



Universitas Negeri Surabaya
Faculty of Engineering,
Undergraduate Study Program in Informatics Engineering

Document Code

SEMESTER LEARNING PLAN

Courses	CODE	Course Family	Credit Weight	SEMESTER	Compilation Date
Multimedia Compression Techniques	5520203097		T=3 P=0 ECTS=4.77	7	July 18, 2024

AUTHORIZATION	SP Developer	Course Cluster Coordinator	Study Program Coordinator
	Aditya Prapanca, S.T., M.Kom.

Learning model	Project Based Learning
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Program Learning Outcomes (PLO)	PLO study program that is charged to the course																																	
	Program Objectives (PO)																																	
	PLO-PO Matrix																																	
	<table border="1" style="margin: auto;"> <tr> <td style="width: 50px; height: 20px;">P.O</td> </tr> </table>	P.O																																
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	PO Matrix at the end of each learning stage (Sub-PO)																																	
	<table border="1" style="margin: auto;"> <tr> <td rowspan="2" style="width: 30px; height: 20px;">P.O</td> <td colspan="16" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 20px;">1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td> </tr> </table>	P.O	Week																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16																		

Short Course Description	This course examines the development of basic concepts of multimedia applications. This course covers basic multimedia concepts in general, processing, representation and compression of image, audio, video data, devices and implementation of multimedia applications as well as media distribution and security.
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References	Main : <ol style="list-style-type: none"> 1. Li, Ze-Nian. dan Drew, Mark. S. 2003. Fundamentals of Multimedia. New Jersey: Prentice-Hall. ISBN 0130618721. 2. Sayood, K. 2000. Introduction to Data Compression. San Francisco: Morgan-Kaufman. ISBN 1558605584. 3. Lu, G. 1999. Multimedia Database Management Systems. Boston: Artech House Publishers. ISBN 0890063427. 4. Hady, William C. 2001, QoS Measurement and Evaluation of Telecommunications Quality of Service. New Jersey: Wiley, ISBN 0470845910. 5. Katzenbeisser, S. dan Petitcolas, Fabien A.P. 1999. Information Hiding Techniques for Steganography and Digital Watermarking. Boston: Artech House Publishers. ISBN 1580530354.
	Supporters:

Supporting lecturer	Setya Chendra Wibawa, S.Pd., M.T. Martini Dwi Endah Susanti, S.Kom., M.Kom.
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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	Students are motivated to know and understand knowledge about data compression	Know and understand knowledge about data compression.	Form of Assessment : Participatory Activities	Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			25%

2	Students know what compression techniques are and the importance of compression techniques in the era of digital information technology.	<ol style="list-style-type: none"> 1. Students can explain the background to the emergence of Data Compression 2. Students can explain the definition of compression techniques based on several expert opinions 3. Students can explain the purpose of data compression 		Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%
3	Students know data compression methods/techniques and are able to work on compression algorithms correctly.	<ol style="list-style-type: none"> 1. Know data compression methods/techniques. 2. Able to work on compression algorithms correctly. 		Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%
4	Students know data compression methods/techniques and are able to work on compression algorithms correctly.	<ol style="list-style-type: none"> 1. Know data compression methods/techniques. 2. Able to work on compression algorithms correctly. 	Form of Assessment : Participatory Activities	Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%
5	Students know the implementation of the Huffman algorithm.	Know the implementation of the Huffman algorithm		Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%
6	Students know compression engineering modeling	Know the modeling of compression techniques		Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%
7	Students know text compression techniques and their application to implementing text retrieval.	Know text compression techniques and their application to text retrieval implementation.		Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%
8	UTS			3 X 50			0%
9	Students know audio data compression techniques.	Know audio data compression techniques.		Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%

10	Students know audio data compression techniques.	Know audio data compression techniques.		Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%
11	Students know image data compression techniques	Know image data compression techniques		Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%
12	Students know image data compression techniques	Know image data compression techniques		Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%
13	Students know video data compression techniques	Know video data compression techniques		Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%
14	Students know video data compression techniques	Know video data compression techniques	Form of Assessment : Project Results Assessment / Product Assessment	Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			50%
15	Students apply data compression techniques/methods into program implementation and are able to explain the functions used.	Apply data compression techniques/methods into program implementation and be able to explain the functions used		Approach: Scientific Model: Problem-based learning Method: Discussion, Presentation, Practical 3 X 50			0%
16							0%

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	25%
2.	Project Results Assessment / Product Assessment	50%
		75%

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** 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.