MODULE HANDBOOK

Module Name:	Problem Solving
Module Level:	Sarjana (S-1) / Bachelor
Abbreviation, if applicable:	8420203217
Sub-heading, if applicable:	-
Course included in the module, if applicable:	-
Semester/term:	6/ Third year
Module Coordinator(s):	Rooselyna Ekawati, Ph.D
Lecturer(s):	Rooselyna Ekawati, Ph.D Prof. Dr. Tatag Yuli Eko Siswono, M.Pd. Nina Rinda Prihartiwi, M.Pd.
Language:	Indonesia
Classification within the curriculum:	~~Compulsory course~~/ elective studies
Teaching format/class hours per week during the semester	Teaching format: lectures, tutorial assignment, and individual study. 3 x 170 minutes = 510 minutes = 8.5 hours lectures
Workload:	15 weeks per semester consisting of: ➢ 1.67 hours lectures (2 x 50 minutes) per week, ➢ 2 hours tutorial assignments (2 x 60 minutes) per week, ➢ 2 hours individual study (2 x 60 minutes) per week, Total workload : 14x2x170 minutes = 4,760 minutes = 3.17 ECTS*
Credit Point:	2
Requirements:	-
Learning Goals:	**Knowledge** CLO-1: Able to solve mathematical problems (algebra, geometry, statistics, discrete, probability, mathematical literacy, and numeracy) **Skill** CLO-2: Able to explain problems and their meaning, problem solving in learning, problem solving and posing, mathematical thinking and problem solving, and problem solving skills CLO-3: Able to arrange problems categorized as problems

	Competency CLO-4: Able to determine strategies and stages in solving problems and evaluating the work that has been done
Content:	Problem solving problems related to mathematical logic, discrete mathematics, algebra, analysis, geometry, probability theory and statistics, which supports learning mathematics in primary and secondary education and for further studies. Assessment of the problem-solving process, strategies and problems, and solving and posing problems related to finding patterns, making pictures or diagrams, making organized lists, making tables, working in reverse, and the use of reasoning
Study/exam achievements	➤ Students are considered competent and pass if the final score calculated from the score of midterm exam, assignments, participation, and final exam is at least 55 or C. ➤ Final score is calculated as follows: ➤ 20% midterm exam + 30% assignments + 20% participation + 30% final exam ➤ Final index is defined as follow:

Index	Converted Score	Score Range
A	4.00	$85 \leq A \leq 100$
A-	3.75	$80 \leq A- <85$
B+	3.50	$75 \leq B+ <80$
B	3.00	$70 \leq B <75$
B-	2.75	$65 \leq B- <70$
C+	2.50	$60 \leq C+ <65$
C	2.00	$55 \leq C <60$
D	1.00	$40 \leq D <55$
E	0.00	$0 \leq E <40$

Forms of Media	Slides and LCD projectors, whiteboard
Literature	[1] Polya, G. (2004). *How to solve it: A new aspect of mathematical method* (Vol. 85). Princeton university press. [2] Posamentier, A. S., & Krulik, S. (2008). *Problem-solving strategies for efficient and elegant solutions, grades 6-12: a resource for the mathematics teacher*. Corwin press.

	[3] Rudnick, S. K. J. A. (1996). The new sourcebook for teaching reasoning and problem solving in junior and senior high school. [4] Relevant journal articles
Note	*Total hours per 1 credit in 1 semester={(1 credit x 170 minutes x 14 weeks)/60 minutes}=39,67 hours. Each ECTS equals with 25 hours therefore 1 credit in 1 semester equals 1,59 ECTS.