Module Description
MPK 1001 General Chemistry I

Module Name	**General Chemistry I**
Module level, if applicable	Undergraduate Programme
Code, if applicable	MPK 1001
Subtitle, if applicable	-
Course, if applicable	-
Semester(s) in which the module is taught	1st Semester
Module coordinator(s):	Dr. Anis Shofiyani, M.Si
Lecturer	Dr. Anis Shofiyani, M.Si; Dr. Winda Rahmalia, M.Si; Dr. Nelly Wahyuni
Language	Bahasa Indonesia
Relation to curriculum	Compulsory Courses for the undergraduate programme in Chemistry
Type of teaching, contact hours	Decide teaching/training components for each course outcome ● Theory /Face-to-face lecture (for understanding): 12 lecture meetings ● Assignments: 2 ● Examinations: 2
Workload	(Estimated) Total workload: 3 x 2.83 hours = 8.49 hours per week. Contact hours (lecture): 3 x 0.83 hours = 2.49 hours per week Individual activity, including examination preparation, specified in hours: 3 x 1 hour = 3 hours per week Structured activity: 3 x 1 hour = 3 hours per week Mid and final-test: 2 x (3 x 0.83) hours = 4.98 hours 14 weeks per semester plus 2 times examination (mid and final test) 118 total hours

Credit points	3 (5.01 ECTS)
Requirement according to the examination regulations	Registered in this course Minimum 75% attendance in this course
Learning goals/competencies:	**Intended Learning Outcomes (ILO)** After taking this course, students will be able to: 1. LO-1 2. LO-3
Module objectives	After taking this course, students will be able to: 1. To explain the concepts of atoms, molecules, and ions; be able to write chemical formulas and write the name of molecules or compounds based on their chemical formulas. 2. To complete calculations involving the concept of stoichiometry in chemical reactions 3. To identify types of chemical reactions in aqueous solutions based on the nature of the formation and the results of the reaction 4. To explain the classification of elements in the periodic table and explain the periodic properties of elements 5. To explain the basic concepts of chemical bond formation and write Lewis structures for bonding molecules 6. To describe the types of forces between molecules and relate them to the physical properties of liquids and solids
Content:	1. Atom, Molecules, Ions 2. Mass Relationships in Chemical Reactions 3. Reaction in Aqueous Solutions 4. Periodic Relationship 5. Basic Concept of Chemical Bonding **6.** Intermolecular Forces
Attribute Soft skill:	Critical thinking, Discipline, teamwork skills, and responsibility
Recommended prerequisites	-
Study and examination requirements and forms of examination	Students are considered to be competent and pass if they get at least 50% of the maximum final grade. The final grade (NA) is calculated based on the following :

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<tr><th>Assessment Components</th><th>Percentage Contribution</th></tr>
<tr><td>Participation and activeness in class</td><td>10%</td></tr>
<tr><td>Assignment</td><td>20% - 30%</td></tr>
<tr><td>Mid-semester test</td><td>35 %</td></tr>
<tr><td>Final semester test</td><td>35%</td></tr>
<tr><td>Total</td><td>100%</td></tr>
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Assessment format: essay test, assignments, resume of learning materials
Assessment criteria: activity, assignments, examination scores</td></tr>
<tr><td>Learning Methods</td><td>Group discussion
Demonstration (using molecular model)
Recitations
Case-Based Learning</td></tr>
<tr><td>Media employed</td><td>white board; power point presentation; and e-learning system (edlink)</td></tr>
<tr><td>Reading list</td><td>1. Chang, R. and Overby, J., 2011, General Chemistry: The essential Concepts, 6th ed., McGraw-Hill Companies
2. Petrucci, R.H., 1985, General Chemistry: Principles & Modern Applications, 4th ed., Collier Macmillan, Inc.</td></tr>
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