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Undergraduate Programme in Mathematics

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MODULE HANDBOOK

Module name	Basic Chemistry I
Module level, if applicable	Bachelor
Code, if applicable	MKK-1101
Subtitle, if applicable	-
Courses, if applicable	Basic Chemistry I
Semester(s) in which the module is taught	1st (first)
Person responsible for the module	Department of Chemistry
Lecturers	Team
Language	Bahasa Indonesia
Relation to curriculum	Compulsory course in the first year (1st semester) Bachelor Degree
Type of teaching, contact hours	150 minutes lectures and 180 minutes structured activities per week.
Workload	Total workload is 136 hours per semester, which consists of 150 minutes lectures per week for 14 weeks, 180 minutes structured activities per week, 180 minutes individual study per week, in total is 16 weeks per semester, including mid exam and final exam.
Credit points	3
Requirements according to the examination regulations	Students have taken Basic Chemistry I course (MKK-1101) and have an examination card where the course is stated on.
Recommended prerequisites	No prerequisite is needed
Module objectives/intended learning outcomes	After completing this course the students should be able to : CO understand the concept of atom structure and molecule, reaction and energy changes, and the fundamental theory of chemical bond.
Content	• Introduction, Molecules, Ions and Chemical Formulas, Chemical Reactions; • Reactions in solution, Energy changes in chemical reactions; • Atomic Structure, Periodic Table; • Ionic Bond vs. Covalent bonding, Molecular Geometry and Covalent Bonding Model
Study and examination requirements and forms of examination	The final mark will be weighted as follows: No — Assessment methods (components, activities) — Weight (percentage) 1 — Final Examination — 40% 2 — Mid-Term Examination — 30% 3 — Class Activities: Quiz, Homework, etc. — 30% The initial cut-off points for grades A, B, C, and D should not be less than 80%, 70%, 50%, and 40%, respectively.
	Board, LCD Projector, Laptop/Computer
Reading List	1. James E. Brady, Frederick A. Senese, 2009, *Chemistry: The Study of Matter and Its Changes 5th edition.* 2. Raymond Chang, Kenneth A. Goldsby, 2012, *Chemistry, 11th Edition* 3. Ralph H. Petrucci, William S. Harwood, F. Geoffrey Herring, 2002, *General Chemistry: Principles and Modern Applications, 8th ed.*

PLO and CO Mapping

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9
CO		v			v				