



Course Specifications

Course Title:	General Chemistry
Course Code:	1003-103
Program:	N/A
Department:	Basic Science
College:	Dean of Preparatory Year & Supportive Studies
Institution:	Northern Border University

Table of Contents

A. Course Identification	3
6. Mode of Instruction (mark all that apply)	3
B. Course Objectives and Learning Outcomes	3
1. Course Description	3
2. Course Main Objective.....	4
3. Course Learning Outcomes	4
C. Course Content	4
D. Teaching and Assessment	4
1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods	4
2. Assessment Tasks for Students	5
E. Student Academic Counseling and Support	5
F. Learning Resources and Facilities	5
1. Learning Resources	5
2. Facilities Required.....	6
G. Course Quality Evaluation	6
H. Specification Approval Data	6

A. Course Identification

1. Credit hours:
2. Course type
a. University <input checked="" type="checkbox"/> College <input type="checkbox"/> Department <input type="checkbox"/> Others <input type="checkbox"/>
b. Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
3. Level/year at which this course is offered:
4. Pre-requisites for this course (if any): N/A
5. Co-requisites for this course (if any): N/A

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	3	100%
2	Blended		
3	E-learning		
4	Correspondence		
5	Other		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	Lecture	45
2	Laboratory/Studio	
3	Tutorial	
4	Others (specify)	
	Total	45
Other Learning Hours*		
1	Study	45
2	Assignments	25
3	Library	25
4	Projects/Research Essays/Theses	10
5	Others (specify)	
	Total	105

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

This course is an introductory to chemistry course. The course covers the Properties of Gases, Pressure of Gases and its Units, Gas Laws, Standard Temperature and Pressure "STP", Gas Density, Dalton's law of Partial Pressure and Mole Fraction (X).

2. Course Main Objective

This Course aims to learn and understand the Units of Measurement, Structure of Atoms, Isotopes, Periodic table, Molecules and Ions, Chemical Formulas and Naming compounds and Dalton's Atomic Theory

3. Course Learning Outcomes

CLOs		Aligned PLOs
1	Knowledge:	
1.1	Understand the fundamentals of numerous chemistry branches (organic, inorganic, physical, analytical, and biochemistry).	N/A
1.2	Compare the major concepts, theoretical principles, and experimental findings in chemistry.	N/A
1...		N/A
2	Skills:	
2.1	Differentiate between the different substances in terms of their intrinsic properties.	N/A
2.2	Extend the differences between the chemical and physical properties of materials.	N/A
2...		N/A
3	Competence:	
3.1	Link some natural phenomena in daily life with material properties.	N/A
3...		N/A

C. Course Content

No	List of Topics	Contact Hours
1	Introduction Chapter 1 (Molecules, Atoms, Formulas)	3
2	Chapter 2 (Stoichiometry)	6
3	Chapter 3 (Gases)	6
4	Chapter 4 (Atomic structure)	6
5	Chapter 5 (Periodic table and bonding)	6
6	Chapter 6 (Equilibrium)	6
7	Chapter 7 (Ionic equilibrium)	6
8	Chapter 8 (Organic chemistry and biochemistry)	6
Total		45

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge		
1.1	Understand the fundamentals of numerous chemistry branches (organic, inorganic, physical, analytical, and biochemistry).	Lectures	Assignments, Worksheet, Midterm exam, Final exam.

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.2	Compare the major concepts, theoretical principles, and experimental findings in chemistry.	Lectures, Self-learning worksheet	Quizzes, Assignments
2.0	Skills		
2.1	Differentiate between the different substances in terms of their intrinsic properties.	Lectures Self learning	Assignments, Worksheet
2.2	Extend the differences between the chemical and physical properties of materials.	Open discussions. Group work	Quizzes, Small project
3.0	Competence		
3.1	Link some natural phenomena in daily life with material properties.	Lectures, Self-learning	Assignments, Worksheet

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes	5,7,12,14	20%
2	Midterm	8	25%
3	Final Test	16	40%
4	Assignments	Every week	10%
5	Activities	Every week	5%

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice:

Office Hours (6 office hours/ week.)

Academic Advisor for Students

Blackboard Forum

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	Chemistry for Preparatory Year Students
Essential References Materials	Ebbing, D., & Gammon, S. D. (2016). General chemistry. Cengage Learning. Masterton, W. L., & Hurley, C. N. (2015). Chemistry: principles and reactions. Cengage Learning.
Electronic Materials	Blackboard
Other Learning Materials	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classroom enough for 50 students, Black (white) boards. Projector
Technology Resources (AV, data show, Smart Board, software, etc.)	Blackboard system
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	---

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Students evaluation in each semester	Teacher	Direct
Meeting with students	Students, Faculty, Program Leader	Direct, Indirect
e-suggestions	Students, Faculty, Program Leader	Direct, Indirect
Open door policy	Students, Faculty, Program Leader	Direct, Indirect

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Basic Sciences Department - Dean of Preparatory Year & Supportive Studies
Reference No.	2 nd
Date	23-07-1443 H