



UNIVERSITAS NEGERI PADANG
 FACULTY OF MATHEMATICS AND NATURAL SCIENCES
 MATHEMATICS DEPARTMENT, MATHEMATICS STUDY PROGRAM
 Main Campus Universitas Negeri Padang.
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Bachelor of Mathematics Education

MODULE HANDBOOK

Module name:	General chemistry
Module level, if applicable:	Bachelor
Code:	FMA1.60.2103
Sub-heading, if applicable:	-
Classes, if applicable:	General chemistry
Semester	2 nd (Second)
Module coordinator:	Dra. Iryani, M.Si.
Lecturer(s):	Dra. Iryani, M.Si., and Team
Language:	Bahasa Indonesia
Classification within the curriculum:	Faculty compulsory course
Teaching format / class hours per week during the semester:	<p>Teaching format:</p> <ul style="list-style-type: none"> • Lectures (face to face activities: Presentation, question and answer, discussion, problem solving) • structured assignment • Independent activities • practice (simulations and demonstrations) <p>4 x 170 minutes = 680 minutes = 11.3 hours</p>
Workload:	<p>16 weeks per semester include midterm exam and final exam consisting of:</p> <ul style="list-style-type: none"> • 2.5 hours lectures (3 x 50 minutes) per week, • 3 hours structured assignments (3x 60 minutes) per week, • 3 hours independent activities (3 x 60 minutes) per week • 2.83 hours Practice (1 x 170 minute) per week <p>16 x 170 x 4 = 10880 minute = 181.3 hours = 6.04 ECTS</p>
Credit points:	4 SKS (6.04 ECTS)
Prerequisite's course(s):	-

Course outcomes:	<p>After taking this course the students have ability to:</p> <p>CO1: Work creatively, innovatively, collaboratively, conscientiously and responsibly and sensitive to change</p> <p>CO2: Master theoretical concepts regarding the aspects of the structure, properties, dynamics and energy of both living and non-living materials</p>
Content:	<p>This course discusses:</p> <ol style="list-style-type: none"> 1. Atomic structure 2. The Periodic System of the Elements 3. Basic Chemical Laws 4. Gas Laws 5. Ionic Bonds 6. Bonds 7. Covalent 8. Nomenclature of Chemical Compounds 9. Metal Bonds and Intermolecular Interactions 10. Stoichiometry 11. Chemical Energetics 12. Chemical Kinetics and Forms Substance
Study/exam achievements:	<p>Total score= (30% x midterm Exam Score) + (30% x final Exam Score) + (20% x Assignment: Paper, Project is like tracing theory, looking for problem example, etc.) + (20% x practice)</p> <p>The initial cut - off points for grades A, A-, B+, B, B-, C+, C, C-, and D should not be less than 85, 80, 75, 70, 65, 60, 55, 50, and 40 out of 100 respectively.</p> <p>Explanation:</p> <ol style="list-style-type: none"> 1. Midterm Exam <ul style="list-style-type: none"> ✓ Midterm Exam will be conducted in the 9th meeting . ✓ Midterm Exam is in the form of a written test (essay) and will be conducted in the classroom. ✓ The time allocation is 120 minutes according to the module schedule. 2. Final Exam <ul style="list-style-type: none"> ✓ Final Exam will be conducted in the 16th meeting. ✓ Final Exam is in the form of a written test (essay) and will be conducted in the classroom. ✓ The time allocation is 120 minutes which follows the Final Exam schedule. 3. Assignment <ul style="list-style-type: none"> ✓ Presentations: the participants of the module will be divided into several small groups. Each of the groups will assign to particular topic related to the learning content of Basic Social Culture. The students should discuss the topic, prepare the paper and conduct a class presentation. ✓ Report: Students summarize the learning content and write a report. 4. Affective Assessment <ul style="list-style-type: none"> ✓ Affective asesment is held in every meeting by observing students' attitude in the classroom. ✓ The assesment is based on the observation sheet by

	using the given scoring rubrics
Forms of media:	Power Point, e-book, laptop, projector
Literature:	<ol style="list-style-type: none"> 1. Jespersen, Neil D., James E. Brady, dan Alison Hyslop. (2012). <i>Chemistry the Molecular Nature of Matter</i>. New York, USA: John Willey & Sons. 2. Tim Kimia Dasar FMIPA UNP. (2018). <i>Penuntun Praktikum Kimia Umum</i>. Padang: FMIPA Universitas Negeri Padang 3. Sastrohamidjojo, Hardjono. (2012). <i>Kimia Dasar</i>. Yogyakarta: Gadjah Mada Press. 4. Kuchel, Phillip W. (2007). <i>Schaum's Easy Outline</i>. Jakarta: Erlangga. 5. Syarifuddin, Nuraaini. (2002). <i>Ikatan Kimia</i>. Jakarta: Universitas Terbuka.

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11
CO1					✓					✓	
CO2					✓					✓	