

		<p style="text-align: center;"><b>Universitas Negeri Surabaya</b>  <b>Faculty of Mathematics and Natural Sciences</b>  <b>Data Science Undergraduate Study Program</b></p>					<p style="text-align: center;">Document Code</p>																																	
<b>SEMESTER LEARNING PLAN</b>																																								
<b>Courses</b>		<b>CODE</b>	<b>Course Family</b>	<b>Credit Weight</b>			<b>SEMESTER</b>	<b>Compilation Date</b>																																
Statistical Computing		4920203056		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>																																	
		.....		.....			Yuliani Puji Astuti, S.Si., M.Si.																																	
<b>Learning model</b>	<b>Project Based Learning</b>																																							
<b>Program Learning Outcomes (PLO)</b>	<b>PLO study program that is charged to the course</b>																																							
	<b>Program Objectives (PO)</b>																																							
	<b>PLO-PO Matrix</b>																																							
		<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td style="width: 100px; height: 20px;">P.O</td></tr> </table>							P.O																															
P.O																																								
	<b>PO Matrix at the end of each learning stage (Sub-PO)</b>																																							
	<table border="1" style="margin-left: auto; margin-right: 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; height: 20px;">1</td> <td style="width: 20px; height: 20px;">2</td> <td style="width: 20px; height: 20px;">3</td> <td style="width: 20px; height: 20px;">4</td> <td style="width: 20px; height: 20px;">5</td> <td style="width: 20px; height: 20px;">6</td> <td style="width: 20px; height: 20px;">7</td> <td style="width: 20px; height: 20px;">8</td> <td style="width: 20px; height: 20px;">9</td> <td style="width: 20px; height: 20px;">10</td> <td style="width: 20px; height: 20px;">11</td> <td style="width: 20px; height: 20px;">12</td> <td style="width: 20px; height: 20px;">13</td> <td style="width: 20px; height: 20px;">14</td> <td style="width: 20px; height: 20px;">15</td> <td style="width: 20px; height: 20px;">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																								
<b>Short Course Description</b>	This course will provide the basics of simulation techniques so that students are able to master the latest intensive statistical computing theory and methods and are able to apply them to real problems, both in development and application. Through this course, it is hoped that students will have the learning experience to think critically and be able to make the right decisions about intensive statistical computing techniques that are appropriate for a problem and its solution.																																							
<b>References</b>	<b>Main :</b>																																							
	<ol style="list-style-type: none"> <li>1. Møller, J, dan Waagepetersen, R. P (2004).. Statistical inference and simulation for spatial point processes, Chapman &amp; Hall, London.</li> <li>2. Dani, G. Dan Lopes, H. F.,(2006) Markov chain Monte Carlo: stochastic simulation for Bayesian inference, Chapman &amp; Hall, New Y.</li> <li>3. Voss, J.(2014), An introduction to statistical computing : a simulation-based approach, John Wiley &amp; Sons, New Jersey.</li> <li>4. Rubinstein , R. Y. dan Kroese, D. P (2017), Simulation And the Monte Carlo Method 3rd Edition, John Wiley &amp; Sons, New Jersey.</li> <li>5. 5. Chen, D. D. dan Chen, J. D. (2017r), Monte-Carlo Simulation-Based Statistical Modeling , Springer Nature, Singapore</li> </ol>																																							
	<b>Supporters:</b>																																							
<b>Supporting lecturer</b>																																								
<b>Week-</b>	<b>Final abilities of each learning</b>	<b>Evaluation</b>		<b>Help Learning, Learning methods, Student Assignments, [ Estimated time]</b>			<b>Learning materials [ References</b>	<b>Assessment Weight (%)</b>																																

	stage (Sub-PO)	Indicator	Criteria & Form	Offline ( <i>offline</i> )	Online ( <i>online</i> )	1	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1							0%
2							0%
3							0%
4							0%
5							0%
6							0%
7							0%
8							0%
9							0%
10							0%
11							0%
12							0%
13							0%
14							0%
15							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** 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.