هيئة تقويم التعليم
Education Evaluation Commission
المركز الوطني للتقويم والاعتماد الأكاديمي
National Center for Academic Accreditation and Evaluation

ATTACHMENT 5.

T6. COURSE SPECIFICATIONS (CS)

هيئة تقويم التعليم
Education Evaluation Commission

Course Specifications

Institution: Gazan university	Date: 1-11-2017
College/Department : Architecture and design/ General Courses	

A. Course Identification and General Information

1. Course title and code: General Chemistry, Chem 101
2. Credit hours: 4 and 5 contact hours (3 lecture, 2 prac.)
3. Program(s) in which the course is offered.
Architecture Interior Design- Applied arts
4. Name of faculty member responsible for the course
Dr. Eng. Zeinab Abdel Wahab Ahmed
5. Level/year at which this course is offered: Level 2
6. Pre-requisites for this course: –
7. Co-requisites for this course: –
8. Location if not on main campus:
9. Mode of Instruction (mark all that apply):

a. traditional classroom	√	What percentage?	100%
b. blended (traditional and online)		What percentage?	
c. e-learning		What percentage?	
d. correspondence		What percentage?	
f. other		What percentage?	

Comments:

B Objectives

1. What is the main purpose for this course?
The student will be able to:

1. Describe and define the three states of matter, general properties of gases; define, apply, and carry out calculations using Boyle's, Charles', combined, and ideal gas laws, Avogadro's hypothesis; carry out calculations related to Dalton's Law of Partial Pressures, and gas diffusion.
2.Describe and define properties of liquids; define rate of evaporation, intermolecular forces within a liquid, wetting phenomenon and phase changes.
3.Describe the chemical reaction; distinguish between reversible and irreversible reactions; define homogenous and heterogeneous reactions; define and apply law of mass action, determine equilibrium constant. Define Le Chatelier's principle and factors affecting equilibrium
4.Describe the ionic equilibrium; define and discuss electrolyte, ionic product for water. Define and determine PH and POH values; describe and define Buffer, Indicators, Hydrolysis and Solubility.
5. Describe and define atomic theories, atomic structure; define and determine atomic and mass numbers, and isotopes; organize elements in the Periodic Table; write electron configurations, Hund's Rule and Aufbau principle.
6.Describe the Periodic table; periodic law and organization of table; describe Alkali metals, Alkaline earth metals, Halogens, Noble gases, Transition metals, metals and non-metals; define ionization energy, electron affinity and electronegativity; describe electron shell and size of atoms.
7.Describe the chemical bonds, covalent bonds, ionic bonds, metallic bonding and hydrogen bonding.
8.Define hydrocarbons, Alkanes Alkenes, alkynes, carbon rings; describe Aldehydes, Ketones, fatty acids, esters.

2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)
-The course contents will be periodically reviewed by the instructors.
- Use of Virtual Learning Environment (VLE)
- Use of Web-based references and increased use if IT.

C. Course Description (Note: General description in the form used in Bulletin or handbook)

Course Description:

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Introduction, Gases	2	6
Properties of Liquids	1	3
Chemical equilibrium	1	4
Ionic equilibrium	1	4
Atomic Structure	2	6
Periodic Table	2	6
Chemical bonds	2	4
Introduction to organic chemistry	2	6

2. Course components (total contact hours and credits per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other:	Total
Contact Hours	Planed	39			26		65
	Actual	39			26		65
Credit	Planed	39			13		52
	Actual	39			13		52

3. Additional private study/learning hours expected for students per week.
Students should spend 1 hr / week VLE (14 hr / semester)

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	This course outline good foundation in chemical knowledge that allows the students to recognize qualitative and quantitative inquiries into topics in natural science.	- Lectures - Tutorial discussions - Laboratory practice (conducting experiments and writing reports)	- Midterm exams - Evaluation of lab reports - Final Exam
2.0	**Cognitive Skills**		
2.1	1-Students will be able to analyze scientific concepts and think critically	- Lectures	- Major and final exams
2.2	2- utilize the methods of science as a logical means of problem solving.	- Problem solving in the tutorial - Homework assignments	- Checking the problems solved in the homework assignments - Discussion of students in the research.
3.0	**Interpersonal Skills & Responsibility**		
3.1	Punctual attendance of classes and tutorials	- Conducting group experiments and	- Laboratory exams

		writing group reports	
3.2	Work independently and as part of a team.	- Participation of students in classroom discussion	- Assessment of the laboratory reports
4.0	**Communication, Information Technology, Numerical**		
4.1	- Use of computer reports writing	- Writing laboratory reports - Incorporating the use and utilization of computer in the course requirements	-Evaluating the laboratory written reports
5.0	**Psychomotor**		
5.1	Not applicable		

5. Schedule of Assessment Tasks for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	1st midterm exam	6	10%
2	2nd midterm exam	12	10%
3	Participation		10%
4	Laboratory exam	13	20%
5	Final exam		50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week) Office hours: 26 hrs/week

E Learning Resources

1. List Required Textbooks Text book: Atkins, P. and Paula J. "The Elements of Physical Chemistry" 2005
2. List Essential References Materials (Journals, Reports, etc.)
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc. Websites on the internet that are relevant to the topics of the course
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) 1- Lecture room with 60 seats. 2- Chemistry lab with 30 seats.
2. Technology resources (AV, data show, Smart Board, software, etc.) 1- Computer 2- Scientific calculator
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

G Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching 1- Course evaluation by student. 2- Meeting with students
2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department 1- Self-evaluation. 2- Annual review. 3- Departmental council discussions.
3. Processes for Improvement of Teaching 1- Periodical departmental revisions of its methods of teaching. 2- Monitoring of teaching activates by senior faculty members
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) Taking a sample of assignments and exams to determine validity and reliability.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. 1- Collecting all reports and evaluations at the end of the year for a reviewing purpose 2- The course material and learning outcome are periodically reviewed and made the necessary change

Name of Course Instructor: _____ Zienab Abd El whab Ahmed
Signature: _____ Date Specification Completed: 1-11-2017
Program Coordinator: _____

Signature: _____ Date Received: _____