

Universitas Negeri Surabaya Vocational Faculty, D4 Civil Engineering Study Program

Document Code

| | | | | SEI | MEST | FER LE | ARN | ING | PL | AN | | | | | | |
|-----------------------------|-------------|---|----------------------------------|--|---|-------------------------------|------------------------|----------------------------|-------------------|---------------------------|---------------------------------------|---------------|-----------------------|------------------------|---------------------|-------------------|
| Courses | | | | CODE | | Course | e Family | | Credit Weight | | | SEME | STER | Comp Date | oilation | |
| VALUE E | NGIN | IEERING | | 223050203 | 3 | | | | T=2 | P=0 | ECTS=3 | .18 | | 5 | July 1 | 7, 2024 |
| AUTHORIZATION | | | | SP Develo | ber | | | Cours | e Clus | ster C | oordinat | or | Study | Program | 1 Coord | linator |
| | | | | | Mas Suryanto H.S., S.T., M.T. ; Puguh Novi Prasetyono, S.Pd., M.T. ; Drs. Hasa Dani, M.T. | | | Mas Suryanto H.S.,S.T.,M.T | | - | Puguh Novi Prasetyono, S.Pd., M.T. | | ono, | | | |
| Learning model | | Case Studies | | | | | | | | | | | | | | |
| Program Learning | | PLO study prog | gram | which is ch | arged to | the course | 9 | | | | | | | | | |
| Outcome (PLO) | | Program Objec | tives | s (PO) | | | | | | | | | | | | |
| (FLO) | | PLO-PO Matrix | 1 | | | | | | | | | | | | | |
| | | | | P.0 | | | | | | | | | | | | |
| | | PO Matrix at th | e en | d of each lea | arning st | age (Sub-P | 0) | | | | | | | | | |
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| | | | | P.O | | | | | Week | | | | | | | |
| | | | | 1 | 2 3 | 4 5 | 6 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 1 | L6 |
| Short Course Descript | ion | This course con engineering; the o phase: breakdo recommendation constructivist app | conce wn a phas | epts of value, (analysis, cos e; and implen | cost, and t t models | function in va s, function | lue engin analysis; | eering; v specu | value e lation | engine phas | ering tecl e; analy | hniqı /sis | ues and phase | d work pla ; develo | ans (info opment | prmation phase; |
| Reference | ces | Main : | | | | | | | | | | | | | | |
| | | Dell 19is Reinhold Soeharto Venkatar | sola <i>A</i> o, Ima ramar | Alphonse J. 2 In, 2001. Man 1 Ray R., Pinte | E 8. Kumpulan Bahan Kuliah Manajemen Proyek Konstruksi ITS . Surabaya: ITS. Iphonse J. 1982. Value Engineering in the Construction Industry, Edisi ke-3 . New York: Van Nost n, 2001. Manajemen Proyek Dari Konseptual Sampai Operasional Jilid 2 . Jakarta: Penerbit Erlangga. Ray R., Pinto Jeffrey K. 2008. Cost and Value Management in Projects . New Jersey: John Wiley & Sons struction Engineering and Management (ASCE) | | | | | | | | | | | |
| | | Supporters: | | | | | | | | | | | | | | |
| | | 1. Journal c | of Cor | nstruction Eng | ineering a | and Managen | nent (ASC | E) | | | | | | | | |
| Supporti lecturer | ing | Drs. Hasan Dani, Puguh Novi Pras | | | | | | | | | | | | | | |
| Week- | eac stag | | | Ev | aluation | | | Lear Stude | stimat | metho signm ced tin | ds, ents, ne] | | Learning materials | | | ssment jht (%) |
| | (Su | b-PO) | I | Indicator | Crite | ria & Form | | ine(ine) | 0 | nline | (online) | | | | | |
| (1) | | (2) | | (3) | | (4) | (| 5) | | (| 6) | | | (7) | (| (8) |

| 1 | Know the history of the development of value engineering | Students can describe the history of the development of value engineering | Criteria: Essay 100% Form of Assessment : Participatory Activities | Lectures, discussions and questions and answers 2 X 50 | Lectures, discussions and questions and answers | Material: history of the development of value engineering References: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 0% |
|---|---|--|--|--|---|---|----|
| 2 | Understand the basic concepts of value engineering | Students can explain the reasons for the need, understanding, main elements and conditions for using value engineering | Criteria: Essay 100% Form of Assessment : Participatory Activities | Lectures, discussions and questions and answers 2 X 50 | Lectures, discussions and questions and answers 2 X 50 | Material: basic concepts of value engineering References: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 0% |
| 3 | Understand the value engineering organizational structure | Students can describe the organizational structure of value engineering | Criteria: Essay 100% Form of Assessment : Participatory Activities | Lectures, discussions and questions and answers 2 X 50 | Lectures, discussions and questions and answers 2 X 50 | Material: value engineering organizational structure Reference: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 5% |
| 4 | Understand the implementation of value engineering at each stage of the project | Students can explain the implementation of value engineering at each stage of the project | Criteria: Essay 100% Form of Assessment : Participatory Activities | Lectures, discussions and questions and answers 2 X 50 | Lectures, discussions and questions and answers 2 X 50 | Material: implementation of value engineering at each stage of the project Reference: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 5% |
| 5 | Understand the concepts of value, cost, and function in value engineering | Students can explain the concepts of value, cost, and function in value engineering and how they are related | Criteria: Essay 100% Form of Assessment : Participatory Activities | Lectures, discussions and questions and answers 2 X 50 | Lectures, discussions and questions and answers 2 X 50 | Material: concepts of value, cost and function in value engineering Reference: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 5% |

| 6 | Understand the concepts of value, cost, and function in value engineering | Students can explain the concepts of value, cost, and function in value engineering and how they are related | Criteria: Essay 100% Form of Assessment : Participatory Activities | Lectures, discussions and questions and answers 2 X 50 | Lectures, discussions and questions and answers 2 X 50 | Material: concepts of value, cost and function in value engineering Reference: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 5% |
|----|---|--|--|--|---|---|-----|
| 7 | Meeting 01 - 06 | Meeting 01 - 06 | Criteria: Essay 100% Form of Assessment : Participatory Activities | Written test 2 X 50 | Written test 2 X 50 | Material: value engineering References: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 20% |
| 8 | Understand the value engineering work plan | Students can explain the value engineering work plan | Criteria: Essay 100% Form of Assessment : Participatory Activities | Lectures, discussions and questions and answers 2 X 50 | Lectures, discussions and questions and answers 2 X 50 | Material: value engineering work plan References: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 5% |
| 9 | USS Exam | 100 marks if answered correctly | Criteria: 100 marks if answered correctly | written test 2 X 50 | written test 2 X 50 | Material: value engineering References: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 0% |
| 10 | | 100 marks if answered correctly | Criteria: 100 marks if answered correctly Form of Assessment : Participatory Activities | Presentation and group discussion 2 X 50 | Presentation and group discussion 2 X 50 | Material: application of value engineering work plans to the Library Building project: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 5% |

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| 11 | Understand the | Students can | Criteria: | Presentation | Presentations and | Material: | 5% |
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| | plans in building | engineering on | Presentation is | discussion | | value | |
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| | | | emphasis, shows | | | Reference: | |
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| 13 | Understand the application of value engineering work plans to road and bridge projects | Students can present the results of value engineering on road and bridge projects | Criteria: 75-100: Presentation is carried out coherently with appropriate intonation and emphasis, shows good understanding of the concept, assisted by ppt media according to media criteria, answers to the questioner are correct, able to formulate suggestions for improvement 50-74: Presentation is carried out coherently with correct intonation and emphasis appropriate, but lacking in understanding some concepts, assisted by ppt media according to media criteria, answers from the questioner are generally correct, able to formulate suggestions for improvement 25-49: Presentation is done, not coherent and/or shows lack of understanding of several concepts, assisted by ppt media but does not meet media criteria, answers from asker are generally incorrect, able to formulate suggestions for improvement0-24 Presentation is made, but lacks consistency and/or shows lack of understanding of many concepts, not supported by ppt media, answers from asker are incorrect, unable formulate suggestions for improvement Form of Assessment : Participatory Activities | Lectures, discussions and questions and answers 2 X 50 | Lectures, discussions and questions and answers 2 X 50 | Material: application of value engineering work plans on road and bridge projects Reference: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 5% |
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| 14 | Understand the application of value engineering work | Students can present the results of value | Criteria: 75-100: Presentation | Lectures, discussions | Lectures, discussions and questions and | Material: application of | 5% |
| | plans to road and | engineering on | is carried out coherently with | and | answers | value | |
| | bridge projects | road and | appropriate | questions | 2 X 50 | engineering | |
| | | bridge projects | intonation and | and | | work plans on | |
| | | • • • | emphasis, shows | answers | | road and | |
| | | | good understanding | 2 X 50 | | bridge projects | |
| | | | of the concept, | | | Reference: | |
| | | | assisted by ppt | | | Soeharto, | |
| | | | media according to media criteria, | | | Iman, 2001. | |
| | | | answers to the | | | Project | |
| | | | questioner are | | | Management | |
| | | | correct, able to | | | From | |
| | | | formulate | | | Conceptual to | |
| | | | suggestions for improvement 50-74: | | | Operational | |
| | | | Presentation is | | | Volume 2. | |
| | | | carried out | | | Jakarta: | |
| | | | coherently with | | | Erlangga | |
| | | | correct intonation and | | | Publishers. | |
| | | | emphasis appropriate, but | | | | |
| | | | lacking in | | | | |
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| | | | assisted by ppt media but does not | | | | |
| | | | meet media criteria, | | | | |
| | | | answers from asker | | | | |
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| | | | incorrect, able to | | | | |
| | | | formulate suggestions for | | | | |
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| | | | Form of Assessment | | | | |
| | | | : Participatory Activities | | | | |
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| 15 | Understand the application of value engineering work plans to water construction projects | Students can present the results of value engineering on water building projects | Criteria: 75-100: Presentation is carried out coherently with appropriate intonation and emphasis, shows good understanding of the concept, assisted by ppt media according to media actording to media criteria, answers to the questioner are correct, able to formulate suggestions for improvement 50-74: Presentation is carried out coherently with correct intonation and emphasis appropriate, but lacking in understanding some concepts, assisted by ppt media according to media criteria, answers from the questioner are generally correct, able to formulate suggestions for improvement 25-49: Presentation is carried out, not coherent and/or shows lack of understanding of several concepts, assisted by ppt media criteria, answers from asker are generally incorrect, able to formulate suggestions for improvement0-24 Presentation is made, but lacks consistency and/or shows lack of understanding of many concepts, not supported by ppt media, answers from asker are incorrect, unable to formulate suggestions for improvement0-24 presentation is made, but lacks consistency and/or shows lack of understanding of many concepts, not supported by ppt media, answers from asker are incorrect, unable to formulate suggestions for improvement | Presentation and group discussion 2 X 50 | discussion 2 X 50 | Material: application of value engineering work plans on water construction projects Reference: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 5% |
|----|--|---|--|---|------------------------|---|-----|
| 16 | | 100 marks if answered correctly | Criteria: 100 marks if answered correctly Form of Assessment : Participatory Activities | written test 2 X 50 | written test 2 X 50 | Material: value engineering References: Soeharto, Iman, 2001. Project Management From Conceptual to Operational Volume 2. Jakarta: Erlangga Publishers. | 20% |

Evaluation Percentage Recap: Case Study

| No | Evaluation | Percentage |
|----|--------------------------|------------|
| 1. | Participatory Activities | 90% |
| | | 90% |

Notes

- Learning Outcomes of Study Program Graduates (PLO Study Program) are the abilities possessed by each Study
 Program graduate which are the internalization of attitudes, mastery of knowledge and skills according to the level of their
 study program obtained through the learning process.
- The PLO imposed on courses are several learning outcomes of study program graduates (CPL-Study Program) which are used for the formation/development of a course consisting of aspects of attitude, general skills, special skills and knowledge.
- 3. **Program Objectives (PO)** are abilities that are specifically described from the PLO assigned to a course, and are specific to the study material or learning materials for that course.

- 4. **Subject Sub-PO (Sub-PO)** is a capability that is specifically described from the PO that can be measured or observed and is the final ability that is planned at each learning stage, and is specific to the learning material of the course.
- 5. Indicators for assessing ability in the process and student learning outcomes are specific and measurable statements that identify the ability or performance of student learning outcomes accompanied by evidence.
- 6. Assessment Criteria are benchmarks used as a measure or measure of learning achievement in assessments based on predetermined indicators. Assessment criteria are guidelines for assessors so that assessments are consistent and unbiased. Criteria can be quantitative or qualitative.
- 7. Forms of assessment: test and non-test.
- 8. Forms of learning: Lecture, Response, Tutorial, Seminar or equivalent, Practicum, Studio Practice, Workshop Practice, Field Practice, Research, Community Service and/or other equivalent forms of learning.
- 9. Learning Methods: Small Group Discussion, Role-Play & Simulation, Discovery Learning, Self-Directed Learning, Cooperative Learning, Collaborative Learning, Contextual Learning, Project Based Learning, and other equivalent methods.
- 10. Learning materials are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- 11. The assessment weight is the percentage of assessment of each sub-PO achievement whose size is proportional to the level of difficulty of achieving that sub-PO, and the total is 100%.
- 12. TM=Face to face, PT=Structured assignments, BM=Independent study.