



**Universitas Negeri Surabaya  
Faculty of Engineering,  
Bachelor of Information Systems Study Program**

**Document Code**

**SEMESTER LEARNING PLAN**

<b>Courses</b>	<b>CODE</b>	<b>Course Family</b>	<b>Credit Weight</b>	<b>SEMESTER</b>	<b>Compilation Date</b>
Business Intelligence	5720103092		T=3 P=0 ECTS=4.77	5	July 18, 2024
<b>AUTHORIZATION</b>	<b>SP Developer</b>		<b>Course Cluster Coordinator</b>	<b>Study Program Coordinator</b>	
	.....		.....	I Kadek Dwi Nuryana, S.T., M.Kom.	

<b>Learning model</b>	Case Studies
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<b>Program Learning Outcomes (PLO)</b>	<b>PLO study program that is charged to the course</b>																																													
	<b>PLO-5</b>	Have faith in God Almighty and be able to show a religious attitude;																																												
	<b>PLO-18</b>	Able to be involved in sustainable professional development by following and reviewing developments and implementation of science and/or technology which is his expertise based on scientific rules, procedures and ethics in order to produce solutions, ideas, designs and carry out more complex work with sharper analytical skills ;																																												
	<b>PLO-26</b>	Have expertise in evaluating, identifying system developments and carrying out system maintenance;																																												
	<b>PLO-30</b>	Able to apply the basic principles of algorithms and computer science theory in modeling and designing computer-based systems in such a way as to demonstrate an understanding of the advantages and disadvantages of existing designs.																																												
	<b>Program Objectives (PO)</b>																																													
	<b>PLO-PO Matrix</b>																																													
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">P.O</td> <td style="width: 20%;">PLO-5</td> <td style="width: 20%;">PLO-18</td> <td style="width: 20%;">PLO-26</td> <td style="width: 20%;">PLO-30</td> </tr> </table>														P.O	PLO-5	PLO-18	PLO-26	PLO-30																										
	P.O	PLO-5	PLO-18	PLO-26	PLO-30																																									
	<b>PO Matrix at the end of each learning stage (Sub-PO)</b>																																													
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td rowspan="2" style="width: 5%;">P.O</td> <td colspan="15" style="text-align: center;">Week</td> </tr> <tr> <td style="width: 5%;">1</td> <td style="width: 5%;">2</td> <td style="width: 5%;">3</td> <td style="width: 5%;">4</td> <td style="width: 5%;">5</td> <td style="width: 5%;">6</td> <td style="width: 5%;">7</td> <td style="width: 5%;">8</td> <td style="width: 5%;">9</td> <td style="width: 5%;">10</td> <td style="width: 5%;">11</td> <td style="width: 5%;">12</td> <td style="width: 5%;">13</td> <td style="width: 5%;">14</td> <td style="width: 5%;">15</td> <td style="width: 5%;">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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<b>Short Course Description</b>	This course teaches students about the principles and concepts of business intelligence to carry out organizational governance. Starting from: basic concepts of business intelligence, history and objectives of business intelligence, organizational decision making processes and levels, personal knowledge and organizational knowledge, employment security, decision support systems using data mining techniques, expert systems and data visualization techniques
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<b>References</b>	<b>Main :</b>
	<ol style="list-style-type: none"> <li>1. Business Intelligence and Data Mining., Anil K Maheswari., 2015</li> <li>2. Decision Support and Business Intelligence Systems: 9th Edition., Efraim Turban, Ramesh E Sharda, Dursun Delen</li> <li>3. Best Practice in Business Intelligence and Data ware housing., TDWI Vol 24., 2007.</li> <li>4. Introduction to the SAS®9 Business Intelligence Platform: A Tutorial., Greg Nelson Thot Wave Technologies, Chapel Hill, North Carolina.</li> <li>5. The Bumper Book of Business Intelligence, Matillion Business Intelligence.</li> </ol>
	<b>Supporters:</b>

<b>Supporting lecturer</b>	Aries Dwi Indriyanti, S.Kom., M.Kom. Martini Dwi Endah Susanti, S.Kom., M.Kom.
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<b>Week-</b>	<b>Final abilities of each learning stage (Sub-PO)</b>	<b>Evaluation</b>	<b>Help Learning, Learning methods, Student Assignments, [ Estimated time ]</b>	<b>Learning materials [ References ]</b>	<b>Assessment Weight (%)</b>
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		Indicator	Criteria & Form	Offline ( offline )	Online ( online )		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Understand the basic concepts of business intelligence, history and benefits of its application	Students are able to explain the basic concepts of business intelligence, the history and benefits of its application in organizations.	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Introduction to Business Intelligence <b>Library:</b> <i>Introduction to the SAS®9 Business Intelligence Platform: A Tutorial.</i> , Greg Nelson <i>Thot Wave Technologies</i> , Chapel Hill, North Carolina.	4%
2	Understand the benefits and advantages of using information systems in business processes, as well as how to utilize primary data in organizations.	Students are able to explain the benefits and advantages of using information systems in business processes, as well as how to utilize primary data in organizations.	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> BI architecture and related technologies such as data warehousing, ETL (extract, transform, load), and data visualization <b>References:</b> <i>Introduction to the SAS®9 Business Intelligence Platform: A Tutorial.</i> , Greg Nelson <i>Thot Wave Technologies</i> , Chapel Hill, North Carolina .	4%
3	Understand the relationship between data and the effectiveness of organizational activities, and be able to apply trend estimation techniques using Linear Regression.	Students are able to explain the relationship between data and the effectiveness of organizational activities, and are able to apply trend estimation techniques using Linear Regression.	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Use of BI for historical, predictive and prescriptive data analysis. <b>Library:</b> <i>The Bumper Book of Business Intelligence</i> , Matillion <i>Business Intelligence</i> .	4%
4	Understand the concept of business processes and develop data retrieval techniques for organizational activities based on the business processes that occur	Students are able to explain what a business process is and develop techniques for collecting data on organizational activities based on the business processes that occur	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Data-based approach to decision making <b>Reference:</b> <i>Best Practice in Business Intelligence and Data ware housing.</i> , TDWI Vol 24., 2007.	4%

5	Understand the concept of knowledge management in the business intelligence framework	Students are able to explain the concept of knowledge management within the business intelligence framework, as well as aspects of knowledge management	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Decision making models, such as risk management models and optimization models. <b>Reference:</b> <i>Decision Support and Business Intelligence Systems: 9th Edition., Efraim Turban, Ramesh E Sharda, Dursun Delen</i>	4%
6	Understand activities and examples of implementing Knowledge Creation in an organization.	Students are able to explain and provide examples of activities within the framework of Knowledge Creation in an Organization	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Data visualization concepts <b>Reference:</b> <i>Best Practice in Business Intelligence and Data ware housing., TDWI Vol 24., 2007.</i>	5%
7	Understand activities and examples of implementing Knowledge Dissemination in an organization.	Students are able to explain and provide examples of activities within the framework of Knowledge Dissemination in an Organization and how to measure organizational understanding.	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Dashboard design principles <b>Reference:</b> <i>Best Practice in Business Intelligence and Data ware housing., TDWI Vol 24., 2007.</i>	5%
8	UTS	UTS	<b>Criteria:</b> UTS <b>Form of Assessment :</b> Practical Assessment, Test	UTS 1x1	UTS 1x1	<b>Material:</b> UTS <b>Library:</b>	20%
9	Understand aspects of information system planning, both from economic and functional calculations	Students are able to explain aspects of information system planning, both from economic and functional calculations	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Strategic planning for business analysis <b>Reference:</b> <i>Business Intelligence and Data Mining., Anil K Maheswari., 2015</i>	4%
10	Understand the important points in information system blueprint design, and explain the concept of Enterprise Architecture	Students are able to explain important points in the design of information system blueprints, and explain the concept of Enterprise Architecture	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Integration of business analysis with organizational strategy <b>Reference:</b> <i>Business Intelligence and Data Mining., Anil K Maheswari., 2015</i>	4%
11	Understand the basic meaning of intelligent systems and random/probability theory	Students are able to explain the basic meaning of intelligent systems and random/probability theory	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50		4%

12	Mastering the application of intelligent systems in solving engineering problems (for search, optimization and prediction)	Students are able to apply intelligent system applications in solving a problem (for search, optimization and prediction)	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Metrics and KPIs (Key Performance Indicators) in evaluating business performance <b>Reference:</b> <i>Business Intelligence and Data Mining., Anil K Maheswari., 2015</i>	4%
13	Mastering the application of intelligent system concepts in order to increase the competitive level of the organization (problem solving and prediction capabilities)	Students can apply the concept of intelligent systems in order to increase the competitive level of the organization	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Business performance evaluation methods such as balanced scorecard and cost-benefit analysis <b>Library:</b> <i>Decision Support and Business Intelligence Systems: 9th Edition., Efraim Turban, Ramesh E Sharda, Dursun Delen</i>	4%
14	Understand various cases involving intelligent systems and their codes of ethics	Students can explain the limitations of implementing intelligent systems and ethical aspects that must be considered in implementing intelligent systems	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Use of data to support organizational learning processes <b>Reference:</b> <i>Decision Support and Business Intelligence Systems: 9th Edition., Efraim Turban, Ramesh E Sharda, Dursun Delen</i>	5%
15	Understand the type of organization that should be designed and developed to be able to compete in a particular competitive environment	Students can explain the type of organization that should be designed and developed to be able to compete in a competitive environment	<b>Form of Assessment :</b> Participatory Activities	Lectures and Discussions 3x50	Lectures and Discussions 3x50	<b>Material:</b> Strategies for building a learning organization <b>Reference:</b> <i>Decision Support and Business Intelligence Systems: 9th Edition., Efraim Turban, Ramesh E Sharda, Dursun Delen</i>	5%
16	UAS	UAS	<b>Form of Assessment :</b> Participatory Activities, Practical Assessment	UAS 1x1	UAS 1x1	<b>Material:</b> UAS <b>Literature:</b>	20%

**Evaluation Percentage Recap: Case Study**

No	Evaluation	Percentage
1.	Participatory Activities	70%
2.	Practical Assessment	20%
3.	Test	10%

**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.