	Universitas Negeri Surabaya Faculty of Engineering Civil Engineering Undergraduate Study Program	Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
Airfield *	2220102034		T=2	P=0	ECTS=3.18	8	July 17, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	.....	.....	Yogie Risdianto, S.T., M.T.

Learning model: Project Based Learning

Program Learning Outcomes (PLO)

PLO study program which is charged to the course

Program Objectives (PO)

PLO-PO Matrix

P.O

PO Matrix at the end of each learning stage (Sub-PO)

P.O	Week															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Short Course Description: This course contains knowledge/knowledge about planning airport land & air side facilities, airport master plan planning, airport terminals, airport classification and design of groups and types of aircraft, planning and design of airfield configurations, as well as structural pavement planning. Learning is carried out with direct explanations from the lecturer. and continued with discussion and questions and answers

References

Main :

1. Basuki, Heru. 1990. Merancang dan Merencana Lapangan Terbang. Penerbit Alumni, Bandung
2. FAA. 1965. Runway Length Requirements for Airport Design. FAA, Washington D.C.
3. Horonjef, Robert & Francis Mc Kelvey. 1983. Perencanaan dan Perancangan Bandar Udara , Jilid I. Penerbit Erlangga, Jakarta
4. ICAO. 1984. Aerodrome Design Manual Part 1 Runway. International Civil Aviation Organization, Montreal
5. ICAO. 1983. Aerodrome Design Manual Part 2 Taxiway, Apron & Holding Bay. International Civil Aviation Organization, Montreal
6. ICAO. 1983. Aerodrome Design Manual Part 3 Pavement. International Civil Aviation Organization, Montreal

Supporters:

Supporting lecturer: Yogie Risdianto, S.T., M.T.
Fitri Rohmah Widayanti, S.Pd., M.T.

Week-	Final abilities of each learning stage (Sub-PO)	Evaluation		Help Learning, Learning methods, Student Assignments, [Estimated time]		Learning materials [References]	Assessment Weight (%)
		Indicator	Criteria & Form	Offline (*offline*)	Online (*online*)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Know and understand the history of development and characteristics of air transportation modes.	1. Explain the history of civil aviation and its development. 2. Get to know several aviation organizations. 3. Explain the advantages and disadvantages of air transportation modes.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
2	Know and understand the characteristics of aircraft related to airport planning.	1. Explain the physical dimensions of an aircraft. 2. Explain the type of engine and speed of the aircraft. 3. Explain aircraft weight terms related to flight operations. 4. Explain the relationship between payload and cruising distance of an airplane.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
3	Know and understand the characteristics of aircraft related to airport planning.	1. Explain the definition and dangers of wind vortices at the tips of airplane wings (wake turbulence). 2. Explain the effect of aircraft performance on runway length and how to calculate runway length. 3. Explain how the environment around the airport influences the length of the runway. 4. Explain the meaning and be able to calculate Balanced Field Length	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
4	Understand and know the concept of airport planning.	1. Explain the parts of the airport system. 2. Explain the elements in airport planning.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%

5	Understand and know the concept of airport planning.	1. Explain the operation and management of airports. 2. Explains the basics of planning terminal buildings and aprons.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
6	Understand and have knowledge of airport configuration.	1. Explain the meaning of airport configuration. 2. Explain the meaning and matters related to runway. 3. Explain the meaning and matters related to taxiways. 4. Explain the various airport configurations, advantages and disadvantages of each type.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
7	Understand and have knowledge of airport configuration.	1. Explain the meaning and matters related to holding apron. 2. Explain the meaning and matters related to holding bay. 3. Explain the relationship between the terminal area and the airport. 4. Explains wind analysis and how to determine runway orientation using wind rose.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
8	-	-	**Criteria:** Full marks are obtained if you do all the questions correctly	- 2 X 50			0%
9	Understand and know the concepts of airside capacity and delays.	1. Explains the definition and analysis of airside capacity and airport delays. 2. Calculate runway capacity with respect to delay. 3. Calculates runway capacity not associated with delays.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%

10	Understand and know the concepts of airside capacity and delays.	1. Calculate delays on the runway system. 2. Calculate apron capacity. 3. Explain the runway capacity.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
11	Understand and know the concept of geometric planning of landing areas.	1. Explain airport planning standards. 2. Explain the classification of airports. 3. Explain the geometric planning of the runway.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
12	Understand and know the concept of geometric planning of landing areas.	1. Explain the geometric planning of the runway and safety area. 2. Explain the geometric planning of stopways 3. Explain the geometric planning of a clearway.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
13	Understand and know the concept of geometric planning of landing areas.	1. Explain the geometric planning of intersections. 2. Explain the geometric planning of exit taxiways.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
14	Understand and understand the concept and be able to plan structural pavement in the landing area.	1. Explain the differences between airport structural pavement and highway structural pavement. 2. Explain the CBR design method for flexible pavement. 3. Explain rigid pavement planning.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
15	Understand and understand the concept and be able to plan structural pavement in the landing area.	1. Describes FAA design methods for flexible and rigid pavements. 2. Explain resurfacing planning.	**Criteria:** Understand the material well	Discussion lectures and questions and answers 2 X 50			0%
16							0%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
		0%

Notes

1. **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.
2. **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** abilities in the process and student learning outcomes are specific and measurable statements that identify the abilities 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.