

	<b>Course name:</b> CHEM101 General Chemistry		<b>Department:</b> Electrical and Electronics Engineering			Semester 1	
	Methods of Education						Credit (ECTS)
	Lecture	Study Time	Quiz	Project	Exam (incl. Prep.)	Total	5
	42	68	20	0	20	150	
Language	English						
Compulsory/Elective	Compulsory						
Prerequisites	None						
Course Contents	Matter-Its Properties and Measurement; Atoms and Atomic Theory; Chemical Compounds; Chemical Reactions; Introduction to Reactions in Aqueous Solutions; Gases; Thermochemistry; Electrons in Atoms; Chemical Bonding; Liquids, Solids and Intermolecular Forces; Solutions and Their Physical Properties; Chemical Kinetics						
Course Objective	The scope of this course is to teach the fundamental concepts to understand the chemical principles and chemical reactions. Students who completed this course are expected to understand the chemical concepts they would face in their future professional life by using their basic chemistry knowledge.						
Learning Outcomes and Competences	<ol style="list-style-type: none"> <li>1. Understanding the structure and the properties of the matter at the atomic level</li> <li>2. Developing the skill to understand and solve problems using chemical principles</li> <li>3. Recording the measurements based on the sensitivity of the apparatus</li> <li>4. Learning and remembering the names of the chemicals, students will encounter in their professions.</li> <li>5. Understanding the properties and the reactions of the compounds using the basic knowledge on molecular structure</li> <li>6. Understanding the chemical properties of the materials and how these properties affect our daily life</li> <li>7. Understanding the theory of the rates of the reactions and how these rates depend on different variables</li> <li>8. Gaining the basic knowledge about chemical materials they will need in their engineering application</li> </ol>						
Textbook and /or References	<p><b>Main Textbooks:</b></p> <ol style="list-style-type: none"> <li>1. Petrucci P. H., Harwood W. S., Herring G. E., Madura J., 2006. General Chemistry: Principles and Modern Applications, 9<sup>th</sup> Edition, Prentice Hall. (in English)</li> <li>2. Brown T. E, LeMay H. E., Bursten B. E., Murphy C., Woodward P., 2011. Chemistry: The Central Science with Mastering Chemistry, 12<sup>th</sup> Edition, Prentice Hall. (in English)</li> </ol>						
Assessment Criteria				If any, mark as (X)	Percentage (%)		
	Midterm Exams			X	40		
	Quizzes						
	Homework						
	Projects						
	Laboratory work						
	Other						
Final Exam			X	60			
Instructors							
<b>Weekly Schedule</b>							
<b>Week</b>	<b>Subject</b>						
1	Matter-Its Properties and Measurement						
2	Atoms and Atomic Theory						
3	Chemical Compounds						
4	Chemical Reactions						
5	Chemical Reactions, Introduction to Reactions in Aqueous Solutions						
6	Gases						
7	Gases, Thermochemistry						
8	Thermochemistry						
9	<b>Mid-term Exam</b>						
10	Electrons in Atoms						
11	Chemical Bonding 1						
12	Chemical Bonding 2						

13	Liquids, Solids and Intermolecular Forces
14	Liquids, Solids and Intermolecular Forces, Solutions and Their Physical Properties
15	Solutions and Their Physical Properties