



KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS NEGERI PADANG
FAKULTAS TEKNIK

JURUSAN TEKNIK SIPIL

Alamat: Jl.Prof Dr. Hamka Kampus UNP Air Tawar Padang 25131
(0751)7059996; <http://sipil.ft.unp.ac.id>; sipil@ft.unp.ac.id

Bachelor of Education in Building Engineering

MODULE HANDBOOK

Module name:	Concrete Structure
Module level, if applicable:	Undergraduate
Code:	SIP1.61.3305
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	3th
Module coordinator:	Dr.Eng.Ir.Eka Juliafad, ST.,M.Eng.,IPM
Lecture(s):	Drs.Juniman Silalahi,M.Pd., Dr.Eng.,Prima Yane,ST.,MT
Language:	Bahasa Indonesia
Classification within the curriculum:	Compulsory course
Teaching format/ class hours per week during the semester:	150 minutes lectures and 180 minutes structured activities per week, and 180 minutes self activities.
Workload:	Totally, workload is 136 hours (8160 minutes) per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes self-study per week for 16 weeks.
Credit points:	3
Prerequisites course(s):	Statics, Engineering Mechanics
Course outcomes:	After taking this course the students have ability to: CO1. Understand the basic of reinforced concrete structure CO2. Analyze and design the reinforced concrete concrete element. CO3. Analyze and design flexural and shear element CO4. Analyze and design T beam CO5. Analyze and design one way slab CO6. Analyze and design two way slab CO7. Analyze and design short column CO8. Analyze and design reinforcement of footing foundation
Content:	This course is an application of the Statics, Engineering Mechanics, and material engineering course. In this course, students are targeted to be able to analyze and design reinforced concrete structures for each structural elements, beam, column and slab. The design requirements are based on Indonesia Nasional Standard for Concrete Building, SNI-03-2847-2019 and other standards required for the design process.
Study / exam achievements:	Attitude assessment is carried out at each class through the observation and / or self-assessment techniques by using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final



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	<p>grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude. The final mark will be weight as follow:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">No</th> <th style="width: 10%;">CO</th> <th style="width: 30%;">Assessment Object</th> <th style="width: 20%;">Assessment Technique</th> <th style="width: 10%;">Weight</th> </tr> </thead> <tbody> <tr> <td rowspan="4" style="text-align: center;">1</td> <td rowspan="4" style="text-align: center;">CO1-CO8</td> <td>a. Individual assignment</td> <td rowspan="4" style="text-align: center;">Presentation/ Written test</td> <td style="text-align: center;">20%</td> </tr> <tr> <td>b. Group assignment</td> <td style="text-align: center;">20%</td> </tr> <tr> <td>c. Mid Exam</td> <td style="text-align: center;">30%</td> </tr> <tr> <td>d. Final Exam</td> <td style="text-align: center;">30%</td> </tr> <tr> <td colspan="4" style="text-align: center;">Total</td> <td style="text-align: center;">100%</td> </tr> </tbody> </table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO1-CO8	a. Individual assignment	Presentation/ Written test	20%	b. Group assignment	20%	c. Mid Exam	30%	d. Final Exam	30%	Total				100%
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1	CO1-CO8	a. Individual assignment	Presentation/ Written test	20%																		
		b. Group assignment		20%																		
		c. Mid Exam		30%																		
		d. Final Exam		30%																		
Total				100%																		
Forms of media:	Board, LCD Projector, Laptop/Computer																					
Literature:	<ol style="list-style-type: none"> 1. SNI-03-2847-2019 2. Wang,CK et al, Reinforced Concrete Structure, Wiley 3. Juliafad.E. Perencanaan Rangka Beton Bertulang, IRDH, 2019 4. Juniman Silalahi, 2009, Struktur Beton Bertulang Untuk Bangunan Gedung, Penerbit Sukabina Press, Padang. 5. Dipohusodo Istimawan, 1994, Struktur Beton Bertulang, Berdasarkan SK SNI T15-1991-03, PT. Gramedia Pustaka Utama, Jakarta. 6. Kusuma H. Gideon, dkk, 1995, Dasar-dasar Perencanaan Beton Bertulang, Berdasarkan SK SNI T-15-1991-03, Penerbit Erlangga, Jakarta. 7. Wahyudi L, dan Rahim A.Syahril, 1997, Struktur Beton Bertulang Standar Baru SNI T-15-1991-03, PT. Gramedia Pustaka Utama, Jakarta. 8. Juliafad, Eka, Iskandar G. Rani, and Fitra Rifwan. "Concreting Workmanship in Indonesia Study Case: Padang City, West Sumatra, Indonesia." International Journal on Advanced Science, Engineering and Information Technology 9.1 (2019): 300-306. 																					

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CO1	√					
CO2	√					
CO3	√	√				
CO4	√	√				
CO5	√	√				
CO6	√	√				
CO7	√	√	√			



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CO8		√	√			
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