



**Universitas Negeri Surabaya  
Faculty of Education,  
Psychology Undergraduate Study Program**

Document Code

**SEMESTER LEARNING PLAN**

Courses	CODE	Course Family	Credit Weight			SEMESTER	Compilation Date
BASIC PSYCHOMETRY	7320103163	Compulsory Study Program Subjects	T=3	P=0	ECTS=4.77	4	July 17, 2024
<b>AUTHORIZATION</b>		<b>SP Developer</b>	<b>Course Cluster Coordinator</b>			<b>Study Program Coordinator</b>	
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**Learning model** Case Studies

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

**Program Objectives (PO)**

**PO - 1** Students are able to characterize basic psychometric concepts based on classical test theory and modern test theory approaches

**PO - 2** Students are able to characterize basic psychometric concepts based on classical test theory and modern test theory approaches

**PLO-PO Matrix**

	P.O																			
	PO-1																			
	PO-2																			

**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																				

**Short Course Description** This course discusses psychological measurement concepts using classical test theory and modern theory approaches, concepts of validity and reliability, test norms, scoring procedures, scaling, and data analysis as a guide to compiling psychological scales with types of maximal performance and typical performance.

**References** **Main :**

1. Azwar, S. (2015). Dasar-dasar Psikometri (Edisi 2). Yogyakarta: Pustaka Pelajar
2. Azwar, S. (2012). Reliabilitas dan Validitas (Edisi 4). Yogyakarta: Pustaka Pelajar
3. Azwar, Saifuddin. (2015). Tes Prestasi Fungsi Dan Pengembangan Pengukuran Prestasi Belajar (Edisi 2). Yogyakarta: Pustaka Pelajar.
4. Crocker, L., and Algina, J. (1986). Introduction to Classical and Modern Test Theory . New York: CBS College Publishing.
5. Gulliksen, H. (1950). Theory of mental tests . New York: Wiley.
6. Kaplan, Robert M., & Dennis P Saccuzzo. (2018). Psychological testing : principles, applications, & issues. Boston: Cengage Learning
7. Lewis R. Aiken. (1985). Three Coefficients For Analyzing The Reliability And Validity Of Ratings. Educational and Psychological Measurement, 45, 131–141. Retrieved from <https://journals.sagepub.com/doi/abs/10.1177/0013164485451012>
8. Millman, J., & Greene, J. (1989). The specification and development of tests of achievement and ability . In R. L. Linn (Ed.), Educational measurement (3rd ed., pp. 335-366). New York: Macmillan.
9. Sumintono, B., & Widharso, W. (2014). Aplikasi Model Rasch untuk Penelitian Ilmu-Ilmu Sosial (edisi revisi). Cimahi: Trim Komunikata

**Supporters:**

1. Nurwidawati, Desi. (2023). Menyusun konstruk kompetensi sosial guru menggunakan model rasch dan analisis faktor. Journal on Teacher Education, 4(3), 804-815. Diunduh dari <http://journal.universitaspahlawan.ac.id/index.php/jote/article/download/13130/10232>
2. Santosa, R. P., & Kusumawardhani, D. A. (2020). Alat ukur pemeliharaan hubungan perkawinan untuk orang Indonesia: Pengujian properti Psikometris. Persona: Jurnal Psikologi Indonesia, 9(1), 67–87. Diunduh dari <http://jurnal.untag-sby.ac.id/index.php/persona/article/view/2928>

**Supporting lecturer** Dr. Damajanti Kusuma Dewi, S.Psi., M.Si.  
Desi Nurwidawati, S.Si., M.Sc.  
Rizky Putra Santosa, M.Si.

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 determine the psychometric discussion area based on the learning outcomes of this course, materials, methods and learning evaluation	1. Students are able to understand the relationship between psychometrics, the concepts of measurement, assessment and evaluation. 2. Students are able to explain the role of psychometrics (psychological measurements)	<b>Criteria:</b> Score 5 = very good; Score 4 = good; Score 3: moderate; Score 2: poor; Score 1: very poor  <b>Form of Assessment :</b> Test	Contextual Instruction 3 X 50		<b>Material:</b> Concepts of psychological measurement, assessment and evaluation <b>References:</b> Azwar, S. (2015). <i>Basics of Psychometrics Edition II</i> . Yogyakarta: Student Library	4%
2	Students are able to create basic groupings and ways to measure psychological constructs	1. Students are able to understand the types of psychological constructs (and variables). 2. Students understand how to take measurements based on types of psychological constructs	<b>Criteria:</b> Score 4 = very good; Score 3 = good; Score 2 = moderate; Score 1 = poor  <b>Form of Assessment :</b> Participatory Activities	Contextual Instruction 3 X 50		<b>Material:</b> Classification concepts and data from psychological tests. <b>Reference:</b> Kaplan, Robert M., & Dennis P Saccuzzo. (2018). <i>Psychological testing : principles, applications, &amp; issues</i> . Boston: Cengage Learning	4%
3	Students are able to outline approaches to classical test theory and modern test theory	1. Students are able to explain classical test theory 2. Students are able to explain modern test theory	<b>Criteria:</b> Score 4 = very good; Score 3 = good; Score 2 = moderate; Score 1 = poor  <b>Form of Assessment :</b> Participatory Activities	Contextual Instruction 3 X 50		<b>Material:</b> Classical test theory approach and modern test theory <b>References:</b> Azwar, S. (2015). <i>Basics of Psychometrics Edition II</i> . Yogyakarta: Student Library  <b>Material:</b> Classical test theory approach and modern test theory <b>References:</b> Azwar, S. (2012). <i>Reliability and Validity (4th Edition)</i> . Yogyakarta: Student Library  <b>Material:</b> Classical test theory approach and modern test theory <b>References:</b> Crocker, L., and Algina, J. (1986). <i>Introduction to Classical and Modern Test Theory</i> . New York: CBS College Publishing.	4%
4	Students are able to explain the concept of reliability (1)	1. Students are able to understand various reliability estimates 2. Students are able to understand internal consistency techniques in psychological tests	<b>Criteria:</b> Score 3 = good; Score 2 = moderate; Score 1 = poor  <b>Form of Assessment :</b> Test	Contextual Instruction 3 X 50		<b>Material:</b> Reliability estimation and internal consistency techniques <b>References:</b> Azwar, S. (2015). <i>Basics of Psychometrics Edition II</i> . Yogyakarta: Student Library	3%
5	Students are able to explain the concept of reliability (2)	1. Students are able to understand internal consistency techniques on psychological scales 2. Students are able to evaluate the reliability of psychological scale measurement results	<b>Criteria:</b> Score 3 = good; Score 2 = moderate; Score 1 = poor  <b>Form of Assessment :</b> Test	Contextual Instruction 3 X 50		<b>Material:</b> Internal consistency technique for estimating the reliability of psychological scales. <b>Reference:</b> Azwar, S. (2015). <i>Basics of Psychometrics Edition II</i> . Yogyakarta: Student Library  <b>Material:</b> Internal consistency technique for estimating the reliability of psychological scales. <b>Reference:</b> Azwar, S. (2005). <i>Reliability and Validity</i> . Yogyakarta: Student Library	4%

6	Students are able to understand the concept of psychological scale item parameters, psychological tests and evaluate them	<ol style="list-style-type: none"> <li>Students are able to understand the parameters of psychological scale items (non-cognitive tests): item differentiation power</li> <li>Students are able to understand the parameters of psychological test items (cognitive tests): item difficulty level, item discrimination power and distractor effectiveness</li> </ol>	<b>Criteria:</b> Score 3 = good; Score 2 = moderate; Score 1 = poor  <b>Form of Assessment :</b> Participatory Activities	Contextual Instruction 3 X 50		<b>Material:</b> Analysis of test items <b>References:</b> Azwar, S. (2012). <i>Reliability and Validity (4th Edition)</i> . Yogyakarta: Student Library  <b>Material:</b> Analysis of test items <b>References:</b> Azwar, Saifuddin. (2015). <i>Achievement Test Function and Development of Learning Achievement Measurement (2nd Edition)</i> . Yogyakarta: Student Library.	3%
7	Students are able to understand the development of validity theory	Students are able to explain the concept of validity of psychological measurements	<b>Criteria:</b> Score 3 = good; Score 2 = moderate; Score 1 = poor  <b>Form of Assessment :</b> Participatory Activities	Contextual Instruction 3 X 50		<b>Material:</b> Validity Theory <b>Literature:</b> Azwar, S. (2012). <i>Reliability and Validity (4th Edition)</i> . Yogyakarta: Student Library  <b>Material:</b> Validity Theory <b>Literature:</b> Santosa, RP, & Kusumawardhani, DA (2020). <i>Measuring tool for maintaining marital relationships for Indonesians: Psychometric property testing</i> . <i>Persona: Indonesian Journal of Psychology</i> , 9(1), 67–87. Downloaded from <a href="http://jurnal.untag-sby.ac.id/">http://jurnal.untag-sby.ac.id/...</a>	3%
8	Midterm exam	Midterm exam	<b>Criteria:</b> Full marks if you do all the questions correctly  <b>Form of Assessment :</b> Test	3 X 50 Structured Activities		<b>Material:</b> Literature Writing Exam : Azwar, S. (2015). <i>Fundamentals of Psychometrics (2nd Edition)</i> . Yogyakarta: Student Library	20%
9	Students are able to understand the concept of validity evidence based on content and application	<ol style="list-style-type: none"> <li>Students are able to explain the concept of validity evidence based on content</li> <li>Students are able to apply the Aiken technique</li> </ol>	<b>Criteria:</b> Score 3 = good; Score 2 = moderate; Score 1 = poor  <b>Form of Assessment :</b> Participatory Activities, Tests	Contextual Instruction 3 X 50		<b>Material:</b> Content Validity <b>Bibliography:</b> Kaplan, Robert M., & Dennis P Saccuzzo. (2018). <i>Psychological testing : principles, applications, &amp; issues</i> . Boston: Cengage Learning  <b>Material:</b> Content Validity <b>Literature:</b> Azwar, S. (2012). <i>Reliability and Validity (4th Edition)</i> . Yogyakarta: Student Library	3%
10	Students are able to understand the concept of validity evidence based on the construct and its application	<ol style="list-style-type: none"> <li>Students are able to explain the concept of construct-based validity evidence</li> <li>Students are able to apply confirmatory factor analysis techniques</li> <li>Students are able to apply multitrait-multimethod techniques</li> </ol>	<b>Criteria:</b> Score 3 = good; Score 2 = moderate; Score 1 = poor  <b>Form of Assessment :</b> Participatory Activities, Tests	Contextual Instruction 3 X 50		<b>Material:</b> Construct Validity <b>Literature:</b> Kaplan, Robert M., & Dennis P Saccuzzo. (2018). <i>Psychological testing : principles, applications, &amp; issues</i> . Boston: Cengage Learning  <b>Material:</b> Construct Validity <b>References:</b> Azwar, S. (2012). <i>Reliability and Validity (4th Edition)</i> . Yogyakarta: Student Library	3%
11	Students are able to understand the concept of validity evidence based on criteria and its application	<ol style="list-style-type: none"> <li>Students are able to explain the concept of predictive validity</li> <li>Students are able to apply concurrent validity</li> </ol>	<b>Criteria:</b> Score 4 = very good; Score 3 = good; Score 2 = moderate; Score 1 = poor  <b>Form of Assessment :</b> Participatory Activities, Tests	Contextual Instruction 3 X 50		<b>Material:</b> Construct Validity <b>Literature:</b> Kaplan, Robert M., & Dennis P Saccuzzo. (2018). <i>Psychological testing : principles, applications, &amp; issues</i> . Boston: Cengage Learning  <b>Material:</b> Construct Validity <b>References:</b> Azwar, S. (2012). <i>Reliability and Validity (4th Edition)</i> . Yogyakarta: Student Library	4%
12	Students are able to interpret the measurement results scores	Students are able to interpret the measurement results scores	<b>Criteria:</b> Score 3 = good; Score 2 = moderate; Score 1 = poor  <b>Form of Assessment :</b> Practice / Performance	Contextual Instruction 3 X 50		<b>Material:</b> Standard scores and standardized scores <b>References:</b> Kaplan, Robert M., & Dennis P Saccuzzo. (2018). <i>Psychological testing : principles, applications, &amp; issues</i> . Boston: Cengage Learning	3%

13	Students are able to understand the concept of the Rasch model in psychological measurement	1. Able to explain the concept of the Rasch model in psychological measurement 2.	<b>Criteria:</b> Score 4 = very good; Score 3 = good; Score 2 = moderate; Score 1 = poor <b>Form of Assessment :</b> Participatory Activities, Practice/Performance	Case study 3 X 50		<b>Material:</b> Rasch modeling <b>References:</b> Nurwidawati, Desi. (2023). <i>Developing a construct of teacher social competence using the Rasch model and factor analysis. Journal on Teacher Education</i> , 4(3), 804-815. Downloaded from <a href="http://journal.universitaspahlawan.ac.id/">http://journal.universitaspahlawan.ac.id/...</a> <b>Material:</b> Rasch modeling <b>Reference:</b> Sumintono, B., & Widhiarso, W. (2014). <i>Applications of the Rasch Model to Research in the Social Sciences (revised ed.)</i> . Cimahi: Trim Communication	4%
14	Students are able to apply psychological measurement theory (1)	1. Able to compile and retrieve psychological measurement data 2. Able to tabulate data	<b>Criteria:</b> Score 4 = very good; Score 3 = good; Score 2 = moderate; Score 1 = poor <b>Form of Assessment :</b> Participatory Activities	Case Study 3 X 50		<b>Material:</b> Psychological Measurement <b>Bibliography:</b> Kaplan, Robert M., & Dennis P Saccuzzo. (2018). <i>Psychological testing : principles, applications, &amp; issues</i> . Boston: Cengage Learning	4%
15	Students are able to apply psychological measurement theory (2)	1. Able to analyze measurement data 2. Able to carry out psychometric property testing using the Rasch model	<b>Criteria:</b> Score 4 = very good; Score 3 = good; Score 2 = moderate; Score 1 = poor <b>Form of Assessment :</b> Participatory Activities	Case Study 3 X 50		<b>Material:</b> Psychological Measurement <b>Bibliography:</b> Kaplan, Robert M., & Dennis P Saccuzzo. (2018). <i>Psychological testing : principles, applications, &amp; issues</i> . Boston: Cengage Learning	4%
16	Final exams	1. Accuracy of the procedure 2. Accuracy of item parameter estimation and scale reliability	<b>Criteria:</b> 1. Accuracy of the procedure 2. Accuracy of item parameter estimation and scale reliability <b>Form of Assessment :</b> Practical Assessment	Structured Activities		<b>Material:</b> Accountability Report <b>References:</b> Azwar, S. (2015). <i>Fundamentals of Psychometrics (2nd Edition)</i> . Yogyakarta: Student Library	30%

#### Evaluation Percentage Recap: Case Study

No	Evaluation	Percentage
1.	Participatory Activities	29%
2.	Practical Assessment	30%
3.	Practice / Performance	5%
4.	Test	36%
		100%

#### Notes

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- Forms of assessment:** test and non-test.
- 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.
- 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.
- Learning materials** are details or descriptions of study materials which can be presented in the form of several main points and sub-topics.
- 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%.
- TM=Face to face, PT=Structured assignments, BM=Independent study.