



TEACHING PLAN

BACHELOR OF EDUCATION IN BUILDING ENGINEERING (BE-BE) STUDY PROGRAM

DEPARTMENT OF CIVIL ENGINEERING, FACULTY OF ENGINEERING, UNIVERSITAS NEGERI PADANG

COURSE	CODE	COURSE CLUSTER	CREDITS		SEM	VERSION
			Theory	Practice		
Research Methodology						
Lecturer in Charge	Yuwalitas Gusmareta, M.Pd T			Lecturer in Charge		
<u>Remarks</u>	Dean of Faculty of Engineering	Head of Civil Engineering Department	Coordinator of BEVE			
	<u>Dr. Fahmi Rizal, M.Pd., M.T</u> NIP. 195912041985031004	<u>Faisal Ashar, Ph.D.</u> NIP. 19750103 200312 1001	<u>Drs. Revian Body, MSA.</u> NIP. 19600103 198503 1003			
Program Learning Outcomes	Program Learning Outcomes (PLO) Study Program					
	<p>By considering input from all stake holders and the minimum requirements set by ASIIN, the PLO's that must be possessed by graduates from the Bachelor of Education in Building Engineering Study Program are determined as follows:</p> <ol style="list-style-type: none"> 1. Master <i>basic knowledge of science</i> (mathematics, natural sciences) and other scientific disciplines that form the basis of building engineering vocational education field for carrying out professional work (<i>Knowledge and Understanding</i>). <ol style="list-style-type: none"> 1.1. Able to implement basic concepts of mathematics and physics to master subjects matter in the field of building engineering vocational education. 1.2. Mastering Statics, Mechanics, Statistics, Technology Materials, and Engineering Drawings as the basic knowledge in the field of building engineering vocational education. 					

2. Able to identify, formulate, solve, and evaluate various technical problems of buildings as the basic ability for teaching in the field of building engineering vocational education (*Engineering analysis, investigation and assessment*).
 - 2.1. Able to identify, formulate, solve, and evaluate technical problems in the field of geotechnical and transportation as the basic ability for teaching in the field of building engineering vocational education.
 - 2.2. Able to identify, formulate, solve, and evaluate technical problems in the field of structure and construction management as the basic ability for teaching in the field of building engineering vocational education.
 - 2.3. Able to identify, formulate, solve, and evaluate technical problems in the field of hydrology as the basic ability for teaching in the field of building engineering vocational education.
3. Possess the ability to design building by taking into account environmental, social, health and work safety issues as the basis for teaching in the field of building engineering vocational education (*Engineering design*).
 - 3.1. Able to make design programming by taking into account environmental, social, health and work safety issues, in cooperation with various party related.
 - 3.2. Able to analyze the design by taking into account environmental, social, health and work safety aspects.
 - 3.3. Able to produce design by taking into account environmental, social, health and work safety aspects.
4. Possess social, managerial, team work, and effective communication competencies, entrepreneurial character, environmental insight and life-long learning habits. (*Transferable and soft skills*).
 - 4.1. Possess religious character implemented in personal and professional activities.
 - 4.2. Possess the spirit of nationalism, social sensitivity and environmental insight
 - 4.3. Able to communicate effectively and work in a team.
 - 4.4. Able to transfer science and technology to the community to improve the quality of life
 - 4.5. Possess entrepreneurial character
5. Possess the ability to innovate and adapt to the development of science and technology, and implement it into the learning process of building engineering vocational education field by taking into account non-technical risks that may occur (ethical, ecological, commercial, and industrial impact) (*Engineering practice*).
 - 5.1. Able to innovate and use information technology (software) in the field of building engineering vocational education by taking into account the ethical, ecological, commercial and industrial impact.

- 5.2. Able to use information technology-based equipment (hardware) in field of building engineering vocational education.
- 6. Possess a good ability to design, implement and evaluate the learning process in the field of building engineering vocational education (*Educational design*).
 - 6.1. Able to design curriculum and learning process of building engineering vocational education.
 - 6.2. Able to implement, control, evaluate and improve the quality of learning process through research in the field of building engineering vocational education.
 - 6.3. Able to develop an effective, efficient, and attractive learning media in the field of building engineering vocational education.

Course Learning Outcomes	Course Learning Outcomes (CLO)															
	<table border="1"> <thead> <tr> <th data-bbox="472 762 1749 834">CPMK</th> <th data-bbox="1749 762 2098 834">CPL</th> </tr> </thead> <tbody> <tr> <td data-bbox="472 834 1749 946">Have skills in drafting and presenting scientific research proposals well, correctly, precisely and effectively.</td> <td data-bbox="1749 834 2098 946">4.1,4.2,4.3,5.1,5.2,5.3, 6.1, 6.2, dan 6.3</td> </tr> <tr> <td data-bbox="472 946 1749 986"></td> <td data-bbox="1749 946 2098 986"></td> </tr> <tr> <td data-bbox="472 986 1749 1026"></td> <td data-bbox="1749 986 2098 1026"></td> </tr> <tr> <td data-bbox="472 1026 1749 1066"></td> <td data-bbox="1749 1026 2098 1066"></td> </tr> <tr> <td data-bbox="472 1066 1749 1106"></td> <td data-bbox="1749 1066 2098 1106"></td> </tr> <tr> <td data-bbox="472 1106 1749 1161"></td> <td data-bbox="1749 1106 2098 1161"></td> </tr> </tbody> </table>	CPMK	CPL	Have skills in drafting and presenting scientific research proposals well, correctly, precisely and effectively.	4.1,4.2,4.3,5.1,5.2,5.3, 6.1, 6.2, dan 6.3											
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Course Description	This course provides skills in drafting and presenting scientific research proposals well, correctly, precisely and effectively.															
Literature	Main:															

	1. Sugiyono. (2006). <i>Metoda penelitian administrasi</i> . Bandung. Alfabeta	
	Supporting:	
	1. Aliyu, A.M. (2014). Educational research for sustainable development. <i>Proceedings of the Multi-disciplinary Academic Conference on Sustainable Development</i>	
	2. Gay, L. R. (1981). <i>Educational research</i> . Ohio. Charles E Merrill Company	
	3. Jujun, S.S.(2003). <i>Filsafat ilmu sebuah pengantar</i> . Jakarta.Pustaka Sinar Harapan	
	4. Shamoo, A. E. & Resnik. (2003). <i>Responsible conduct of research</i> . New York. Oxford University Press, Inc	
	5. Tomal, R.D. (2003). <i>Action research for educator</i> . Lanham .The Scarecrow Press.	
	6. Blaxter,L., Hughes, C.& Tight,M. (2006). <i>How to research</i> . Maidenhead. Open University Press	
	7. Sudarsana, K.et al. (2014). Research Problem. Diakses dari www.slideshare.net/sudarsanakumar/research-problem-38360683	
	8. Sugiyono. (2006). <i>Metoda penelitian administrasi</i> . Bandung. Alfabeta	
	9. The Abraham S. Fischler School of Education. (2014). <i>From problem statement to research questions</i> . Diakses dari www.fischlerschool.nova.edu/.../from_pro	
	10.Davis, L.S& Morrow,A.K.((2004) Creating usable assessment tools: a step-by-step guide to instrument design.Diakses dari www.jmu.edu/.../ID_Davis_Morrow_AAHE20 .	
	11.Creswell, J. W.(2012). <i>Educational research</i> . Boston. Pearson Education, Inc	
	12.Koshy, V. (2005). <i>Action research for improving practice</i> .London. Paul Chapman Publishing	
	13.Sekaran, U. (2013). <i>Research methods for business</i> New York. John Wiley & Sons, Inc	
	14.Murniati, M. P.(2013). Alat-alat pengujian hipotesis. Semarang.Unika Soegijapranata	
	15.Tim Kerja Prodi S1.(2014). <i>Panduan penulisan skripsi dan TA prodi S1 pendidikan teknik bangunan</i> . Padang. Jurusan Teknik Sipil FT UNP.	
Teaching Media	Software:	Hardware:
		Computer, LCD Projector and White Board.
Team Teaching	Dr. Indrati Kusumaningrum, M.Pd Dr. Azwar Inra, M.Pd Yuwalitas Gusmareta, M.Pd T	
Assessment	Mid-Semester Exam, Final Exam, Individual and Group Assignment, Group Presentation	
Prerequisite	-	

TEACHING MATERIAL

Week	Competencies to be achieved	Study Materials	Learning Methods and Strategies	Tasks / assignments	Assessment Criteria / Indicators	Reference
(1)	Introduction to lectures and memahami the scope of teaching materials research methods	Rmoney scope of teaching materials tata research methods	Lectures and Q&A	-	Oral Test (Q&A)	Learning Tools
(2)	Able to explain: - Definition of research - Definition of educational research - Research as a scientific method - The significance of educational research - Ethics of research educatorsn	Mendiscussit - Definition of research - Definition of educational research - scientific methods - The significance of educational research - Principles of research educatorsn	Discussion Faqs	Paper	Oral test House assignment (bill)	2,3,4,and 5
(3)	Able to distinguish: typesof research	Discussing research differences according to their approach, the level of explantation and the type of data	Discussion Faqs	Paper	Oral tests and homework assignments	1
(4)	Able to select topics, formulate problems, objectives and identify variables	Discuss - Research topics - Problem formulation - Research Objectives - Identify variables	Discussion Faqs	Paper	Oral tests and homework assignments	6,7,8 and 9
(5)	Able to explain the steps of literature	Discussing the steps of literature studies, how to	Discussion Faqs	Paper	Oral tests and homework	11

Week	Competencies to be achieved	Study Materials	Learning Methods and Strategies	Tasks / assignments	Assessment Criteria / Indicators	Reference
	studies, develop thought frameworks and formulate hypotheses	formulate a frame of mind and the formulation of hypotheses			assignments	
(6)	Able to explain the forms of instruments and carry out their development	- Discussing instrument forms - Practice developing instruments	Discussion Faqs	Paper	Oral tests and homework assignments	10
(7)	Able to explain the understanding of population, samples and research process	- Discussing population and sample understanding - Discussing the research process	Discussion Faqs	Paper	Oral tests and homework assignments	11
(8)	Midterm Evaluation through Midterm Exams					
(9)	Able to explain the definition, properties, and model research action	Discuss the definition of nature, and model research action	Discussion Faqs	Paper	Oral tests and homework assignments	12
(10)	Able to explain descriptive research forms and associative	Discuss descriptive and associative	Discussion Faqs	Paper	Oral tests and homework assignments	1
(11)	Able to distinguish various forms of experimental research	Mdiscusses experimental research forms	Discussion Faqs	Paper	Oral tests and homework assignments	13
(12)	Able to explain the scale of measurements	Discuss the scale of measurement and choose	Discussion Faqs	Paper	Oral tests and homework	14

TOTAL		100																		
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Assesment Components

Mid-Semester Exam	: 25 %
Final Exam	: 25 %
Assignment	: 30 %
<u>Presence</u>	: 20 %
Total	: 100 %

Description of Assessment Level

	Excellent	Good	Satisfy	Fail
Description	90-100	70-89	51-69	< 50
Formulation	90-100	70-89	51-69	< 50
Calculation	90-100	70-89	51-69	< 50
Analysis	90-100	70-89	51-69	< 50

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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Alamat: Jl. Prof. Dr. Hamka, Kampus UNP Air Tawar, Padang 25131
Telp. (0751) 7055644, Fax (0751) 7055628, website: www.ft.unp.ac.id, e-mail: info@ft.unp.ac.id

MID-SEMESTER EXAM QUESTIONS

Courses : Research Methodology
Code / SKS :
Exam Properties : Close Book
Lecturer : Yuwalitas Gusmareta, M.Pd T
Time : 75 minutes
Maximum value weight : 100

No	Problem	Weights
1.	Explain what research is?	
2.	There are 2 types of research: a. Qualitative Research b. Quantitative Research Explain each of these studies!	
3.	Explain what a frame of mind is, hypotheses, populations and samples!	
4.	Create a complete study with: a. Problems b. Title c. Background d. Research questions/hypotheses e. Place and time of research f. Population g. Sample	



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FINAL SEMESTER EXAM QUESTIONS

Courses : Research Methodology
Code / SKS :
Exam Properties : Close Book
Lecturer : Yuwalitas Gusmareta, S.Pd, M.Pd T
Time : 75 minutes
Maximum Value Weight : 100

No	Problem	Weights
1.	Describe descriptive and associative forms of research!	
2.	Explain in detail about experimental research along with examples!	
3.	What is a measurement scale and give an example!	
4.	What is: a. Instrument validity b. Instrument reliability	
5.	Determine a problem/ case that you find while attending a lecture in the Department of Civil Engineering, then make: a. Title of research proposal b. Background issues c. Identify the problem d. Limitations of the problem e. Problem formulation f. Research objectives g. Benefits of research	

h. Types of research

i. Research variables

j. Population and research samples



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COURSEWORK QUESTIONS

Courses : Research Methodology
Code / SKS :
Task Nature : Per Group
Lecturer : Yuwalitas Gusmareta, S.Pd, M.Pd T
Presentation time : 20 minutes
Value Weight : 30

Group	Problem	Max value
1.	Create a group paper about: a. Definition of research b. Definition of educational research c. Research as a scientific method d. Significance of educational research e. Principles of educational research	100
2.	Create a group paper about: a. Research by approach b. Research according to the level of explanation c. Research by data type	100
3.	Create a group paper about: a. Formulation of research problems b. Research variables	100
4.	Create a group paper about: a. Literature studies b. Preparation of the frame of mind c. Formulation of Hypotheses	100
5.	Create a group paper about: a. Data collection instruments b. Development of data collection instruments	100
