TEACHING PLAN
BUILDING ENGINEERING VOCATIONAL EDUCATION (BEVE) STUDY PROGRAM
CIVIL ENGINEERING DEPARTMENT, FACULTY OF ENGINEERING, UNIVERSITAS NEGERI PADANG

COURSE	CODE	COURSE CLUSTER	CREDITS		SEM	VERSION
			Theory	Practice		
Media Pembelajaran	SIP1.61.3102	**Compulsory Courses Study Program**	**1**	**2**	**3**	**1**

Lecturer in Charge	**Dr. Indrati Kusumaningrum, M.Pd.**	**Lecturer in Charge**

Remarks	**Dean of Faculty of Engineering**	**Head of Civil Engineering Department**	**Coordinator of BEVE**
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Program Learning Outcomes	**Program Learning Outcomes (PLO) Study Program**
	1. Able to apply basic *science* (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering *Vocational Education* in carrying out professional work in their fields *(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 the 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, drawing techniques, materials science) in the field of building engineering.

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4. Have a reliable ability in designing, implementing and evaluating the learning process in Building Engineering Vocational Education *(Education design).*
   4.1. Able to design curriculum and learning process in the field of 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 interesting learning media.
5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice).*
   5.1. Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects.
   5.2. Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning.
   5.3. Implementing information technology and computers into the planning process, implementation of learning.
6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of

	lifelong learning *(Transferable and softskill).* 6.1. Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes. 6.2. Have curiosity, critical thinking, open-mindedness, and objectives. 6.3. Able to communicate effectively and cooperate in a *team work.* 1. Able to apply basic science (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering *Vocational Education* in carrying out professional work in the field *(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 the 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, drawing techniques, materials science) in the field of building engineering. 2. 2. 2.1 2.1. 2.2 2.2. 2.3 2.3. 3. 3. 3.1 3.1. 3.2 3.2. 3.3 3.3.

4. Have reliable ability to design, implement and evaluate the learning process in Building Engineering Vocational Education *(Education design)*.
   4.1. Able to design curriculum and learning process in the field of 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 interesting learning media.
5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice)*.
   5.1. Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects.
   5.2. Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning.
   5.3. Implementing information technology and computers in the planning process, implementation of learning.
6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*.
   6.1. Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes.
   6.2. Have curiosity, critical thinking, open-mindedness, and objectives.
   6.3. Able to communicate effectively and cooperate in teamwork.

1.1.

1. Able to apply basic science (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering Vocational Education in carrying out professional work in the fields *(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 high understanding and can implement the basic concepts of physics and chemistry (*natural sciences*) in the field of building engineering.

1.3 Have high understanding and can implement the basic principles of basic *engineering* (mechanics, drawing techniques, materials science) in the field of building engineering.

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4. Have reliable ability to design, implement and evaluate the learning process in Building Engineering Vocational Education (*Education design*).

4.1 Able to design curriculum and learning process in the field of 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 interesting learning media.

5. Have the ability to adapt and innovate to the development of science and technology and implement it in the objectives of education and professional work by considering the possible non-technical risks (*Engineering practice*).

5.1 Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects.

5.2 Able to analyze environmental conditions in the process of planning, implementing,

and supervising vocational learning.

5.3 Implementing information technology and computers in the planning process, implementation of learning.

6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*.

6.1 Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes.

6.2 Have curiosity, critical thinking, open-mindedness, and objectives.

6.3 Able to communicate effectively and cooperate in *teamwork*.

1.2.

1. Able to apply basic *science* (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering *Vocational Education* in carrying out professional work in the field *(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 high understanding and can implement the basic concepts of physics and chemistry *(natural sciences)* in the field of building engineering.

1.3 Have high understanding and can implement the basic principles of basic *engineering* (mechanics, drawing techniques, materials science) in the field of building engineering.

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6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*.
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	6.1 Ability to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes. 6.2 Have curiosity, critical thinking, open-mindedness, and objectivity. 6.3 Able to communicate effectively and cooperate in teamwork. 2.1. 1. Ability to apply basic science (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering *(Vocational Education* carrying out professional work in the field *(Knowledge and Understanding)*. 1.1 Ability to show good understanding and implement basic mathematical concepts to solve various problems in the field of building engineering. 1.2 Have high understanding and can implement the basic concepts of physics and chemistry *(natural sciences)* in the field of building engineering. 1.3 Have high understanding and can implement the basic principles of basic *engineering* (mechanics, drawing techniques, materials science) in the field of building engineering. 2. 2. 2.1 2.1. 2.2 2.2. 2.3 2.3. 3. 3. 3.1 3.1. 3.2 3.2. 3.3 3.3. 4. Have reliable ability in designing, implementing and evaluating the learning process in

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possible non-technical risks *(Engineering practice)*.

5.1 Able to innovate and develop in the field of building engineering by considering the social, economic, and environmental aspects.

5.2 Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning.

5.3 Implementing information technology and computers in the planning process, implementation of learning.

6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*.

6.1 Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes.

6.2 Have curiosity, critical thinking, open-mindedness, and objectives.

6.3 Able to communicate effectively and cooperate in teamwork.

3.1.

1. Able to apply basic science (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering Vocational Education in carrying out professional work in the field *(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.

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4.1. Able to design curriculum and learning process in the field of 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 interesting learning media.

5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice)*.

5.1. Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects.

5.2. Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning.

5.3. Implementing information technology and content into the planning process, implementation of learning.

6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*.

6.1. Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes.

6.2. Have curiosity, critical thinking, open-mindedness, and objectives.

6.3. Able to communicate effectively and cooperate in a *team work*.

3.3.

1. Able to apply basic *science* (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering *Vocational Education* in carrying out professional work in their fields *(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 the 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, drawing techniques, materials science) in the field of building engineering. 2. 2.1. 2.2. 2.3. 3. 3.1. 3.2. 3.3. 4. Have a reliable ability in designing, implementing and evaluating the learning process in Building Engineering Vocational Education *(Education design).* 4.1. Able to design curriculum and learning process in the field of 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 interesting learning media. 5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice).* 5.1. Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects. 5.2. Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning. 5.3. Implementing information technology and computers into the planning process,

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4. Have the ability to design, implement and evaluate the learning process in Building Engineering Vocational Education *(Education design)*. 4. Have reliable ability to design, implement and evaluate the learning process in Building Engineering Vocational Education *(Education design)*.

4.1. Able to design curriculum and learning process in the field of building engineering. 4.1. Able to design curriculum and learning process in the field of building engineering.

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5.1. Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects. 5.1. Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects.

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4.1.

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5.1 Able to innovate and develop ideas in the field of building engineering by considering the social, economic, and environmental aspects.

5.2 Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning.

5.3 Implementing information technology and computers in the planning process, implementation of learning.

6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*.

6.1 Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes.

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6.3 Able to communicate effectively and cooperate in *teamwork*.

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1. Able to apply basic *science* (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering *Vocational Education* in carrying out professional work in the fields *(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 high understanding and can implement the basic concepts of physics and chemistry *(natural sciences)* in the field of building engineering.

1.3 Have high understanding and can implement the basic principles of basic *engineering* (mechanics, drawing techniques, materials science) in the field of building engineering.

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   3.3 3.3.
4. Have the ability to design, implement and evaluate the learning process in Building Engineering Vocational Education *(Education design)*.
   4.1 Able to design curriculum and learning process in the field of 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 interesting learning media.
5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice)*.
   5.1 Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects.
   5.2 Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning.
   5.3 Implementing information technology and computers in the planning process, implementation of learning.
6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*.
   6.1 Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes.

6.2 Have curiosity, critical thinking, open-mindedness, and objectives.

6.3 Able to communicate effectively and cooperate in a team work.

4.3.

1. Able to apply basic *science* (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering *Vocational Education* in carrying out professional work in their fields *(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 the 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, drawing techniques, materials science) in the field of building engineering.
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4. Have a reliable ability in designing, implementing and evaluating the learning process in Building Engineering Vocational Education *(Education design).*
   4.1. Able to design curriculum and learning process in the field of 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 interesting learning media. 5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice).* 5.1. Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects. 5.2. Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning. 5.3. Implementing information technology and computers into the planning process, implementation of learning. 6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and softskill).* 6.1. Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes. 6.2. Have curiosity, critical thinking, open-mindedness, and objectives. 6.3. Able to communicate effectively and cooperate in a *team work.* 5. 1. Able to apply basic science (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering *Vocational Education* in carrying out professional work in the fields *(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 high understanding and can implement the basic concepts of physics and chemistry *(natural sciences)* in the field of building engineering. 1.3 Have high understanding and can implement the basic principles of basic *engineering* (mechanics, drawing techniques, materials science) in the field of building engineering. 2. 2. 2.1 2.1. 2.2 2.2. 2.3 2.3. 3. 3. 3.1 3.1. 3.2 3.2. 3.3 3.3. 4. Have reliable ability to design, implement and evaluate the learning process in Building Engineering Vocational Education *(Education design)*. 4.1 Able to design curriculum and learning process in the field of 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 interesting learning media. 5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice)*. 5.1 Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects. 5.2 Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning. 5.3 Implementing information technology and content into the planning process, implementation of learning.

6. Have social and managerial competence, to communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*.
   6.1 Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes.
   6.2 Have curiosity, critical thinking, open-mindedness, and objectives.
   6.3 Able to communicate effectively and cooperate in teamwork.

5.1.

1. Able to apply basic science (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering Vocational Education in carrying out professional work in the field *(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 high understanding and can implement the basic concepts of physics and chemistry *(natural sciences)* in the field of building engineering.
   1.3 Have high understanding and can implement the basic principles of basic *engineering* (mechanics, drawing techniques, materials science) in the field of building engineering.
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4. Have the ability to design, implement and evaluate the learning process in Building Engineering Vocational Education *(Education design)*.

4.1. Able to design curriculum and learning process in the field of 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 interesting learning media.

5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice)*.

5.1. Able to innovate and develop ideas in the field of building engineering by considering the social, economic, and environmental aspects.

5.2. Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning.

5.3. Implementing information technology and computers in the planning process, implementation of learning.

6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*.

6.1. Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes.

6.2. Have curiosity, critical thinking, open-mindedness, and objectives.

6.3. Able to communicate effectively and cooperate in a teamwork.

5.2.

1. Able to apply basic science (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering Vocational

	Education in carrying out professional work in the field (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 high understanding and can implement the basic concepts of physics and chemistry *(natural sciences)* in the field of building engineering. 1.3 Have high understanding and can implement the basic principles of basic *engineering (mechanics, drawing techniques, materials science)* in the field of building engineering. 2. 2. 2.1 2.1. 2.2 2.2. 2.3 2.3. 3. 3. 3.1 3.1. 3.2 3.2. 3.3 3.3. 4. Have reliable ability to design, implement and evaluate the learning process in Building Engineering Vocational Education *(Education design).* 4.1 Able to design curriculum and learning process in the field of 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 interesting learning media. 5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice).* 5.1 Able to innovate and develop media in the field of building engineering by

considering the social, economic, and environmental aspects.

5.2. Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning.

5.3. Implementing information technology and computers in the planning process, implementation of learning.

6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill).*

6.1. Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes.

6.2. Have curiosity, critical thinking, open-mindedness, and objectivity.

6.3. Able to communicate effectively and cooperate in a *teamwork.*

5.3.

1. Able to apply basic *science* (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering *Vocational Education* in carrying out professional work in their fields *(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 the 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, drawing techniques, materials science) in the field of building engineering.

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	2.1. 2.2. 2.3. 3. 3.1. 3.2. 3.3. 4. Have a reliable ability in designing, implementing and evaluating the learning process in Building Engineering Vocational Education *(Education design).* 4.1. Able to design curriculum and learning process in the field of 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 interesting learning media. 5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice).* 5.1. Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects. 5.2. Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning. 5.3. Implementing information technology and computers into the planning process, implementation of learning. 6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and softskill).* 6.1. Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes. 6.2. Have curiosity, critical thinking, open-mindedness, and objectives.

6.3. Able to communicate effectively and cooperate in a *team work.*

6.

1. Able to apply basic science (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering *Vocational Education* in carrying out professional work in the field (*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 the 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, drawing techniques, materials science) in the field of building engineering.

2. 2.

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4. Have reliable ability in designing, implementing and evaluating the learning process in Building Engineering *Vocational Education (Education design).*

   4.1. Able to design curriculum and learning process in the field of 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 interesting learning media.

5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice)*.
   - 5.1 Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects.
   - 5.2 Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning.
   - 5.3 Implementing information technology and content into the planning process, implementation of learning.

6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*.
   - 6.1 Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes.
   - 6.2 Have curiosity, critical thinking, open-mindedness, and objectives.
   - 6.3 Able to communicate effectively and cooperate in a team work.

6.1.

1. Able to apply basic science (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering Vocational Education in carrying out professional work in the field *(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 high understanding and can implement the 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, drawing techniques, materials science)* in the field of building engineering. 2. 2. 2.1 2.1. 2.2 2.2. 2.3 2.3. 3. 3. 3.1 3.1. 3.2 3.2. 3.3 3.3. 4. Have reliable ability to design, implement and evaluate the learning process in Building Engineering Vocational Education *(Education design)*. 4.1 Able to design curriculum and learning process in the field of 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 interesting learning media. 5. Have the ability to adapt and innovate to the development of science and technology and implement it in the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice)*. 5.1 Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects. 5.2 Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning. 5.3 Implementing information technology and content into the planning process, implementation of learning. 6. Have social and managerial competence, cooperate, communicate effectively, have

	entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*. 6.1 Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes. 6.2 Have curiosity, critical thinking, open-mindedness, and objectives. 6.3 Able to communicate effectively and cooperate in a *team work*. 6.2. 1. Able to apply basic *science* (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering *Vocational Education* in carrying out professional work in the field *(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 the 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, drawing techniques, materials science) in the field of building engineering. 2. 2. 2.1 2.1. 2.2 2.2. 2.3 2.3. 3. 3. 3.1 3.1. 3.2 3.2.

	3.3.3. 4. Have reliable ability to designing, implementing and evaluating the learning process in Building Engineering Vocational Education *(Education design)*. 4.1 Able to design curriculum and learning process in the field of 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 interesting learning media. 5. Have the ability to adapt and innovate to the development of science and technology and implement it into the objectives of education and professional work by considering the possible non-technical risks *(Engineering practice)*. 5.1 Able to innovate and develop media in the field of building engineering by considering the social, economic, and environmental aspects. 5.2 Able to analyze environmental conditions in the process of planning, implementing, and supervising vocational learning. 5.3 Implementing information technology and computers in the planning process, implementation of learning. 6. Have social and managerial competence, cooperate, communicate effectively, have entrepreneurship character, environmentally minded and aware of the importance of lifelong learning *(Transferable and soft skill)*. 6.1 Able to work creatively, innovatively, collaboratively, carefully, responsibly, responsive to environmental changes. 6.2 Have curiosity, critical thinking, open-mindedness, and objectives. 6.3 Able to communicate effectively and cooperate in teamwork.
Course Learning	**Course Learning Outcomes (CLO)**

Achievements	

CPMK	Cpl
1. Explaining definitions, concepts, principles of use of learning media	4.1, 4.2, 4.3
2. Explaining Communication through the medium of learning, the demands of learning in the 21st century	5.1, 5.2, 5.3
3. Analyzing Media Learning Plans	4.1, 4.2, 4.3
4. Understanding the Integration of Technology and Media in Learning with the ASSURE Model	4.1, 4.2, 4.3, 5.1, 5.2, 5.3
5. Understand and analyze the steps of Selection and creation of animated media	4.1, 4.2, 4.3
6. AnalyzingPhotography Asa learning medium	4.1, 4.2, 4.3
7. Analyzing and designing The Creation of Model Media in The Structure Of Buildings	4.1, 4.2, 4.3, 5.1, 5.2
8. Analyzing Preparation for future challenges	4.1, 4.2, 4.3, 5.3, 6.2
9. Understanding and explaining the habituation of learners with computers, (Engaging Learners with Computers)	4.1, 4.2, 4.3, 5.1, 5.2, 5.3
10. Understand and explain how to connect students with web 2.0 tools.	4.1, 4.2, 4.3, 5.1, 5.2, 5.3
11. Understand how toconnect students remotely	4.3, 5.3, 6.1, 6.2, 6.3
12. Analyzing Learning Improvements with Audio Visuals	4.3, 5.3, 6.1, 6.2, 6.3
13. Multimedia Usage Analysis and Design for students	5.1, 5.2, 5.3
14. Analyzing and Designing Learning Video Creation	4.3, 5.3, 6.1, 6.2, 6.3

Short description of Courses	Learning Media courses include understanding the concepts and principles of using learning media, selecting and using media and designing media learning in accordance with the materials and learning methods for the materials presented. Students understand the concept of development, design and utilization of learning media and evaluate their effectiveness
Literature	**Main:**

1. Kemp, Jerrold & Dayton D,K .(2010). Planning , Producing and Using Instructional Media, 8th edition. New York : Harper & Row Publishers.

	2. Smaldino,Lowther, Russel .(2014). Instructional Technology and Media For Learning, (10th edition), New York : Pearson Education Limited, Macmillan Publishing Company. 3. Steven Hackbarth (1996) The Educational Technology Handbook : A Comprehensive Guide Process and Products for Learning, Englewood Cliffs, New Jersey : Educational Technology Publications..	
	Supporting: 1. Anderson, Renald (1994) Pemilihan dan Pengembangan Media untuk Pengajaran, Jakarta : CV. Rajawali 2. Arief S. Sadiman, dkk. (2001). Media Pendidikan, Jakarta : C.V Rajawali 3. Cepi Riyana,(2004), Strategi *implementasi Teknologi Informasi dan Komunikasi dengan menerapkan Konsep Instructional Technology*, Jurnal Edutech, Jurusan Kurtek Bandung 4. Sungkono dkk.(2003). *Pengembangan Bahan Ajar*. Yogyakarta: Universitas Negeri Yogyakarta 5.	
Teaching Media	**Software:**	**Hardware:**
		Computer, LCD Projector and White Board
Team Teaching	Dr. Indrati Kususmaningrum, M.Pd.	
Assessment	UTS, UAS, Tugas mandiri & kelompok	
Prerequisite	-	

TEACHING MATERIAL

Week	Competencies to be achieved	Study Materials	Learning Methods and Strategies	Tasks / assignments	Assessment Criteria / Indicators	Reference
(1)	**CPM, -** [C PL- 4.1 , 4.2 4 .3 **)** Students understand the Definition, Concept, Principles of utilization and use of learning media	Definition, Concept, Principle of utilization and use of Media Pembelajaran	Material explanation **[1x50']** FAQ **[1x20']** Review of related course materials **[1x120']** **Discussions [1x60']**	Create summaries and descriptions of the materials delivered in the resume book	Able to understand definitions, concepts, principles of utilization and use of learning media	RU-1, RU-2, RU-3, RP-2, RP-3, RP-4
(2)	**CPMK- 2: [CPL-5.1, 5.2,**	Communication and the	Material explanation	• Create summaries	Able to	RU-1, RU-2,

Week	Competencies to be achieved	Study Materials	Learning Methods and Strategies	Tasks / assignments	Assessment Criteria / Indicators	Reference
	5.3] Students have the ability to understand and master Communication through the medium of learning, as well as the demands of learning in the 21st century	demands of the learning environment in the 21st century	**[1x50']** FAQ **[1x20']** Working on a task **[1x180']**	and descriptions of the materials delivered in the resume book	understand and master Communication through media in learning, as well as the demands of learning in the 21st century	RU-3
(3)	**CPMK- 3: [CPL-4.1, 4.2, 4.3]** Students are able to analyze the MediaLearning Plan	Median Learning Design Analysis	Material explanation **[1x50']** FAQ **[1x20']** Working on a task **[1x180']**	• Create summaries and descriptions of the materials delivered in the resume book	Able to understand and analyze the design of media learning	RU-1, RU-2, RU-3, RP-1, RP-3, RP-4
(4)	**CPMK- 4: [CPL-4.1, 4.2, 4.3, 5.1, 5.2, 5.3]** Students are able to understand the Integration of Technology and Media in Learning with assure model	Analysis of Technology Integration and Learning Media with ASSURE Model	Material explanation **[1x50']** FAQ **[1x20']** Working on a task **[1x180']**	• Create summaries and descriptions of the materials delivered in the resume book	Able to understand andintegrate Technology and Media in Learning using ASSURE Model	RU-1, RU-2, RU-3, RP-1, RP-3, RP-4
(5)	**CPMK- 5: [CPL-4.1, 4.2, 4.3]** Students are able to understand and analyze the steps of selection and creation of animated media	Steps to Select and Create Animated Media	Material explanation **[1x50']** FAQ **[1x20']** Working on a task **[1x180']**	• Create summaries and descriptions of the materials delivered in the resume book • • Task mengerjakan creation of animated media	Able to understand and analyze the steps of selection and creation of animated media	RU-1, RU-2, RU-3, RP-1, RU-2, RP-3, RP-4
(6)	**CPMK- 6: [CPL-4.1, 4.2,**	Selection of Photography as	Material explanation	• Create summaries	Able to	RU-1, RU-2,

Week	Competencies to be achieved	Study Materials	Learning Methods and Strategies	Tasks / assignments	Assessment Criteria / Indicators	Reference
	4.3] Students are able to understand and analyze the Selection of Photography as a learning medium	a learning medium	**[1x50']** FAQ **[1x20']** Working on a task **[1x180']**	and descriptions of the materials delivered in the resume book • • The task of taking photos that correspond to the learning materials	understand and analyze photo objects as a medium in learning materials	RU-3, RP-1, RU-2, RP-3, RP-4
(7)	**CPMK- 7: [CPL-4.1, 4.2, 4.3, 5.1, 5.2]** Students are able to understand, analyzeand design the Making of Media Models in the Structure Section of theBuilding	Analysis of models on the structure of buildings	Material explanation **[1x50']** FAQ **[1x20']** Working on a task **[1x180']**	• Create summaries and descriptions of the materials delivered in the resume book • • The task ofmaking model media from the structure of the building	Able to understand,, analyze and design media models on the structure of your building.	RU-1, RU-2, RU-3, RP-1, RU-2, RP-3, RP-4
(8)	**Midterm Evaluation through Midterm Exams**					
(9)	**CPMK- 8: [CPL-4.1, 4.2, 4.3, 5.3, 6.2]** Students understand and are able to explain preparation for future challenges	Preparing for future challenges	Material explanation **[1x100']** FAQ **[1x20']** Working on a task **[1x130']**	• Create summaries and descriptions of the materials delivered in the resume book • • The task ofm engerjakan problem	Able to understand and explain the preparatory steps for future challenges	RU-2, RU-3, RP-1, RP-3
(10)	**CPMK- 9: [CPL-2.1, 2.2]** Students are able to understand and explain the habituation of learners with computers	Habituation of learners with computers.	Material explanation **[1x100']** FAQ **[1x20']** Working on a task **[1x130']**	• Create summaries and descriptions of the materials delivered in the resume book • • The task ofm	Able to understand and explain the habituation of learners with computers	RU-1, RU-2, RU-3, RP-3

Week	Competencies to be achieved	Study Materials	Learning Methods and Strategies	Tasks / assignments	Assessment Criteria / Indicators	Reference
				engerjakan problem		
(11)	**CPMK -10: [CPL-4.1, 4.2, 4.3, 5.1, 5.2, 5.3]** Students understand how to connect learners with web 2.0 tools	how to connect learners with web 2.0 tools	Material explanation **[1x100']** FAQ **[1x20']** Working on a task **[1x130']**	• Create summaries and descriptions of the materials delivered in the resume book • • The task ofm engerjakan problem	Able to understand how to connect learners with web 2.0 tools	RU-1, RU-2, RU-3, RP-3
(12)	**CPMK-11 : [CPL-4.3, 5.3, 6.1, 6.2, 6.3]** Students are able to understand and explain how to connect students remotely	how to connect students remotely	Material explanation **[1x50']** FAQ **[1x20']** Working on a task **[1x180']**	• Create summaries and descriptions of the materials delivered in the resume book • • The task ofm engerjakan problem	Able to understand and explain how to connect students remotely	RU-2
(13)	**CPMK-12 : [CPL-5.1, 5.2]** Students are able to understand Improved Learning with Audio Visual	Improved Learning with Audio Visuals	Material explanation **[1x50']** FAQ **[1x20']** Working on a task **[1x180']**	• Create summaries and descriptions of the materials delivered in the resume book • • The task ofm engerjakan problem	Able to understand Improved Learning with Audio Visual	RU-1, RU-2, RU-3, RP-3
(14)	**CPMK-13 : [CPL-5.1, 5.2]** Students are able to analyze and design multimedia usage for students	Multimedia Usage Analysis and Design for students	Material explanation **[1x50']** FAQ **[1x20']** Working on a task **[1x180']**	• Create summaries and descriptions of the materials delivered in the resume book • • The task ofm engerjakan problem	Able to perform Multimedia Usage Analysis and Design for students	RU-1, RU-2, RU-3, RP-3

Week	Competencies to be achieved	Study Materials	Learning Methods and Strategies	Tasks / assignments	Assessment Criteria / Indicators	Reference
(15)	**CPMK- 12: [CPL-5.3, 6.1, 6.2, 6.3]** Students are able to Analyze and Design Learning Video Creation	Analyzing and Designing Learning Video Creation	Material explanation **[1x50']** FAQ **[1x20']** Working on a task **[1x180']**	• Create summaries and descriptions of the materials delivered in the resume book • • The task ofm engerjakan problem	Able to Analyze and Design Learning Video Creation	RU-1, RU-2, RU-3, RP-3
(16)	**Final Semester Evaluation (Evaluation intended to determine the final achievement of student learning outcomes)**					

Note :

1 credits = (50' TM + 60' BT + 60' BM)/Week BM = Self-Learning T = Theory (aspect of science)
TM = Face-to-Face (Lecture) PL = Laboratory Practicum (200 minutes/week) P = Practice (aspect of work skills)
BT = Structured Learning.

CPMK's Association with 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.1	10																				
CPMK-2	UTS.1																					
CPMK-3	UTS.2	5																				
CPMK-4	UTS.3	5																				
CPMK-5	UTS.4	10																				
CPMK-6	Task 1	15																				
CPMK-7																						
CPMK-8	Task 2.1	10																				
CPMK-9	Task 2.1																					
CPMK-10	Task 2.2, Task 2.3	7.5, 7.5																				

CPMK-11	UAS.1, UAS.2	5, 15																				
CPMK-12	UAS.3	10																		√	√	√	√
TOTAL		100																					

Assesment Components

Mid-Semester Exam : 30 %

Final Exam : 30 %

Task 1 : 15 %

Task 2 : 25 %

Presence : (min 80%)

Total : 100 %

Description of Assessment Level

	Excellent	**Good**	**Satisfy**	**Files**
Description	Able to describe **correctly and completely**	Able to describe correctly but incompletely	Able to describe but less clear and incomplete	Unable to describe
Formulation	Able to formulate correctly and completely	Able to formulate correctly but incomplete	Able to formulate but less clear and incomplete	Unable to formulate
Count	Able to calculate correctly and completely	Able to calculate correctly but less complete	Able to calculate but less clear and less complete	Unable to calculate
Analysis	Able to analyze correctly and completely	Able to analyze correctly but less complete	Able to analyze but less clear and less complete	Unable to analyze

Assessment System

Score Range	**Grade Letter**	**Grade Point**	**Notes**	**Score Range**	**Grade Letter**	**Grade Point**	**Notes**

85 – 100	A	4.0	Exceptional	55 – 59	C	2.0	Quite Satisfactory
80 – 84	A-	3.6	Excellent	50 – 54	C-	1.6	Poor
75 – 79	B+	3.3	Very Good	40 – 49	D	1.0	Very Poor
70 – 74	B	3.0	Good	≤ 39	E	0.0	Fail
65 – 69	B-	2.6	Fairly Good	-	T	-	Delayed
60 – 64	C+	2.3	Satisfactory				

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MIDTERM EXAM QUESTIONS

Course	:
Code / SKS	: SIP1.61.3102 / 2sks
Test Nature	:
Lecturer	:
Time	:
Maximum value weight	:

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FINAL SEMESTER EXAM QUESTIONS

Course	:
Code / SKS	: SIP1.61.3102 / 2sks
Test Nature	:
Lecturer	:
Time	:
Maximum value weight	:

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QUESTION ASSIGNMENT 2 COURSE

Course :
Code / SKS : SIP1.61.
Task Nature : Personal Duty
Lecturer :
Presentation time :
Value weight :

No	Question	Bobot
1.		10
2.		7.5
3.		7.5