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		
Praktek Batu Beton	SIP1.61.1101	Study Program Compulsory Courses	1	3	1	
Responsible Lecturer	Laras Oktavia Andreas., S.Pd.,M.Pd.T		**the signature of the responsible lecturer** Laras Oktavia Andreas., S.Pd.,M.Pd.T			

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 multidisciplinary expertise to other scientists who 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 knowledge and can implement basic concepts of physics and chemistry (natural sciences) in the area of building engineering. 1.3. Have a heightened understanding and can implement the basic principles of basic engineering (mechanics, engineering drawings, materials science) 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 methods (Engineering analysis,

	investigations and assessment). 2.1. Able to identify various technical problems in the field of building engineering 2.2. Able to analyze multiple technical issues in the field of building engineering 2.3. Able to evaluate various technical issues in the building sector 3. Have a reliable ability in designing, implementing and supervising engineering design works. 3.1. Able to realize working 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 4. Have reliable abilities in designing, implementing and evaluating the learning process in Building Engineering Vocational Education (Education design). 4.1. Able to create 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. 5. Have 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, performance, and supervision processes of buildings. 6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurial character, are environmentally friendly and 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. Having curiosity, critical thinking, open-minded, and objective. 6.3. Able to communicate effectively and cooperate in teamwork.
Course Learning	**Learning Achievment of Course**

<table>
<tr><td>Outcomes</td><td>
<table>
<tr><th>CPMK</th><th>CPL</th></tr>
<tr><td>1. Have knowledge of land measurement with building plan guidelines..</td><td>1.1, 1.2, 1.3
2.4, 3.4</td></tr>
<tr><td>2. Have the ability and skills to do bow plank installation work</td><td>1.1, 1.2, 1.3
2.4, 3.4,6.1,6.3</td></tr>
<tr><td>3. Knowing the installation of the cough foundation profile.</td><td>1.1, 1.2, 1.3
2.4, 3.4, 6.2</td></tr>
<tr><td>4. Have the ability and skills in installing profiles and river stone foundations for building works..</td><td>1.1, 1.2, 1.3
2.4, 3.4, 6.1,6.3</td></tr>
<tr><td>5. Know concrete blocks, concrete pillars and concrete floor slabs for buildings.</td><td>1.1, 1.2, 1.3
2.4, 3.4, 6.2</td></tr>
<tr><td>6. Have the ability and skills to install concrete beams, poles and slabs in buildings..</td><td>1.1, 1.2, 1.3
2.4, 3.4,6.1,6.3</td></tr>
<tr><td>7. Know the walls and types of masonry.</td><td>1.1, 1.2, 1.3
2.4, 3.4, 6.2</td></tr>
<tr><td>8. Have the ability and skills in brick wall installation.</td><td>1.1, 1.2, 1.3
2.4, 6.1,6.3</td></tr>
<tr><td>9. Knowing the ceramic wall and floor pairs.</td><td>1.1, 1.2, 1.3
2.4, 3.4, 6.2</td></tr>
<tr><td>10. Have the ability and skills to install floor and wall tiles.</td><td>1.1, 1.2, 1.3
2.4, 3.4, 6.1,6.3</td></tr>
</table>
</td></tr>
<tr><td>Short descriptions of course</td><td>This course provides students with knowledge, abilities and skills in the practical field of concrete masonry work, which includes soil measurement for bow plank installation; excavation of soil; installation of stone facades; stone pairs; reinforcement and casting of columns and block beams, installation of brick walls, installation of tiles/tiles and floors according to SNI for simple buildings.</td></tr>
<tr><td>References</td><td>Main(RU) :
1. Departemen Pendidikan dan Kebudayaan (1977). Ilmu Bangunan Gedung Jilid 1.Proyek Pengadaan Buku/Diktat Pendidikan Menengah Teknologi Jakarta
2. Dapartemen Pekerjaan Umum. (2009). Buku Saku Persyaratan Pokok Rumah yang Lebih Aman Gempa. Direktorat Jenderal Cipta Karya.
3. Jobshett (2019). Praktek Kerja Batu dan Beton. Jurusan Teknik Sipil FT-UNP.
Support (RP)
1. SNI 03-1726-2002, TataCara PerencanaanKetahananGempaUntukBangunan.</td></tr>
</table>

	2. SNI 03-2847-1992, Tata Cara PerencanaanStrukturBetonuntukBangunanGedung.	
Learning Media	**Software:**	**Hardware:**
	-	Laptop, LCD projectors and whiteboards with peripherals
Team Teaching	Dr. Nurhasansyah, M.Pd, LarasOktavia Andreas, S.Pd.,M.Pd.T, NidalZuwida, S.Pd.,M.Pd.T	
Assessment	Practices and personal task	
Requirements Subject	None	

LESSON MATERIAL

Weeks	Competence to be achieved	Study Materials	Learning Methods and Strategies	Assignments / task	Assessment Criteria / Indicators	Rreference
(1)	CPMK -1 Students are able to: - know the type and function of tools in concrete masonry practice. - read the drawings and building plans.	Introduction to tools and floor plans.	Lectures, demonstrations and questions & answers	Personal task	1. Attitude 2. Knowledge	RU 1 RU 3
(2)	CPMK-2 Students are able to: - determine the location and height of the building based on the drawing/building plan. - Conducting soil excavation according to the project in the working drawing.	Bouw plank	Lectures, demonstrations and questions & answers	Job 1: Bouw plank job practice, and Personal task	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 3
(3)	CPMK-3, CPMK-4 Students are able to: - Choose a river stone that meets the requirements for the *anstampang*. - Arrange stones and fill sand following the size and conditions that have been determined.	River stone foundation	Lectures, demonstrations and questions & answers	Job 2: *Anstampang* installation practice and personal tasks	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 2 RU 3
(4)	CPMK-3, CPMK-4 Students are able to: - - profile the foundation with the	River stone foundation	Lectures, demonstrations and questions & answers	Job 2: Practical Work foundation profiles	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 2 RU 3

Weeks	Competence to be achieved	Study Materials	Learning Methods and Strategies	Assignments / task	Assessment Criteria / Indicators	Rreference
	accuracy of the planned size.			and independent tasks and personal task		
(5)	CPMK-3, CPMK-4 Students are able to: - Calculating the materials required for the foundation. - Choose river stones that qualify for the foundation. - Installing/arranging river stones according to the size and shape in the working drawing.	River stone foundation	Lectures, demonstrations and questions & answers	Job 2: The Practice of Pairing the river Stone Foundation and personal Tasks	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 2 RU 3
(6)	CPMK-5, CPMK-6 Students are able to: - - Making pens for bending reinforcing steel and tapes on bearing wood.	reinforcing	Lectures, demonstrations and questions & answers	Job 3: The practice of making pens for bending steel and personal Tasks	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 2 RP 2
(7)	CPMK-5, CPMK-6 Students are able to: - Calculate the amount of staple reinforcement and rods needed for the beam sloof according to the working drawing. - Cutting and bending reinforcing steel - Make a bag according to your needs - Making tofu (concrete decking) - Stringing reinforcing steel for sloof.	Sloof	Lectures, demonstrations and questions & answers	Job 3: Cutting, bending and stringing reinforcing steel for sloofs and personal tasks	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 2 RP 2
(8)	CPMK-5, CPMK-6 Students are able to: - Calculating the materials required for formwork - Adjusting the formwork according	Sloof	Lectures, demonstrations and questions & answers	Job 3: The practice of making formwork, casting sloof and personal task	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 2 RP 2

Weeks	Competence to be achieved	Study Materials	Learning Methods and Strategies	Assignments / task	Assessment Criteria / Indicators	Rreference
	to the working drawing. - Adjusting the loop reinforcement. - Making a 1: 2: 3 concrete mortar using the manual method for sloof blocks.					
(9)	CPMK-5, CPMK-6 Students are able to: - Calculating the amount of staple reinforcement and rods needed for the structural column according to the working drawing. - Cutting and bending reinforcing steel - Make rods according to your needs. - Stringing reinforcing steel for sloof.	column	Lectures, demonstrations and questions & answers	Job 3: Cutting, Bending and stringing column reinforcing steel and personal task	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 2 RP 2
(10)	CPMK-5, CPMK-6 Students are able to: - Calculating the required materials for structural column formwork. - Adjusting the formwork according to the working drawing. - Making 1: 2: 3 concrete mortar manually for structural columns.	column	Lectures, demonstrations and questions & answers	Job 3: Practices for formwork making, column casting and personal task	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 2 RP 2
(11)	CPMK-7, CPMK-8 Students are able to: - Make a ½ brick wall mounting profile. - Make a mortar for masonry specs with a 1: 4 mortar. - Installing ½ brick masonry for building walls.	brick masonry	Lectures, demonstrations and questions & answers	Job 4: Practice making profiles, ½ brick masonry and personal task	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 3
(12)	CPMK-7, CPMK-8	brick masonry	Lectures,	Job 4:	1. Attitude	RU 1

Weeks	Competence to be achieved	Study Materials	Learning Methods and Strategies	Assignments / task	Assessment Criteria / Indicators	Rreference
	Students can: - Creating an upright profile on the wall to be plastered. - Make dots in the shape of a circle/square in a vertical direction as a guideline for making plaster heads.		demonstrations and questions & answers	Practical work of plaster head profile and personal task	2. Knowledge 3. Skills	RU 3
(13)	CPMK-7, CPMK-8 Students can: - Doing sand sieve for plastering with a 1: 4 cement mix. Plaster the surface of the wall (vertical) and the horizontal surface.	brick masonry	Lectures, demonstrations and questions & answers	Job 4: Wall plastering practice and personal Task	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 3
(14)	CPMK-7, CPMK-8 Students can: - Covering vertical and horizontal stucco surfaces.	brick masonry	Lectures, demonstrations and questions & answers	Job4: Practicing stucco wall and Personal Tasks	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 3
(15)	CPMK-9, CPMK-10 Students can: - Creating a profile for installing floor tiles following the working drawing plan. - Create a row of ceramic wall installation guidelines. - Cutting ceramics with manual or machine cutting tools. - Install tiles according to existing lane guidelines and check level and density of species.	Tiles	Lectures, demonstrations and questions & answers	Job 5: The practice of installing floor tiles and personal task	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 3
(16)	CPMK-9, CPMK-10 Students can: - Creating a profile for wall tile installation following the work drawing plan,	Tiles	Lectures, demonstrations and questions & answers	Job 5: Practical wall tiles installation, and Independent Assignments	1. Attitude 2. Knowledge 3. Skills	RU 1 RU 3

Weeks	Competence to be achieved	Study Materials	Learning Methods and Strategies	Assignments / task	Assessment Criteria / Indicators	Rreference
	- Create a row of ceramic wall installation guidelines, - Cutting ceramics with manual or machine cutting tools. - Install the ceramic wall with the existing lane guidelines and check the level and density of spaces.					

Note:
Every week students have to carry out practical activities to identify the aspects of knowledge and skills in a simple construction work plan.

Keterkaitan CPMK dengan CPL dan Metode Assesment

	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	4	1	2	3	1	2	3
CPMK 1	Tugas Mandiri	5																					
CPMK 2	Job 1	10																					
CPMK 3	Job 2	10																					
CPMK 4	Job 2	10																					
CPMK 5	Job 3	10																					
CPMK 6	Job 3	10																					
CPMK 7	Job 4	10																					
CPMK 8	Job 4	10																					
CPMK 9	Job 5	10																					
CPMK 10	Job 5	10																					
Kehadiran		5																					
TOTAL		100																					

Komponen Penilaian

Job 1	:	10%
Job 2	:	20%
Job 3	:	20%
Job 4	:	20%
Job 5	:	20%
Tugas Mandiri	:	5%
Kehadiran	:	5%
Total	:	100 %

Deskripsi Tingkat Penilaian

	Excellent	***Good***	***Satisfy***	***Fail***
Deskripsi	90-100	70-89	51-69	>50
Formulasi	90-100	70-89	51-69	>50
Menghitung	90-100	70-89	51-69	>50
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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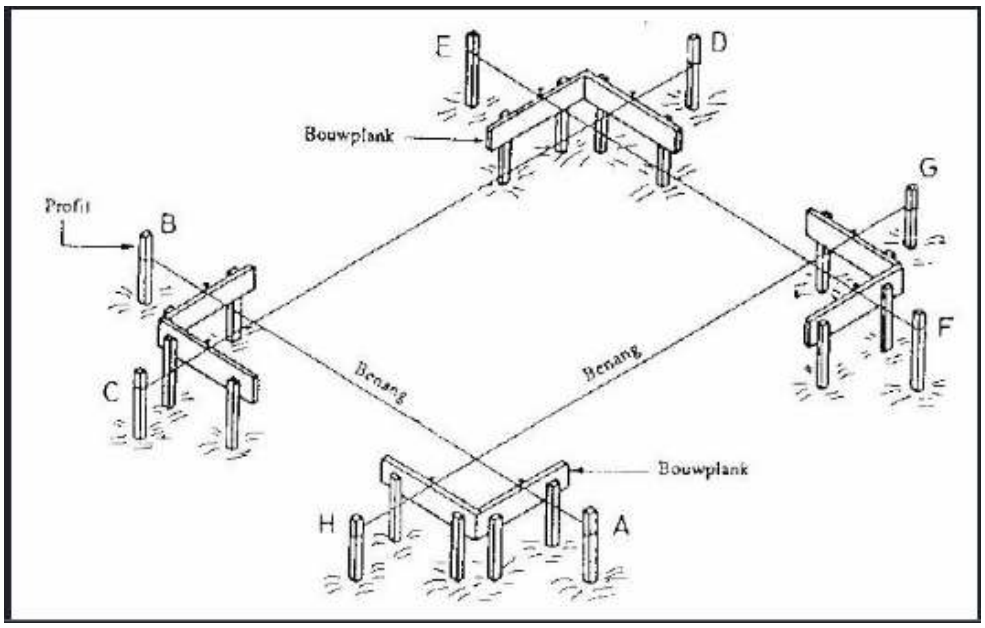
GAMBAR KERJA
JOB 1

Matakuliah	: Praktek Batu Beton
Kode / SKS	: SIP1.61.1101 / 4 SKS
Sifat Ujian	: Pratikum
Dosen	: Dr. Nurhasansyah, M.Pd, LarasOktavia Andreas, S.Pd.,M.Pd.T, NidalZuwida, S.Pd.,M.Pd.T
Waktu	: 2x 4 x 50 Menit
Bobot nilai maksimal	: 10 %

Praktek pemasangan bowplank



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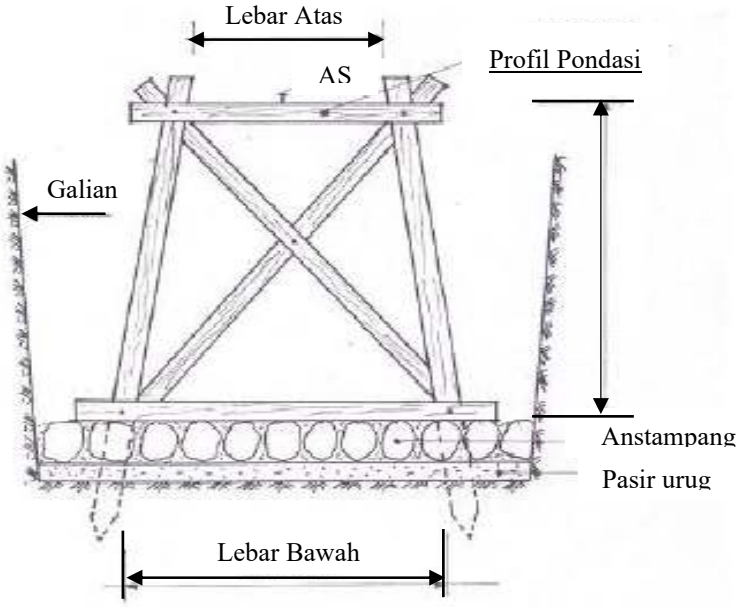
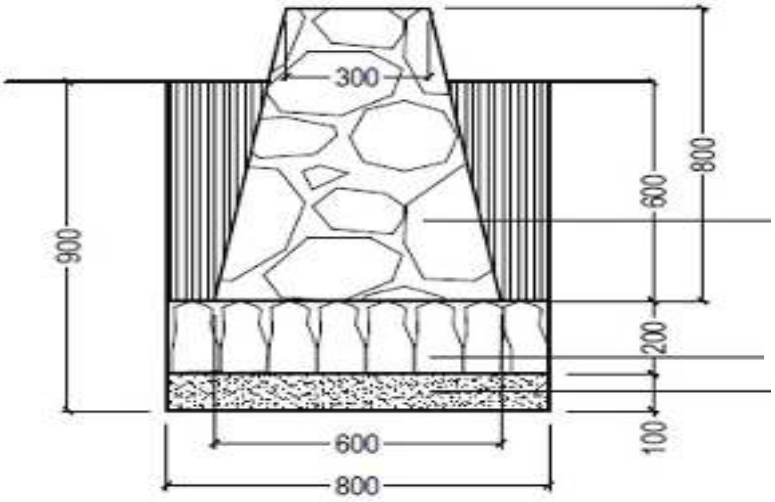
GAMBAR KERJA
JOB 2

Matakuliah	: Praktek Batu Beton
Kode / SKS	: SIP1.61.1101 / 4 SKS
Sifat Ujian	: Pratikum
Dosen	: Dr. Nurhasansyah, M.Pd, LarasOktavia Andreas, S.Pd.,M.Pd.T, NidalZuwida, S.Pd.,M.Pd.T
Waktu	: 2x 4 x 50 Menit
Bobot nilai maksimal	: 20 %

Pondasi Batu Kali





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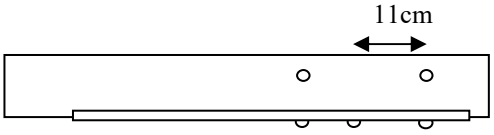
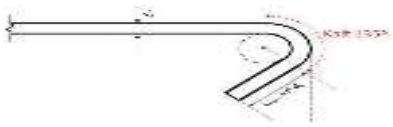
GAMBAR KERJA
JOB 3

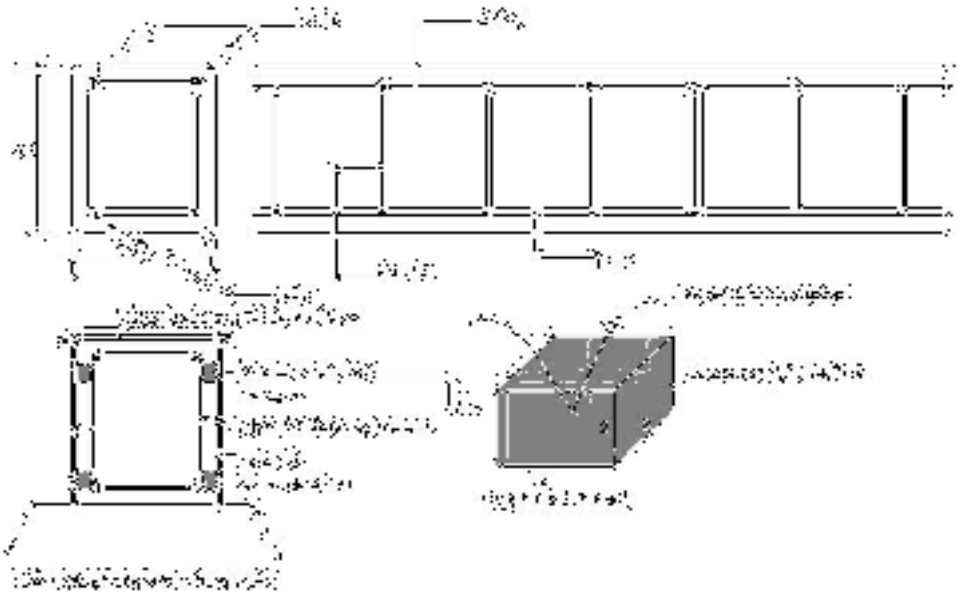
Matakuliah	: Praktek Batu Beton
Kode / SKS	: SIP1.61.1101 / 4 SKS
Sifat Ujian	: Pratikum
Dosen	: Dr. Nurhasansyah, M.Pd, LarasOktavia Andreas, S.Pd.,M.Pd.T, NidalZuwida, S.Pd.,M.Pd.T
Waktu	: 2x 4 x 50 Menit
Bobot nilai maksimal	: 20 %

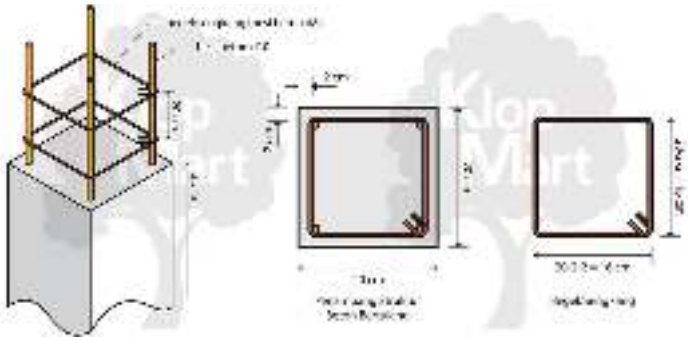
Praktek Pekerjaan Struktur Bangunan





16 cm





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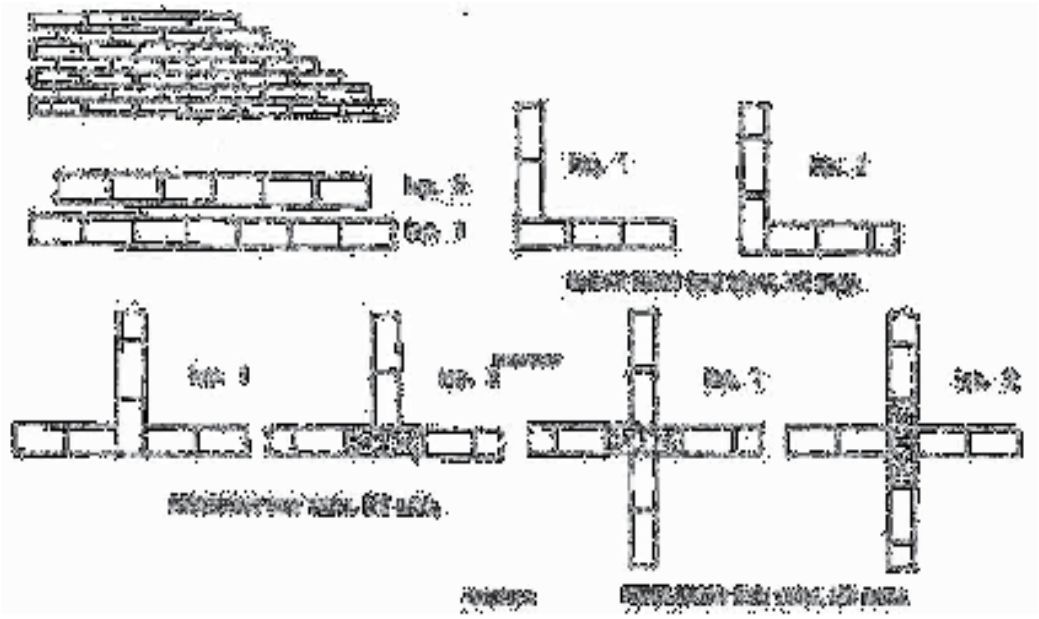
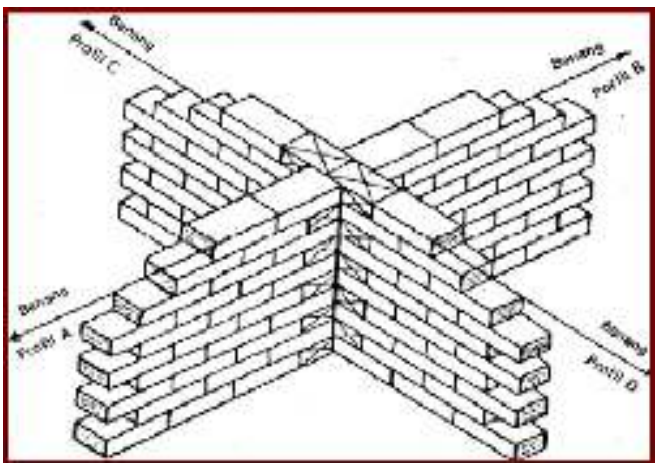
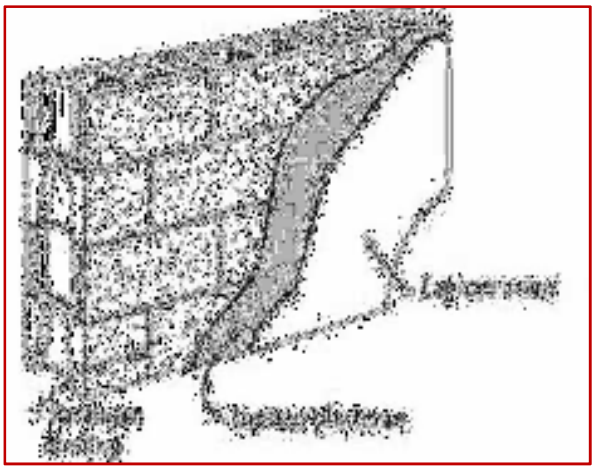
GAMBAR KERJA
JOB 4

Matakuliah	: Praktek Batu Beton
Kode / SKS	: SIP1.61.1101 / 4 SKS
Sifat Ujian	: Pratikum
Dosen	: Dr. Nurhasansyah, M.Pd, LarasOktavia Andreas, S.Pd.,M.Pd.T, NidalZuwida, S.Pd.,M.Pd.T
Waktu	: 2x 4 x 50 Menit
Bobot nilai maksimal	: 20 %

Pasangan dinding ½ bata







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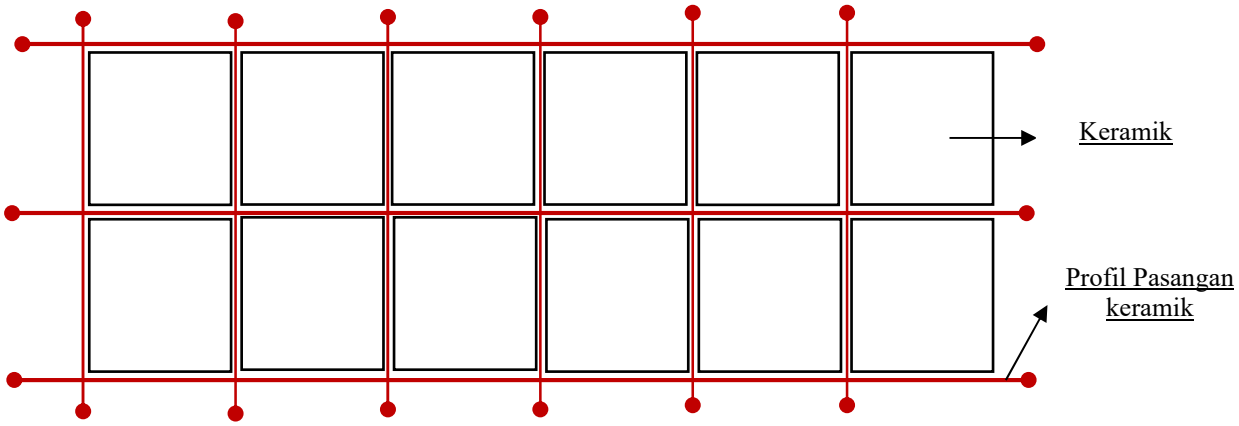
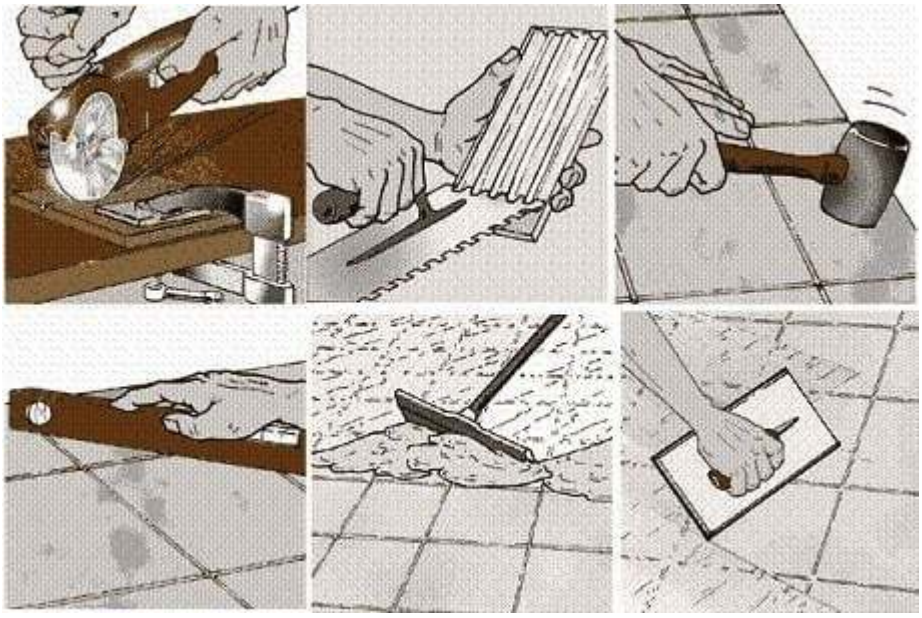
GAMBAR KERJA
JOB 5

Matakuliah	: Praktek Batu Beton
Kode / SKS	: SIP1.61.1101 / 4 SKS
Sifat Ujian	: Pratikum
Dosen	: Dr. Nurhasansyah, M.Pd, LarasOktavia Andreas, S.Pd.,M.Pd.T, NidalZuwida, S.Pd.,M.Pd.T
Waktu	: 2x 4 x 50 Menit
Bobot nilai maksimal	: 20 %

Pasangan Keramik





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TUGAS MANDIRI

Matakuliah : Praktek Batu Beton
Kode / SKS : SIP1.61.1101 / 4 SKS
Sifat Ujian : Laporan Praktek
Dosen : Dr. Nurhasansyah, M.Pd,
LarasOktavia Andreas, S.Pd.,M.Pd.T,
NidalZuwida, S.Pd.,M.Pd.T
Waktu : 2x 4 x 50 Menit
Bobot nilai maksimal : 5%

No	Soal	Nilai maks
1	Landasan teori	0,5
2	Langkah kerja	1
3	Alat dan bahan	0,5
4	Analisa perhitungan	1
5	Gambar kerja	1
6	kesimpulan	0,5
7	Daftar pustaka	0,5

Catatan:
Tugas mandiri berupa laporan yang dibuat setiap minggu oleh mahasiswa setelah melaksanakan praktek.