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

1. Credit hours:
2. Course type **a.** University [√] College [ ] Department [ ] Others [ ] **b.** Required [√] Elective [ ]
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**	20
3	**Library**	15
4	**Projects/Research Essays/Theses**	10
5	**Others** (specify)	---
	Total	90

* 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 introduction 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 targets 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	Define the properties of Gases, Pressure of Gases and its Units.	N/A
1.2	Recognize the concept of equilibrium, the law of Mass Action and the equilibrium constant.	N/A
1.3	Memorize Periodic Table, Periodic properties of elements, Compounds and chemical bonding.	N/A
1...		N/A
2	**Skills :**	
2.1	Develop skills of the perception, comprehension.	N/A
2.2	Construct skills of critical and analytical thinking of chemistry concepts.	N/A
2.3	Summarize the main ideas contained in the lessons.	N/A
2...		N/A
3	**Competence:**	
3.1	Gain student notice some natural phenomena in daily life.	N/A
3.2	Compare and derive the result.	N/A
3.3	Criticize with others via comments and explanations.	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	Define the properties of Gases, Pressure of Gases and its Units.	Lectures	Assignments, Worksheet
1.2	Recognize the concept of equilibrium, the law of Mass Action and the equilibrium constant.	Lectures, Self-learning worksheet	Quizzes, Assignments
1.3	Memorize Periodic Table, Periodic properties of elements, Compounds and chemical bonding.	Lectures	Quizzes, Assignments
2.0	**Skills**		
2.1	Develop skills of the perception, comprehension.	Lectures Self learning	Assignments, Worksheet
2.2	Construct skills of critical and analytical	Open discussions. Group	Quizzes, Small project

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	thinking of chemistry concepts.	work	
2.3	Summarize the main ideas contained in the lcssons.	Lectures, Self-learning	Assignments, Worksheet
3.0	**Competence**		
3.1	Gain student notice some natural phenomena in daily life.	Lectures	Assignments, Worksheet
3.2	Compare and derive the result.	Lectures worksheet	Quizzes, Assignments
3.3	Criticize with others via comments and explanations.	Self-learning	Assignments, Worksheet

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Quizzes (Blackboard)	5,7,12,14	20%
2	Midterm (Blackboard)	8	25%
3	Final Test (Blackboard)	15	40%
4	Assignments	2,4,7,9,11, 13,15	5%
5	Activities & Participation	Every week	10%

***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	**1-** Chemistry: 9th ed. by R. CHANG; McGraw-Hill, 2008 **2-** Chemistry: Principals and Reactions (6 ed.), by W. L. Masteron and C. N. Hurely; BROOKS/COLE Gengage Learning, 2007
Electronic Materials	Blackbord
Other Learning Materials	N/A

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)	N/A

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	Supervisor of Basic Sciences Department/ Dean of Preparatory Year & Supportive Studies
Reference No.	10th
Date	10-09-1440 H