	SULTAN QABOOS UNIVERSITY **COLLEGE OF SCIENCE** **BACHELOR OF SCIENCE IN CHEMISTRY** **COURSE OUTLINE**	

I. COURSE INFORMATION			
COURSE CODE	CHEM1100		
COURSE TITLE	**EVERYDAY CHEMISTRY**		
OMAN QUALIFICATION FRAMEWORK (OQF) LEVEL	**5**		
CREDIT HOURS	2		
CONTACT HOURS	2		
PRE-REQUISITES			
CO-REQUISITES			
EQUIVALENT COURSES			
INCOMPATIBLE COURSES			
COURSE CATEGORY	☐ University Requirement	☒ University Elective	
	☐ College Requirement	☐ College Elective	
	☐ Department Requirement	☐ Department Elective	
	☐ Specialization Requirement	☐ Specialization Elective	
	☐ Other (specify): Major Requirement		
COURSE OWNER	College: Science	Department: Chemistry	
	Center:	Unit:	
DELIVERY MODE	☐ Face to Face	☐ Blended	☒ Online
COURSE TYPE	☒ Lecture	☐ Lecture//Lab	
	☐ Lecture/Seminar	☐ Lecture/Studio	
	☐ Lecture /Tutorial	☐ Lecture/Lab/Tutorial or Seminar	
	☐ Tutorial	☐ Laboratory (Practical)	
	☐ Field or Work Placement	☐ Studio	

	☐ Seminar	☐ Internship	
	☐ Workshop	☐ Project	
	☐ Thesis	☐ Other (specify):	
LANGUAGE OF INSTRUCTION	Arabic		
COURSE DESCRIPTION	This course is designed to give an insight into the chemistry that is all around us and affects our daily lives. No previous knowledge of chemistry is necessary. Contents include atoms, molecules and bonding, nuclear chemistry, energy, hydrocarbons and petroleum, soaps and detergents, pollution, food, carbohydrates, proteins and fats, minerals and vitamins, polymers and plastics, cosmetics, medicine and drugs		
TEACHING AND LEARNING STRATEGIES	☐ Augmented Reality	☐ Flipped Classroom	
	☒Blended Learning	☐Problem-Based Learning	
	☐ Discovery-Based Learning	☐ Project-Based Learning	
	☐ Student-Led Learning	☐ Team-Based Learning	
	☐ Work-Based Learning	☐ Other (specify):	
ASSESSMENT COMPONENT AND WEIGHT	☒ In-term exams (s) (50%)	☐ Quizzes (%)	☐ Other (specify): (%)
	☐ Homework (5%)	☐ Project (%)	
	☒Final examination (50%)	☐ Practical/ Lab (%)	
TEXTBOOKS AND EDUCATIONAL MATERIAL	Lecture notes, presentations available through Moodle. Chemistry in context, Applying Chemistry to Society		
GRADING METHOD	☒ A-F Scale	☐ Pass/Not Pass	☐ Other (specify):

GRADING METHOD DESCRIPTION

	Range	Letter Grade	Description
A-F GRADING SCALE:	>90	A	**Exceptional performance:** All course objectives achieved and met in a consistently outstanding manner.
	86-90	A-	
	81-86	B+	**Very Good Performance:** The majority of the course objectives achieved (majority being at least two-thirds) and met in a consistently thorough manner.
	77-81	B	
	73-77	B-	
	68-73	C+	**Satisfactory Performance:** At least most of course objectives have been achieved and met satisfactorily
	64-68	C	
	60-64	C-	

	55-60	D+	**Minimally Acceptable Performance:** The course objectives met at a minimally acceptable level.
	50-55	D	
	<50	F	**Unacceptable performance:** The course objectives not met at a minimally acceptable level.
PASS/NOT PASS:			
OTHER:			

II. SEMESTER INFORMATION			
SEMESTER/YEAR	Fall	**SECTION(S)**	One
DAY AND TIME	Online	**VENUE(S)**	Online
COURSE COORDINATOR	Sultan Al Saadi	**COURSE TEAM**	The Coordinator
COORDINATOR OFFICE		**OFFICE HOURS**	Monday/Wednesday 10:00-11:00
COORDINATOR EXTENSION	2347	**COORDINATOR EMAIL**	Oman55@squ.edu.om

III. ALIGNMENT OF COURSE LEARNING OUTCOMES (CLO), PROGRAM LEARNING OUTCOMES (PLO), GRADUATE ATTRIBUTES (GA), AND OMAN QUALIFICATION FRAMEWORK (OQF) CHARACTERISTICS			
CLO	**PLO**	**SQU GA**	**OQF CHARACTERISTICS (LEVEL)**
1. Recognize the how the physical and chemical properties of water and air effect essential life processes	**1** **2**	**A** **B**	**1(5))**
2. Associate chemical potential energy with the process of combustion	**1** **2**	**A** **E**	**1(5)** **2(5)** **3(5)**
3. Recognize how the food we eat provides the energy and essential chemicals needed for health	**5**	**B** **E**	**1(5)** **2(5)**
4. Classify everyday plastics and polymers by their physical properties and associated chemical composition.	**1** **2**	**B** **E** **F**	**2(5)** **3(5)**
5. Recognize the role of chemicals in cosmetics	**1** **2**	**B** **E**	**2(5)** **3(5)**

		F	
6.			
7.			
8.			

IV. COURSE LEARNING OUTCOMES (CLOS) AND ASSESSMENT CRITERIA AND METHODS (FOR EACH CLO)		
CLO1: Recognize the how the physical and chemical properties of water and air effect essential life processes		
ASSESSMENT CRITERIA (TO ACHIEVE THIS OBJECTIVE, THE STUDENT MUST)		**ASSESSMENT METHODS**
A)	Recognize the how the physical and chemical properties of water make it essential for life	Mid Term exam, Final Exam
B)	Recognize the how the physical and chemical properties of air make it essential for life and how this is effected by pollutants	Mid Term exam, Final Exam
C)		
CLO2: Associate chemical potential energy with the process of combustion		
ASSESSMENT CRITERIA (TO ACHIEVE THIS OBJECTIVE, THE STUDENT MUST)		**ASSESSMENT METHODS**
A)	Describe the flow of energy during combustion of fuels	Mid Term exam, Final Exam
B)	Evaluate the potential of a fuel based on its chemical composition	Mid Term exam, Final Exam
C)		
CLO3: Recognize how the food we eat provides the energy and essential chemicals needed for health		
ASSESSMENT CRITERIA (TO ACHIEVE THIS OBJECTIVE, THE STUDENT MUST)		**ASSESSMENT METHODS**
A)	Describe how the bodies energy requirements are met by the food we eat	Mid Term exam, Final Exam
B)	Associate nutritional needs with food groups	Mid Term exam, Final Exam
C)	Recognize the harmful effects of poor nutrition	
CLO4: Classify everyday plastics and polymers by their physical properties and associated chemical composition		
ASSESSMENT CRITERIA (TO ACHIEVE THIS OBJECTIVE, THE STUDENT MUST)		**ASSESSMENT METHODS**
A)	Classify everyday plastics and polymers by their physical properties	Mid Term exam Final Exam

B)	Classify everyday plastics and polymers by their chemical composition	Mid Term exam Final Exam
C)		
CLO5: Recognize the role of chemicals in cosmetics		
ASSESSMENT CRITERIA (TO ACHIEVE THIS OBJECTIVE, THE STUDENT MUST)		**ASSESSMENT METHODS**
A)	Associate cosmetic properties with their chemical ingredients	Final Exam
B)	Discuss historical health hazards associated with chemicals in cosmetics	Final Exam
C)		
CLO6:		
ASSESSMENT CRITERIA (TO ACHIEVE THIS OBJECTIVE, THE STUDENT MUST)		**ASSESSMENT METHODS**
A)		
B)		
C)		

V. COURSE CONTENT AND SCHEDULE

WEEK	LECTURES #	TOPICS/ SUBJECTS	READINGS/ CHAPTERS	REMARKS (e.g., ASSESSMENTS)
1	1	Introduction	Course outline	
2	2	The air we breath	Presentation slides	
3	3	Water for Life	Presentation slides	
4	4	Energy from combustion - I	Presentation slides	
5	5	Energy from combustion - II	Presentation slides	
6	6			MidSemester Test 1
7	7	Health & medicine	Presentation slides	
8	8	Nutrition - .	Presentation slides	
9	9	Nutrition - II	Presentation slides	
10	10			MidSemester Test 2
11	11	The world if polymers	Presentation slides	

		and plastics - I		
12	12	The world if polymers and plastics - II	Presentation slides	
13	13	Cosmetics	Presentation slides	
14	14	Review	Presentation slides	
15	15			Final Exam
16				

VI. ADDITIONAL INFORMATION (e.g., RUBRICS, etc.)

VII. STUDENTS RESPONSIBILITIES	
It is the student's responsibility to know and comply with all University Academic Regulations relevant to participation in this course. These regulations specifically include attendance requirements and student academic code of conduct.	
ACADEMIC INTEGRITY	The University expects the students to approach their academic endeavors with the highest academic integrity. Please refer to the **Undergraduate Academic Regulations**.
ADD AND DROP	Students who wish to drop or add the course should review the **Undergraduate Academic Regulations**.
ATTENDANCE	Sultan Qaboos University has a clear requirement for students to attend courses, detailed in the **Undergraduate Academic Regulations**.
ASSESSMENT AND GRADING	To ensure the provision of a sound and fair assessment and grading, please review the **Undergraduate Academic Regulations**.
GRADE APPEAL	Students who wish to appeal their grades should review the **Undergraduate Academic Regulations**.
CLASSROOM POLICIES	Students are expected to dress professionally during class time as required by the University. Use of phones or any other electronic devices in the classroom during class time is strictly prohibited. Unauthorized use may lead to faculty member confiscation of the device for the remainder of the class. Behavior that persistently or grossly interferes with classroom activities is considered disruptive behavior and may be subject to disciplinary action. A student responsible for disruptive behavior may be required to leave the class.

LATE AND MAKE-UP WORK	Students are required to meet the course objectives by submitting coursework no later than the assigned due date. Students may be allowed to submit late work if approved by the course coordinator. Assignments submitted after the due date may be penalized.
MISSED EVALUATIONS	All quizzes, tests, clinical evaluations, and exams must be completed by the date they are assigned. If a quiz, test, or exam is missed due to a documented emergency situation (e.g., medical emergency, death in the immediate family), it is the student's responsibility to contact the instructor. Make-up exams will not be given for assessment criteria less than 25% of the course grade, but marks will be normalized over the other assessment components for students with valid proof of emergency situation (e.g. medical sick leave)
OTHER	

Course Outline Appendix

1. PROGRAM LEARNING OUTCOMES

1. Demonstrate factual knowledge of chemistry
2. Assimilate new information into existing knowledge
3. Integrate knowledge in problem-solving, critical thinking, and analytical reasoning.
4. Appraise time requirements for assigned tasks, and manage time appropriately
5. Work within a team
6. Use modern instrumentation and techniques to conduct experiments following established procedures
7. Use and dispose of chemicals safely following appropriate procedures and regulations
8. Employ efficient use of computers for data acquisition and analysis
9. Use information sources to retrieve chemical information
10. Formulate hypothesis, design, and perform experiments
11. Communicate chemical information to specialist and non-specialist audience

2. SQU Graduate Attributes and Competencies for Undergraduate Studies

GRADUATE ATTRIBUTES	GRADUATE COMPETENCIES FOR UNDERGRADUATE STUDIES
A. Cognitive Capabilities: The graduate has sufficient general and specialized theoretical knowledge that enables him/her to deal well with his/her specialty and other related fields.	1. Demonstrates familiarity and works with advanced specialized knowledge in the area of specialization.
	2. Demonstrates a general understanding of the relationship of advanced specialized knowledge with knowledge in other relevant professional fields and aspects.
	3. Demonstrates a comprehensive understanding of the theories, principles, and methods used in his/her specialty, and how to create and apply new knowledge.
	4. Demonstrates general knowledge of the legal environment and necessary relevant regulatory

	frameworks.
	5. Shows awareness of contemporary literature and research.
B. Skill and Professional Capability: The graduate has sufficient skill and practical experience that enables him/her to perform all tasks related to the specialization and other related fields.	1. Applies concepts, theories, and investigative methods to synthesize and interpret information to evaluate conclusions.
	2. Applies appropriate research methods and techniques and employs digital knowledge
	3. Evaluates and critiques information independently
	4. Uses cognitive and technical skills to analyze complex issues and develop appropriate solutions.
	5. Initiates new ideas or processes in the professional, educational or research context.
C. Effective Communication: The graduate has the ability to communicate effectively with others to achieve the desired results	1. Explains, presents, and adapts information to suit the recipients.
	2. Employs appropriate information and communication technology to collect and analyze information.
D. Autonomy and Leadership: The graduate has the ability to lead, make decisions and take responsibility for decisions.	1. Performs advanced professional activities independently.
	2. Demonstrates leadership skills.
	3. Takes professional responsibility.
	4. Assumes full accountability for the tasks and their output.
E. Responsibility and Commitment: The graduate appreciates the importance of available resources and deals with them effectively and is committed to the ethics of the profession and society.	1. Manages time and other resources assigned to accomplishing tasks effectively and responsibly.
	2. Demonstrates effective practices when working in teams.
	3. Demonstrates advanced levels of understanding of values and ethics relevant to the specialization, profession and local and international society and

	promotes them among others.
	4. Works within the professional, institutional, and specialization guiding frameworks and strategic plans.
	5. Interacts with community affairs positively and preserves national identity.
F. Development and Innovation: The graduate has a passion for development and innovation in the field of specialization.	1. Demonstrates the ability to independently manage learning tasks, with an awareness of how to develop and apply new knowledge.
	2. Utilizes specialized knowledge and skills for entrepreneurship.
	3. Utilizes creative and innovative skills in the field of specialization.

3. OQF Characteristics

1. Knowledge
2. Skills
3. Communication, Numeracy, and Information and Communication Technology Skills.
4. Autonomy and Responsibility
5. Employability and Values
6. Learning to learn