	Universitas Negeri Surabaya Faculty of Education, Educational Technology Undergraduate Study Program		**Document Code**

SEMESTER LEARNING PLAN

Courses		CODE	Course Family		Credit Weight			SEMESTER	Compilation Date
Information and Communication Technology Based Learning		8620304048	Compulsory Study Program Subjects		T=4	P=0	ECTS=6.36	4	July 14, 2022
AUTHORIZATION		**SP Developer**		**Course Cluster Coordinator**			**Study Program Coordinator**		
		Hirnanda Dimas Pradana, M.Pd.		Dr. Alim Sumarno, M.Pd.			Dr. Utari Dewi, S.Sn., M.Pd.		

Learning model	**Project Based Learning**
Program Learning Outcomes (PLO)	**PLO study program which is charged to the course**

PLO-2	Demonstrate the character of being tough, collaborative, adaptive, innovative, inclusive, lifelong learning and entrepreneurial spirit
PLO-6	Able to design, implement, evaluate learning in visual communication design, animation, broadcasting and informatics
PLO-9	Able to produce creative products in the field of educational technology that are educational and market them to the user community

Program Objectives (PO)

PO - 1	Able to Implement a Learning Management System (LMS) in an E-learning Context
PO - 2	Able to carry out planning and development of learning management systems (LMS)
PO - 3	Able to Manage Users, Student Interaction, Evaluation, and External Tool Integration
PO - 4	Able to Manage Security and Usage Policies, LMS Development

PLO-PO Matrix

P.O	PLO-2	PLO-6	PLO-9
PO-1		✔	✔
PO-2		✔	✔
PO-3			
PO-4	✔		

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
PO-1	✔	✔	✔	✔												
PO-2					✔	✔	✔	✔								
PO-3									✔	✔	✔	✔				
PO-4													✔	✔	✔	✔

Short Course Description	This course provides students with an in-depth understanding of the concepts and practices of Information and Communication Technology (ICT) Based Learning Development. Learning Using Project Based Learning (PBL) to create a Learning Management System (LMS). In this course, various kinds of material are presented that can improve knowledge, skills and attitudes so that it is hoped that after implementing the ICT-based learning course, you will become an expert in the field of information and communication technology-based learning as a developer of Educational Technology and Educational Analysis.
References	**Main :**

1. Referensi Anderson, terry dan Fathi Elloumi. 2004. Theory and Practice of Online Learning. USA: Athabasca University.
2. Beetham, Helen dan Rhona Sharpe. 2007. Rethinking Pedagogy for a Digital Age: Designing and delevering e-learning. USA: Routledge.
3. Durin, Allison. 2009. Mobile Technology for Children: Design for Interaction and Learning. USA: Elseiver.
4. Ficarra, Francisco V. Cipolla. 2010. Quality and Communicability for Interactive Hypermedia Systems: Concepts and Practices for Design. USA: IGI Global.
5. Lee, Willliam W dan Diana L. Owens. 2004. Multimedia-based Instructional Design: Computer-based Training, Web-Based Training, Distance Broadcast training, Performance-Based Solution. Ed. ke-2. USA
6. John Wiley & Sons, Inc. Lehman, Rosemary M. Dan Simone C. O. ConceiD7D3o. 2010. Creating a sense of presence in online teaching: how to be there for distance learners. USA: Jossey-Bass.
7. Sumarno, Alim, dkk. 2020. Handout Pembelajaran Berbasis Teknologi Informasi dan Komunikasi . Surabaya: Teknologi Pendidikan FIP Unesa

Supporters:	
	1. Ficarra, Francisco V. Cipolla. 2010. Quality and Communicability for Interactive Hypermedia Systems: Concepts and Practices for Design . USA: IGI Global. 2. Edy I., Jurike V. 2014. Pengantar Teknologi Informasi. Yogyakarta: Deepublish 3. Moller, Leslie, Jason Bond Huett dan Douglas M. Harvey. 2009. Learning and Instructional Technologies for the 21st Century: Vision of the Future. USA: Springer.

Supporting lecturer	Dr. Alim Sumarno, M.Pd. Citra Fitri Kholidya, S.Pd., M.Pd. Hirnanda Dimas Pradana, M.Pd.

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 able to analyze the basic concepts of e-learning based learning	1.Students' ability to explain the basic concepts of e-learning based learning 2.Active participation in group discussions	**Criteria:** 1.Students' ability to summarize basic e-learning concepts 2.Ability to identify characteristics of e-learning based learning 3.Level of contribution within the group 4.Ability to compare experiences and perspectives **Form of Assessment** : Project Results Assessment / Product Assessment, Test	Group discussion about how to apply e-learning in various contexts. Explain the characteristics and advantages of e-learning based learning together. 2 X 50	Opening with an explanation of the basic concepts of e-learning. Discussion about the characteristics of e-learning based learning. Presentation of benefits using case examples and literature studies. 2 x 50	**Material:** Database structure **Bibliography:** *References Anderson, Terry and Fathi Elloumi. 2004. Theory and Practice of Online Learning. USA: Athabasca University.* **Material:** Database Analysis **Bibliography:** *Beetham, Helen and Rhona Sharpe. 2007. Rethinking Pedagogy for a Digital Age: Designing and delevering e-learning. USA: Routledge.* **Material:** definition, characteristics, functions and benefits of information and communication technology **Reference:** *Edy I., Jurike V. 2014. Introduction to Information Technology. Yogyakarta: Deepublish*	5%
2	Students analyze the role of the Learning Management System (LMS) in the educational context	1.Students' ability to detail the role of LMS in the educational context 2.Quality of analysis and participation in case study discussions	**Criteria:** 1.Students' ability to detail the role of the LMS 2.Understanding of key LMS features 3.Ability to analyze the positive impact of LMS on learning 4.Active participation in group discussions **Form of Assessment** : Project Results Assessment / Product Assessment	Presentation of case studies of LMS implementation in various educational institutions. Group discussion about the benefits and challenges of using LMS 2 X 50	Introduction to the concept of the role of LMS in education. Explanation of the features and uses of LMS in supporting learning. 2 X 50	**Material:** Computing systems in information technology. **References:** *Sumarno, Alim, et al. 2020. Information and Communication Technology Based Learning Handout. Surabaya: Unesa FIP Educational Technology*	5%
3	Students can carry out learning needs analysis for LMS development	1.Students' ability to use analytical methods correctly 2.The quality of preparing a list of learning needs	**Criteria:** 1.Students' ability to use analytical methods correctly. 2.Creativity in identifying needs. 3.Completeness and detail of learning needs 4.Relevance to the needs of the LMS development project **Form of Assessment** : Participatory Activities, Project Results Assessment / Product Assessment	Discussion of student experiences in conducting needs analysis. Group division for case studies. 2 X 50	Presentation of concepts and methods of learning needs analysis. Demonstration of requirements analysis tools and techniques. Presentation of case studies involving LMS needs analysis. Online discussions to analyze and detail learning needs. 2 X 50	**Material:** Computer components **References:** *Sumarno, Alim, et al. 2020. Information and Communication Technology Based Learning Handout. Surabaya: Unesa FIP Educational Technology* **Material:** Computer components **References:** *Edy I., Jurike V. 2014. Introduction to Information Technology. Yogyakarta: Deepublish*	5%

4	Students analyze Moodle as an LMS choice	1. Students' ability to present the advantages and limitations of Moodle. 2. Activity and quality of contribution in case discussion and analysis.	**Criteria:** 1. Students' ability to explain clearly. 2. Deep understanding of Moodle's advantages and limitations. 3. Activities and participation in group discussions. 4. Contribute new ideas or views to the case analysis. **Form of Assessment** : Test	Group discussion regarding experiences of using Moodle. Preparation of a list of Moodle's advantages and limitations. 2 X 50	Exposure to the concepts and features of Moodle as an LMS. Demonstration of using Moodle in learning. Case analysis of Moodle implementation in various educational institutions. Online discussion regarding the results of analysis and lessons learned from the case. 2 X 50	**Material:** telecommunications systems and networks in information technology **References:** *Lee, Willliam W and Diana L. Owens. 2004. Multimedia-based Instructional Design: Computer-based Training, Web-Based Training, Distance Broadcast training, Performance-Based Solution. Ed. 2nd. USA*	5%
5	Students are able to plan LMS development, including server selection and preparation	1. Students' ability to plan the stages of LMS development. 2. The quality of the LMS development plan prepared	**Criteria:** 1. Students' ability to detail the stages of LMS development. 2. Understanding of the relationship between server selection and development stages. 3. Details in planning projects. 4. Relevance and consistency with the concepts taught. **Form of Assessment** : Project Results Assessment / Product Assessment	Explanation of the concept and stages of LMS development. Online discussion regarding server selection and preparation. 2 X 50	In-class discussion of case studies about LMS development projects. Identify success factors and barriers. LMS project planning demonstration. Online discussions regarding development stages and resource allocation. 2 X 50	**Material:** software and applications **References:** *Durin, Allison. 2009. Mobile Technology for Children: Design for Interaction and Learning. USA: Elseiver.*	5%
6	Students can design LMS user interfaces (UI/UX).	1. Students' ability to design LMS UI/UX design sketches. 2. Creativity and consistency of interface designs created.	**Criteria:** 1. Skills in designing UI/UX design sketches. 2. Correct use of UI/UX principles. 3. Active contribution to group discussions. 4. Ability to give and receive feedback. **Form of Assessment** : Project Results Assessment / Product Assessment	Division of tasks for designing LMS interface design sketches. Direct consultation and feedback from teachers. 2 X 50	Effective presentation of UI/UX concepts and principles in LMS. Demonstration of examples of good LMS interface design. Group discussion regarding important UI/UX elements in the LMS. Joint analysis of the designs that have been created. 2 X 50	**Material:** concepts and functions of Telecommunications and Networks in Information Technology **References:** *Lee, Willliam W and Diana L. Owens. 2004. Multimedia-based Instructional Design: Computer-based Training, Web-Based Training, Distance Broadcast training, Performance-Based Solution. Ed. 2nd. USA*	5%
7	Students can develop learning modules in the LMS	1. Students' ability to develop learning module prototypes. 2. Application of concepts and best practices taught in lectures.	**Criteria:** 1. Conformity to development guidelines. 2. Creativity and innovation in the modules developed. 3. Students' ability to apply the concepts and best practices taught. 4. Respond to feedback and consultation. **Form of Assessment** : Project Results Assessment / Product Assessment	Demonstration of practical steps in developing modules in LMS. Direct consultation and feedback from teachers. Demonstration of practical steps in developing modules in LMS. Direct consultation and feedback 2 X 50	Independent development of learning modules with guidance. Online consultations to provide guidance and get feedback. Presentation of concepts and best practices in developing learning modules. Online discussions regarding challenges that may be faced in the project. 2 X 50	**Material:** Definition, types of application systems **References:** *Ficarra, Francisco V. Cipolla. 2010. Quality and Communicability for Interactive Hypermedia Systems: Concepts and Practices for Design. USA: IGI Global.* **Material:** explains the meaning, types of application systems. **Readers:** *Lee, Willliam W and Diana L. Owens. 2004. Multimedia-based Instructional Design: Computer-based Training, Web-Based Training, Distance Broadcast training, Performance-Based Solution. Ed. 2nd. USA*	5%

			Criteria				
8	UTS	1. Students' ability to apply knowledge to create a simple LMS prototype. 2. Conformity of the prototype to the guidelines and concepts being taught.	**Criteria:** 1. Conformity to development guidelines. 2. Functionality and usability of the prototype. 3. Students' ability to apply the knowledge that has been taught. 4. Respond to feedback and consultation. **Form of Assessment** : Project Results Assessment / Product Assessment	Independent development of a simple LMS prototype Online consultation to provide guidance and get feedback. 4 X 50	- -	**Material:** types of application systems **References:** *Edy I., Jurike V. 2014. Introduction to Information Technology. Yogyakarta: Deepublish*	7%
9	Students are able to manage users and access rights in the LMS	1. Students' ability to manage users and access rights in the LMS. 2. Creativity and understanding in completing case studies.	**Criteria:** 1. Students' ability to manage LMS users. 2. Suitability of implementation to case needs. 3. Students' ability to manage LMS user access rights. 4. The relevance of access rights settings to the needs of the case study. **Form of Assessment** : Project Results Assessment / Product Assessment	Group discussion regarding user management and access rights case studies. Problem solving and analysis together in class. 2 X 50	Exposure to the concept of user management and access rights in LMS. Demonstration of implementation steps on the LMS. Providing online case studies regarding the implementation of user management and access rights in LMS. Online discussions on solutions and strategic thinking. 2 X 50	**Material:** Definition and examples of e-learning **References:** *Moller, Leslie, Jason Bond Huett and Douglas M. Harvey. 2009. Learning and Instructional Technologies for the 21st Century: Vision of the Future. USA: Springer.* **Material:** Definition and examples of e-learning **Library:** *John Wiley & Sons, Inc. Lehman, Rosemary M. And Simone CO ConceiD7D3o. 2010. Creating a sense of presence in online teaching: how to be there for distance learners. USA: Jossey-Bass.*	3%
10	Students can develop student interactivity and involvement in the LMS	1. Students' ability to plan and implement strategies to increase student interaction and involvement in the LMS. 2. The effectiveness of the plans and implementation made.	**Criteria:** 1. Students' ability to plan and implement strategies to increase student interaction and involvement in the LMS. 2. The effectiveness of the plans and implementation made. **Form of Assessment** : Project Results Assessment / Product Assessment	Providing case studies in class on increasing student interaction and engagement. Group discussion regarding solutions and implementation. 2 X 50	Exposure to concepts and strategies for increasing interaction in LMS. Demonstration of best practices and case studies. Online discussions in groups regarding experiences and ideas for improving interactions in the LMS. Division of tasks and implementation plans. 2 X 50	**Material:** mobile learning **Readers:** *Moller, Leslie, Jason Bond Huett and Douglas M. Harvey. 2009. Learning and Instructional Technologies for the 21st Century: Vision of the Future. USA: Springer.* **Material:** mobile learning **References:** *Ficarra, Francisco V. Cipolla. 2010. Quality and Communicability for Interactive Hypermedia Systems: Concepts and Practices for Design. USA: IGI Global.*	5%
11	Students are able to develop forms of evaluation and assessment in the LMS	1. Students' ability to organize evaluations and assessments in the LMS. 2. Conformity of arrangements with the principles of evaluation and assessment.	**Criteria:** 1. Conformity of arrangements with guidelines and needs. 2. Creativity and innovation in settings. 3. Understanding the concept of evaluation and assessment. 4. Respond to feedback. **Form of Assessment** : Test	Practical in-class exercises to organize evaluations and assessments within the LMS. Direct consultation and feedback from teachers. 2 X 50	Presentation of evaluation and assessment concepts and strategies in the LMS. Presentation of setup guides in the LMS. 2 X 50	**Material:** Definition and examples of hypermedia **References:** *Edy I., Jurike V. 2014. Introduction to Information Technology. Yogyakarta: Deepublish* **Material:** Definition and examples of hypermedia **Reference:** *Sumarno, Alim, et al. 2020. Information and Communication Technology Based Learning Handout. Surabaya: Unesa FIP Educational Technology*	5%

| 12 | Students can integrate LMS with external tools | 1. Student's ability to integrate LMS with external tools.
2. Creativity in responding to challenges that may arise. | **Criteria:**
1. Compatibility of integration with selected external tools.
2. Creativity in optimizing LMS functionality.
3. Students' ability to respond to and solve problems that arise.
4. Relevance of the solution to the study case.

Form of Assessment : Participatory Activities | Live classroom demonstration of the integration process with examples of external tools. Direct consultation and feedback from teachers.
2 X 50 | Presentation of LMS integration concepts and guidance with external tools. Online discussion of the benefits and potential of integration. Providing online case studies about LMS integration experiences with external tools. Online discussion of strategies and solutions.
2 X 50 | **Material:** Definition, function, benefits of learning management system
Reader: *Beetham, Helen and Rhona Sharpe. 2007. Rethinking Pedagogy for a Digital Age: Designing and delevering e-learning. USA: Routledge.*

Material: Definition, functions, benefits of learning management systems
References: *Durin, Allison. 2009. Mobile Technology for Children: Design for Interaction and Learning. USA: Elseiver.*

Material: Definition, functions, benefits of learning management systems
References: *Ficarra, Francisco V. Cipolla. 2010. Quality and Communicability for Interactive Hypermedia Systems: Concepts and Practices for Design. USA: IGI Global.* | 5% |
| 13 | Students are able to manage security and usage policies in the LMS | 1. Student's ability to manage security and usage policies in the LMS.
2. Conformity of policy implementation with security principles. | **Criteria:**
1. Compliance of implementation with needs and guidelines.
2. Effectiveness in improving LMS security.
3. Students' ability to respond and solve security-related problems.
4. Relevance of the solution to the study case.

Form of Assessment : Participatory Activities | Group discussions in class regarding case studies related to security and usage policies. Joint problem solving and analysis. Direct consultation and feedback
2 X 50 | Presentation of concepts and guidelines regarding security and usage policies in LMS. Online discussion regarding the importance of security in the context of online learning. Implementation of security policies in the LMS independently by students.
2 X 50 | **Material:** Applications and features in the learning management system
References: *References Anderson, Terry and Fathi Elloumi. 2004. Theory and Practice of Online Learning. USA: Athabasca University.*

Material: Applications and features in the learning management system
Reader: *Beetham, Helen and Rhona Sharpe. 2007. Rethinking Pedagogy for a Digital Age: Designing and delevering e-learning. USA: Routledge.* | 5% |

| 14 | Students can develop a comprehensive LMS | 1.Students' ability to evaluate and design improvements to the LMS. 2.Quality of evaluation and improvement documentation. | **Criteria:** 1.Quality of evaluation analysis. 2.Creativity in designing improvements. 3.Quality and completeness of documentation. 4.Quality of improvement recommendations. **Form of Assessment** : Project Results Assessment / Product Assessment, Test | Evaluation of the LMS being developed. Problem solving and group discussions. 2 X 50 | Presentation of LMS evaluation concepts and principles. Presentation of LMS evaluation case studies. Online discussion regarding evaluation results and proposed improvements. Making evaluation and improvement documentation. 2 X 50 | **Material:** Learning management system in accordance with learning problems . Reference : *Anderson, Terry and Fathi Elloumi. 2004. Theory and Practice of Online Learning. USA: Athabasca University.*

 Material: Learning management system in accordance with learning problems **Readers:** *Beetham, Helen and Rhona Sharpe. 2007. Rethinking Pedagogy for a Digital Age: Designing and delevering e-learning. USA: Routledge.*

 Material: Learning management system in accordance with learning problems **Readers:** *Moller, Leslie, Jason Bond Huett and Douglas M. Harvey. 2009. Learning and Instructional Technologies for the 21st Century: Vision of the Future. USA: Springer.* | 5% |
| 15 | Students are able to evaluate and design improvements to the LMS | 1.Students' ability to evaluate and design improvements to the LMS. 2.Quality of evaluation and improvement documentation. | **Criteria:** 1.Quality of evaluation analysis. 2.Creativity in designing improvements. 3.Quality and completeness of documentation. 4.Quality of improvement recommendations. **Form of Assessment** : Project Results Assessment / Product Assessment | Evaluation of the LMS being developed. Problem solving and group discussions in class. 2 X 50 | Presentation of LMS evaluation concepts and principles. Presentation of evaluation and improvement case studies. Online discussion regarding evaluation results and proposed improvements. Making evaluation and improvement documentation. - | **Material:** learning management system according to learning problems **References:** *Ficarra, Francisco V. Cipolla. 2010. Quality and Communicability for Interactive Hypermedia Systems: Concepts and Practices for Design. USA: IGI Global.*

 Material: learning management system according to learning problems **Readers:** *Moller, Leslie, Jason Bond Huett and Douglas M. Harvey. 2009. Learning and Instructional Technologies for the 21st Century: Vision of the Future. USA: Springer.*

 Material: learning management system according to learning problems **References:** *Ficarra, Francisco V. Cipolla. 2010. Quality and Communicability for Interactive Hypermedia Systems: Concepts and Practices for Design. USA: IGI Global.* | 5% |

| 16 | UAS | 1. The quality of student presentations regarding LMS development. 2. Students' ability to explain the improvements implemented. | **Criteria:** 1. Quality of presentation. 2. Ability to explain repairs in detail. 3. Ability to explain implemented fixes and improvements. **Form of Assessment** : Project Results Assessment / Product Assessment | Each student presented the results of the LMS development that had been carried out. Describes the improvements and improvements implemented. 4 X 50 | - | | **Material:** UAS **Literature:** *Sumarno, Alim, et al. 2020. Information and Communication Technology Based Learning Handout. Surabaya: Unesa FIP Educational Technology* | 25% |

Evaluation Percentage Recap: Project Based Learning

No	Evaluation	Percentage
1.	Participatory Activities	12.5%
2.	Project Results Assessment / Product Assessment	72.5%
3.	Test	15%
		100%

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.