attention to environmental, social, health and safety aspects. 3.3. Able to supervise the implementation of building engineering work 3.4. Able to communicate Engineering Design material to students. 4. Have a reliable ability to design, implement and evaluate the learning process in Building Engineering Vocational Education (Education design).. 4.1. Able to design the curriculum and learning process in building engineering. 4.2. Able to implement, control, evaluate and improve the quality of the learning process 4.3. Able to develop effective, efficient, and attractive learning media 4.4. Able to research in the field of education. 5. Having the ability to adapt and innovate to the development of science and technology and implement it into educational goals and professional work by considering possible non-technical risks (Engineering practice). 5.1. Able to innovate and develop technology in the field of building engineering by

considering social, economic and environmental aspects.

5.2. Able to analyze environmental conditions in the planning, implementation and supervision of buildings.

5.3. Implement information technology and computers into the planning, implementation, and supervision processes of buildings.

6. Having social and managerial competence, working together, communicating effectively, having entrepreneurial character, having an environmental perspective and being aware of the importance of lifelong learning (transferable and soft skills).

6.1. Able to work creatively, innovatively, collaboratively, be careful, responsible, responsive to environmental changes..

6.2. Have curiosity, think critically, are open-minded, and objective.

6.3. Able to communicate effectively and work together in teamwork.

Course Learning Outcomes

Learning Achievment of Course (CPMK)

CPMK	CPL
1. Know and understand the definition of Occupational Safety, Health, Safety and Health, Safety and Health at Construction.	1.2, 2.4
2. Knowing, understanding the definitions of Danger, Hazard, Risk, Incident, Accident and the Health and Safety at Work Management System.	1.2, 2.4
3. Able to identify the type of hazard in any construction work (buildings, water structures and roads).	1.2, 2.4, 3.2, 3.3, 5.2, 6.1, 6.2, 6.3
4. Able to assess the risks that arise from hazard identification (low, medium, and high).	1.2, 2.4, 3.2, 3.3, 5.2, 6.1, 6.2, 6.3
5. Analyze the risk controls that arise based on OHSAS (Occupational Health, Safety, Assessment Series 18001.	1.2, 2.4, 3.2, 3.3, 5.2, 6.1, 6.2, 6.3
6. Understand and create the IBPPR document (Hazard Identification, Assessment and Risk Control).	1.2, 2.4, 3.2, 3.3, 5.2, 6.1, 6.2, 6.3
7. Understand and create JSA (Job Safety Analysis) documents	1.2, 2.4, 3.2, 3.3, 5.2, 6.1, 6.2, 6.3

Short descriptions of course	This course provides knowledge and understanding of construction work safety and health-related to the definition of construction work health and safety, construction work environments, construction work hazards and risks and their management systems, with the final result being the preparation of Hazard Identification, Risk Assessment, Control and Opportunities and Job Safety Analysis (JSA) in building construction projects, roads and water structures.	
Reference	**Primary (RU) :**	
	1. *Safety and Health in Construction, ILO* 1992 2. *Safety, Health and Welfare on Construction Site, ILO* 1999 3. Peraturan Menteri PUPR Nomor 21 Tahun 2019	
	Proponent (RP)	
	1. *Job Hazard Analysis*, OSHA 3071 2. Surat Edaran Menteri PU Nomor 11 Tahun 2019 tentang biaya SMK3	
Learning Media	**Software:**	**Hardware:**
	Office Word dan Excell	Komputer, LCD Projector dan Papan tulis dan perangkatnya
Team Teaching	Dr. Rijal Abdullah, M.T., Fitra Rifwan, S.Pd., M.T. , Annisa Prita Melinda, S.T., M.T.,	
Assessment	UTS, UAS, Tugas mandiri & kelompok, Presentasi kelompok	
Requirements Subject	Workshop Courses, Project Management, Environmental Engineering	

LESSON MATERIAL

Weeks	Competence to be achieved	Study Materials	Learning Methods and Strategies	Assignments / task	Assessment Criteria / Indicators	Rreference
(1)	CPMK-1 Knowledge and understanding of: 1. Safety 2. Health 3. Health and Safety at Work 4. Health and Safety at Work in Construction 5. Regulation of the Implementation of Health and Safety in Construction	**Introduction to Health and Safety in Construction and its Regulations**	Lectures and Discussions	quiz	**1.** Attitude 2. Knowledge	RU 1,2

Weeks	Competence to be achieved	Study Materials	Learning Methods and Strategies	Assignments / task	Assessment Criteria / Indicators	Rreference
(2)	CPMK-1 Knowledge and understanding of: 1. Work Environment 2. Construction Work Environment 3. Characteristics of the Construction Work Environment	**Construction Work Environment**				
(3)	CPMK-2 dan CPMK-3 Knowledge and understanding of: 1. Danger 2. Hazard 3. Risk 4. Incidents 5. Accident 6. Types of Hazards in Construction 7. Types of Work Accidents in Construction	**Occupational Hazards and Risks Construction**	Lectures and Discussions	quiz	**1.** Attitude 2. Knowledge	RU 1,2
(4)	CPMK-3 Knowledge and understanding of: 1. Works in building construction 2. Works on Road Construction 3. Works on Water	**Health and Safety at Work of Building, Road and Water Construction**				

Weeks	Competence to be achieved	Study Materials	Learning Methods and Strategies	Assignments / task	Assessment Criteria / Indicators	Rreference
	Construction 4. Types of Hazards					
(5)	CPMK-3 Knowledge and understanding of: 1. Parts of a Scaffolding Building 2. Safety when installing and using scaffolding buildings	**Health and Safety of Scaffolding**	Lectures and Discussions	quiz	**1.** Attitude 2. Knowledge	RU 1,2
(6)	CPMK-3 Knowledge and understanding of: Work Safety when working at heights	**Health and safety at work Working at Heigh**				
(7)	CPMK-3 Knowledge and understanding of: 1. Types of flammable materials 2. Types of fire hazard 3. Fire protection	**Health and Safety at work of Fire Suppression Systems**				
(8)	**Mid-Semester Evaluation through Mid-Semester Examination**					
(9)	CPMK-4, Knowledge and understanding of: 1. Health and Safety Management System 2. Construction Work Health and Safety Management System 3. Hazards identification	**Construction Work Health and Safety Management System**	Lectures and Discussions	quiz	**1.** Attitude 2. Knowledge	RU 3 RP 1

Weeks	Competence to be achieved	Study Materials	Learning Methods and Strategies	Assignments / task	Assessment Criteria / Indicators	Rreference
(10)	CPMK-4, CPMK-5, CPMK-6, CPMK-7 Create Documents 1. Hazard identification 2. Risk Assessment 3. Risk Control	**HIRADC dan JSA**	Lectures and Discussions	quiz	**1.** Attitude 2. Knowledge 3. Skill	RU 3 RP 1 RP 2
(11) (12) (13) (14) (15)	Group Presentation and Ability to Present HIRADC and JSA Documents	**Group Presentation**	Discussions	1. Papers 2. Power Point	**1.** Attitude 2. Knowledge 3. Skill	
(16)	**Final Semester Evaluation (Evaluation intended to determine the final achievement of student learning outcomes)**					

Note

Providing lecture material plus the Mid-Semester Examination and Final Semester Examination only takes 10 meetings, the rest is an independent task to see the extent of student mastery of the material at the 10 meetings in question.

Correlation between CPMK and CPL and Assessment Methods

	Assesment	Bobot (%)	CPL-1			CPL-2				CPL-3				CPL-4			CPL-5			CPL-6		
			1	2	3	1	2	3	4	1	2	3	4	1	2	3	1	2	3	1	2	3
CPMK 1	UTS (Soal 1-12)	**12**																				
CPMK 2	UTS (Soal 13-20)	**8**																				
CPMK 3	UTS (Soal 13-20)																					
CPMK 4 CPMK 5 CPMK 6 CPMK 7	**QUIZ** **Presentasi** **UAS**	**10** **40** **20**																				
Kehadiran		**10**																				
TOTAL		**100**																				

Komponen Penilaian

Ujian Tengah Semester	:	20%
Ujian Akhir Semester	:	20%
Tugas (QIUZ)	:	10%
Makalah dan *Presentation*	:	40%
Kehadiran	:	10%
Total	**:**	**100%**

Deskripsi Tingkat Penilaian

	Excellent	Good	Satisfy	Fail
Deskripsi	80-100	70-79	51-69	>50
Formulasi	-	-	-	-
Menghitung	-	-	-	-
Analisis	90-100	70-89	51-69	>50

Sistem Penilaian

Nilai Angka	Nilai Mutu	Angka Mutu	Sebutan Mutu	Nilai Angka	Nilai Mutu	Angka Mutu	Sebutan Mutu
85 – 100	A	4.0	Dengan pujian	55 – 59	C	2.0	Cukup
80 – 84	A-	3.6	Sangat baik sekali	50 – 54	C-	1.6	Kurang cukup
75 – 79	B+	3.3	Baik sekali	40 – 49	D	1.0	Kurang
70 – 74	B	3.0	Baik	≤ 39	E	0.0	Gagal
65 – 69	B-	2.6	Cukup Baik	-	T	-	Tertunda
60 – 64	C+	2.3	Lebih dari cukup				

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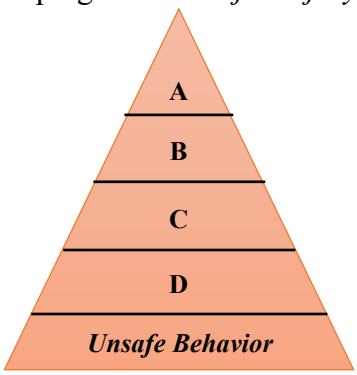
Telp. (0751) 7055644, Fax (0751) 7055628, website: www.ft.unp.ac.id, e-mail: info@ft.unp.ac.id

SOAL UJIAN TENGAH SEMESTER (MID TERM)

Matakuliah	:	Kesehatan dan Keselamatan Kerja
Kode/SKS	:	SIP1.61.4102
Sifat Ujian	:	*Close Book*
Dosen	:	Dr. Rijal Abdullah, M.T.
		Fitra Rifwan, S.Pd., M.T.
		Annisa Prita Melinda, S.T., M.T.
Waktu	:	30 Menit
Bobot nilai maksimal	:	20%

No	Soal	Bobot
1	Kesehatan adalah a. keadaan yang utuh secara fisik, mental dan kesejahteraan sosial b. keadaan yang utuh secara fisik, mental dan kesejahteraan sosial, bukan hanya tidak adanya penyakit atau kelemahan. c. memungkinkan setiap orang untuk hidup produktif secara sosial dan ekonomis. d. keadaan yang baik secara fisik yang memungkinkan setiap orang untuk hidup produktif.	1
2	Keadaan di mana rasa sakit yang dirasakan seseorang atau kerusakan property dapat dikurangi merupakan defenisi dari a. Kesehatan b. Keselamatan c. Kecelakaan d. Resiko	1
3	Apa yang dibutuhkan dalam peningkatan budaya K3 a. pembinaan dan pelatihan, pengarahan dan kontrol b. menjamin terciptanya kondisi kerja c. memberikan bantuan sosialisasi K3 sesuai dengan aturan yang berlaku d. mengadakan evaluasi K3 perusahaan dimana mereka bekerja	1
4	Kegiatan dibawah ini yang termasuk konstruksi, kecuali a. *recycling* b. pengoperasian c. pemeliharaan d. Pembongkaran	1
5	Usaha untuk mempertimbangkan keamanan, kesehatan dan kesejahteraan kerja konstruksi adalah dengan, kecuali a. memberikan solusi yang cepat b. menangani masalah yang ada c. mencegah serta merencanakan penanggulangan kecelakaan kerja d. membuat laporan kecelakaan kerja	1
6	Penyebab utama kecelakaan kerja pada bidang konstruksi itu adalah a. perubahan kondisi lingkungan kerja yang konstan b. metode kerja yang salah	1

	c. adanya unsafe action d. kegagalan manajemen K3 pada proyek	
7	Beberapa elemen yang harus diperhatikan pada K3 konstruksi a. pekerja, peralatan, lingkungan, bahan material b. pekerja, peralatan, lingkungan, metode kerja c. pekerja, metode kerja, material, lingkungan d. pekerja, material, metode kerja, prosedur kerja	1
8	Jaminan keselamatan dan kesehatan kerja baik secara fisik, sosial, dan psikologis kepada pekerja. a. kegunaan kesematan kerja b. fungsi kesehatan kerja c. tujuan kesehatan, keselamatan dan kesejahteraan kerja d. tujuan kesehatan dan keselamatan kerja	1
9	Warna biru pada rambu-rambu K3 berarti a. dipatuhi b. dilarang c. kewaspadaan d. Informasi	1
10	Faktor-Faktor yang mempengaruhi lingkungan kerja a. ruang makan b. ruang kerja c. ruang istirahat d. ruang penyimpanan	1
11	Karakteristik pada gambar di samping adalah mengenai a. *acces and egrees* b. *districted area* c. *safety entry* d. *healthy entry* 	1
12	Peralatan untuk karakteristik bekerja ketinggian di samping adalah a. *safety body net* b. *safety body harness* c. *safety body guard* d. *safety body healthy* 	1
13	Perbedaan hazard dan danger adalah a. *hazard* adalah bahaya dan *danger* adalah sumber bahaya b. *hazard* adalah tingkat bahaya dan *danger* adalah sumber bahaya c. *hazard* adalah sumber bahaya dan *danger* adalah tingkat bahaya d. *hazard* adalah resiko dan *danger* adalah penilaian resiko	1

14	Munculnya accident berawal dari kombinasi a. *unsafe action* dan *unsafe location* b. *unsafe action* dan *unsafe condition* c. *unsafe location* dan *unsafe condition* d. *unsafe location* dan *unsafe environment*	1
15	Perhatikan segitiga *bird* disamping. Posisi *major injury* dan *minor injury* berada pada huruf a. B dan C b. B dan D c. C dan D d. A dan B 	1
16	Beberapa sumber kecelakaan pada pekerjaan industri, khususnya konstruksi a. limbah kimia b. pesawat angkat dan angkut c. tertimbun d. jatuh dari ketinggian	1
17	Peralatan portabel berupa mesin pemotong kayu yang sedang berputar pada pekerjaan perkayuan memiliki bahaya, kecuali a. terpotong b. tergores c. tertarik d. radiasi kebisingan	1
18	Beberapa kejadian yang dimaksud dalam defenisi accident, kecuali a. gangguan terhadap pekerjaan b. pencemaran lingkungan c. kerusakan barang d. keterlambatan penyelesaian kerja	1
19	Apa yang dianalisis dalam suatu resiko pekerjaan konstruksi a. ukuran kemungkinan kerugian yang diperoleh b. potensi sumber bahaya c. keselamatan pekerja d. produktifitas kerja	1
20	Incident + Exposure menghasilkan Accident + _____ a. consequences b. hazard c. resiko d. danger	1

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SOAL UJIAN AKHIR SEMESTER

Matakuliah	:	Kesehatan dan Keselamatan Kerja
Kode/SKS	:	SIP1.61.4102
Sifat Ujian	:	*Close Book*
Dosen	:	Dr. Rijal Abdullah, M.T.
		Fitra Rifwan, S.Pd., M.T.
		Annisa Prita Melinda, S.T., M.T.
Waktu	:	30 Menit
Bobot nilai maksimal	:	20%

Buatlah dokumen HIRARC dari suatu proyek pembangunan jalan raya dengan menggunakan tabel di bawah ini. Minimal aktivitas proyek adalah 4 macam.

NO	Uraian Pekerjaan	Identifikasi Bahaya	Penilaian Resiko			Skala Prioritas	Pengendalian Risiko K3	Penanggung Jawab
			Kekerapan	Keparahan	Tingkat Resiko			
1	2	3	4	5	6	7	8	9

Bobot

1. Kolom 2 sampai dengan 3 5%
2. Kolom 4, 5, 6, dan 7 5%
3. Kolom 8 10%

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SOAL TUGAS MATA KULIAH
(Presentasi Kelompok)

Matakuliah	:	Kesehatan dan Keselamatan Kerja
Kode / SKS	:	SIP1.61.4102
Sifat Tugas	:	Diskusi Kelompok dan Open Book
Dosen	:	Dr. Rijal Abdullah, M.T.
		Fitra Rifwan, S.Pd., M.T.
		Annisa Prita Melinda, S.T., M.T.
Waktu presentasi	:	30 Menit
Bobot Nilai	:	40%

Kelompok	Soal	Nilai maks
CPM-4 CPM-5 CPM-6 CPM-7	Studi ke lapangan atau proyek konstruksi untuk merangkum data-data real terkait, kemudian di presentasikan dalam bentuk diskusi kelompok Paper 1. Identifikasi Bahaya 2. Penilaian Risiko 3. Pengurangan atau Pengendalian Risiko Performance	 10% 30%

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SOAL TUGAS MATA KULIAH
(QUIZ)

Matakuliah	:	Kesehatan dan Keselamatan Kerja
Kode / SKS	:	SIP1.61.4102
Sifat Tugas	:	Diskusi Kelompok dan Open Book
Dosen	:	Dr. Rijal Abdullah, M.T.
		Fitra Rifwan, S.Pd., M.T.
		Annisa Prita Melinda, S.T., M.T.
Waktu	:	30 Menit
Bobot Nilai	:	10%

Kelompok	Soal	Nilai maks
CPMK-1 CPMK-2 CPMK-3	1. Uraikan jenis pekerjaan pada bidang konstruksi gedung, jalan dan bangunan air 2. Identifikasi sumber bahaya-nya 3. Identifikasi jenis bahaya yang akan terjadi-nya	5% 2,5% 2,5%