



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

COURSE	CODE	COURSE CLUSTER	CREDITS		SEM	VERSI ON
			Theo ry	Prac tice		
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	
	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	
Program Learning Outcomes	Program Learning Outcomes (PLO) Study Program					
	1. Able to apply <i>basic science</i> (mathematics, natural sciences) and other multidisciplinary sciences that become the basis of the field of Building Engineering <i>Vocational Education</i> in carrying out professional work in their fields (<i>Knowledge and Understanding</i>). 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 (<i>natural sciences</i>) in the field of building engineering. 1.3. Have a high understanding and can implement the basic principles of <i>basic engineering</i> (mechanics, drawing techniques, 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 various technical problems in the field of building engineering
 - 2.3. Able to evaluate various technical problems in the field of building
 - 2.4. Able to communicate *Engineering Analysis, Investigation and Assessment materials* to students/ training.
3. Have a reliable ability in the design, implementation and supervision of building engineering work (*Engineering design*).
 - 3.1. Able to realize work images in cooperation 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 materials* to students.
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 technology 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 buildings.
- 5.3. Implementing information technology and computers into the process of planning, implementing, supervising buildings.
- 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 work together in a *team work*.

Course Learning Outcomes

Course Learning Outcomes (CLO)

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

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 <u>research questions</u></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). <i>Alat-alat pengujian hipotesis</i> . 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: <ul style="list-style-type: none"> - Definition of research - Definition of educational research - Research as a scientific method - The significance of educational research - Ethics of research educatorsn 	Mendiscussit <ul style="list-style-type: none"> - 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 <ul style="list-style-type: none"> - 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	Discussing the steps of	Discussion	Paper	Oral tests and	11

Week	Competencies to be achieved	Study Materials	Learning Methods and Strategies	Tasks / assignments	Assessment Criteria / Indicators	Reference
	steps of literature studies, develop thought frameworks and formulate hypotheses	literature studies, how to formulate a frame of mind and the formulation of hypotheses	Faqs		homework 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	Discuss the scale of	Discussion	Paper	Oral tests and	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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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
