



UNIVERSITAS NEGERI YOGYAKARTA

FACULTY OF MATHEMATICS AND NATURAL SCIENCES

DEPARTMENT OF SCIENCE EDUCATION

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Bachelor of Education in Science

MODULE HANDBOOK

Module name:	Item Respons Theory
Module level, if applicable:	Undergraduate
Code:	PIA6222
Sub-heading, if applicable:	-
Classes, if applicable:	-
Semester:	5 th
Module coordinator:	Dr. Dadan Rosana, M.Si
Lecturer(s):	Dr. Dadan Rosana, M.Si and Didik Setyawarno, M.Pd.
Language:	Bahasa Indonesia
Classification within the curriculum:	Optional Course
Teaching format / class hours per week during the semester:	150 minutes lectures and 180 minutes structured activities per week.
Workload:	Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes individual study per week for 16 weeks.
Credit points:	3 sks (5 ECTS)
Prerequisites course(s):	Statistics (MKU6210) and Evaluation of Science Learning (PIA6308)
Targeted learning outcomes:	After taking this course the students have ability to: CO 1. Understand the basic concepts of classical measurement which include: validity, reliability, level of discrimination, level of difficulty, and effectiveness of distractors of instrument items CO 2. Using computer applications for classical item analysis CO 3. Understanding the basic concepts of item response theory: 1 PL, 2 PL, and 3 PL CO 4. Understanding the relationship of the ability of respondents to the opportunity to answer the item correctly CO 5. Understanding the basic concepts of item bias CO6: Use computer applications to analyze items in a modern way (theory response item)
Content:	This course discusses the analysis of items with the classical (CTT) and modern (IRT) approach with details of the material discussed by

	ukura, namely (1) the basic concepts of classical concepts which include: validity, reliability, level of discrimination, level of difficulty, and item strength instrument, (2) computer application for classical item analysis, (3) basic concept of item response theory: 1 PL, 2 PL, and 3 PL, (4) relationship of respondent's ability to opportunity to correctly answer questions, (5) basic concept item bias, and (6) computer application for modern item analysis (theory response item)																																									
Study / exam achievements:	<p>Attitude assessment is carried out at each meeting by observation and / or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.</p> <p>The final mark will be weight as follow:</p> <table><tr><th>No</th><th>CO</th><th>Assessment Object</th><th>Assessment Technique</th><th>Weight</th></tr><tr><td>1</td><td>CO1</td><td>a. Individual Assignment</td><td rowspan="5">Presentation / written test</td><td>35%</td></tr><tr><td></td><td>CO2,</td><td>b. Group Assignment</td><td>15%</td></tr><tr><td></td><td>CO3</td><td>c. Mid</td><td>25%</td></tr><tr><td></td><td>CO4</td><td>d. Final Exam</td><td>25%</td></tr><tr><td></td><td>CO5</td><td></td><td></td></tr><tr><td></td><td>And</td><td></td><td></td><td></td></tr><tr><td></td><td>CO6</td><td></td><td></td><td></td></tr><tr><td colspan="4">Total</td><td>100%</td></tr></table>	No	CO	Assessment Object	Assessment Technique	Weight	1	CO1	a. Individual Assignment	Presentation / written test	35%		CO2,	b. Group Assignment	15%		CO3	c. Mid	25%		CO4	d. Final Exam	25%		CO5				And					CO6				Total				100%
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Total				100%																																						
Forms of media:	Board, LCD Projector, Laptop/Computer																																									
Literature:	<p>Compulsory</p> <ol style="list-style-type: none">1. Crocker, Linda & Algia, James. (2008). Introduction to Classical and Modern Test Theory. Canada: Cengage Learning.2. R.K.Hambleton, H.Swaminatan, H.Jane Roger. (1991). Fundamental of item respons theory. California: Sage Publication. <p>Advice</p> <ol style="list-style-type: none">1. Bahrul Hayat. (1997). Analisis Butir Soal dengan Bigsteps. Jakarta: Depdikbud.2. Bambang Subali. (2016). Pengembangan Tes. Yogyakarta: UNY Press.3. Frederick, M.Lord (1980). Aplication of item respons theory to practical testing problem. Hillsdale. New Jersey: Lawrence Erlbaum Associates Publisher.4. Gregory Camilli, Lorie A.Shepard. (1994). Method for identifiyng biased test item. California: Sage Publication																																									

	5. I Wayan Koyan. (2012). Konstruksi Tes. Bali: Undiksha Press. 6. Singgih Pitono. (1999). SPSS. Jakarta. Elex Media Komputindo 7. -----(1997). Manual item and test analysis (Iteman). Jakarta: Pusat Penelitian dan Pengembangan Sistem Pengujian.
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PLO and CO mapping

	PLO											
	Attitude			Knowledge				Specific Skill				
	PLO1	PLO2	PLO3	PLO1	PLO2	PLO3	PLO4	PLO1	PLO2	PLO3	PLO4	PLO5
CO1				✓	✓		✓					
CO2					✓	✓						
CO3					✓	✓						
CO4					✓	✓						
CO5					✓	✓						
CO6					✓	✓	✓					