

A brief Course Description :

Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			
Course Objectives:			
Course Name: Organic Chemistry (1)			
Course Code	CHEM 141T		

A brief Course Description :

College	Science College		
Department/ Program	Chemistry / Chemistry		
Year / Level:	2^{ed} level /1st year		
Credit Hours	4 (3 + 1)		
Contact Hours	Lecture:45	Lab/Tutorial:30	Training:
Language	English		
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 101T		
Co-Requests:	-		
Course Objectives:	<p>The aims of course is to give a good, grounding in the basics of Hydrocarbon compounds and aromatic compounds .The general concept of the practical part of course is to train students the fundamental laboratory skills.</p>		
Course Name: General Chemistry (2)			
Course Code	CHEM102T		
College	Science		
Department/ Program	Chemistry / Chemistry		
Year / Level:	2^{ed} level /1st year		
Credit Hours	3 (2 +2)		

A brief Course Description :

Contact Hours	Lecture: 45	Lab/Tutorial:30	Training:
Language	English		
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 101T		
Co-Requests:	-		
Course Objectives:	<ul style="list-style-type: none"> - Understanding the bond theories - Applying lous structure and covalent bond theory- -Describing common characteristics of elements in each of the main groups of periodic table. 		
Course Name: Thermodynamic			
Course Code	CHEM-211T		
College	Science		
Department/ Program	Chemistry / Chemistry		
Year / Level:	2st year /3rd level		
Credit Hours	3(2+1)		
Contact Hours	Lecture: 30	Lab/Tutorial:26	Training:
Language	English		

A brief Course Description :

Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 101T		
Co-Requests:	-		
Course Objectives:	<p>The aim of this course is Linking the foundations of thermodynamics and energy types and their impact on chemical reactions ,chemical systems and their equilibrium.</p>		
Course Name: Training in scientific research skills			
Course Code	CHEM.291 T		
College	Science		
Department/ Program			
Year / Level:	3 th /2d year		
Credit Hours	2		
Contact Hours	Lecture:30	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		

A brief Course Description :

Pre-requisites Course:			
Co-Requests:	-		
Course Objectives:	<p>This course aims is training, qualifying and raising the student's efficiency in the scientific, research and applied fields related to the labor market through the development of personal skills, communication and research skills and the use of modern techniques and devices in the field of specialization and modern statistical and analytical programs</p>		
Course Name: Organic Chemistry (2)			
Course Code	CHEM 242T		
College			
Department/ Program			
Year / Level:	3rd /2nd year		
Credit Hours	4(3+2+0)		
Contact Hours	Lecture: 45	Lab/Tutorial:26	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 101T		
Co-Requests:	-		

A brief Course Description :

Course Objectives:	<p>Determine the nomenclature and chemical and physical properties of some organic families such :Alkyl halides - Alcohols and ethers and epoxides – Phenols - Aldehydes and ketones - Carboxylic acids and its derivatives - Chemistry of Polycyclic aromatic compounds –Amines</p> <p>- Applications and uses of organic compounds .</p> <p>- Use the tools and equipment efficiently and appreciates the appropriate measurements and weights.</p>		
Course Name: : Chemistry of Heterocyclic Compounds			
Course Code	CHEM 243T		
College			
Department/ Program			
Year / Level:	4th level/2ed year		
Credit Hours	2hrs.		
Contact Hours	Lecture:30	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 242T		
Co-Requests:	-		

A brief Course Description :

Course Objectives:	<p>Characterize the structural composition of the five-ringed compounds and the six-party Study the interactions of cyclic compounds five and six Use of naming methods for ring compounds Explanation of methods of preparation of the compounds ringed five and six Compared to the efficacy of the compounds heterocyclic unilateral and bilateral foreign corn exotic corn Explain the difference in effectiveness between the heterocyclic compounds the five-and six-party</p>		
Course Name: Advanced Organic Chemistry Lab			
Course Code	CHEM244T		
College			
Department/ Program			
Year / Level:	4th level/2th year		
Credit Hours	2 (0+4)		
Contact Hours	Lecture:0	Lab/Tutorial:60	Training:
Language	English		
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 242T		
Co-Requests:			

A brief Course Description :

Course Objectives:	This course contains advanced experiments in organic chemistry preparations including Applications in Green Chemistry, Natural Products and Synthesis and Properties of Some Polymers.		
Course Name: Phases of Matter and Solutions			
Course Code	CHEM212 T		
College			
Department/ Program			
Year / Level:	4th /2th year		
Credit Hours	2hrs.		
Contact Hours	Lecture:30	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 101 T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>-Understanding of the structure, types and properties of crystalline solid</p> <p>-Study of phase changes .</p> <p>-Practice the self-learning skills and continuous learning with the capacity for decision making</p>		
Course Name: Biochemistry			
Course Code	CHEM 251 T		
College			
Department/ Program			
Year / Level:			
Credit Hours	Organic chemistry (2) CHEM 242T		
Contact Hours	Lecture:30	Lab/Tutorial:15	Training:
Language	English		
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	Organic chemistry (2) CHEM 242T		
Co-Requests:	-		

A brief Course Description :

Course Objectives:	<p>The objective of this course is to introduce students to the principals of biochemistry and to let them understand the basic structures of body macromolecules such as proteins, nucleic acids, enzymes, carbohydrates and lipids.</p> <p>Also upon successful of this course, the student will be able to explain some of the blood diseases and vitamins deficiency diseases.</p>		
Course Name: Spectra of Organic Compounds			
Course Code	CHEM345T		
College			
Department/ Program			
Year / Level:	5th /3rd year		
Credit Hours	3 (3+0)hrs.		
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 243T		
Co-Requests:	-		

A brief Course Description :

Course Objectives:	<p>-Understanding the identification methods of structural formula of organic compounds</p> <p>- Explaining the structural formula for organic compounds using different spectroscopic methods</p>		
Course Name: Computational Chemistry			
Course Code	(0+2+1)hrs		
College			
Department/ Program			
Year / Level:	5th /3rd year		
Credit Hours			
Contact Hours	Lecture:0	Lab/Tutorial :30	Training: 15
Language	English		
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	Chem101T		
Co-Requests:	-		

A brief Course Description :

Course Objectives:	<p>-Use computer tools to help increase student understanding of subjects covered in other courses</p> <p>- Introducing the student to a wide range of theoretical topics and techniques in computational chemistry</p> <p>-Development of mathematical and computer skills, in addition to the theoretical basis for the use of software packages in chemistry</p> <p>-Enable the student to understand the theoretical side behind the use of chemistry software packages in the study of chemical phenomena</p>		
Course Name: Kinetic Chemistry			
Course Code	CHEM 313T		
College			
Department/ Program			
Year / Level:	5th /3rd year		
Credit Hours	3((2+ 2)		
Contact Hours	Lecture: 30	Lab/Tutorial:30	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 211T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>1. Identify the kinetic chemistry</p> <p>2. Comparing between rate interaction laws for different orders</p> <p>3. Distinguish between the various complex interactions.</p> <p>4. Recognize the reaction rate theories</p>		
Course Name: Quantitative Analysis			
Course Code	CHEM.331T		
College			
Department/ Program			
Year / Level:	5th /3rd year		
Credit Hours	4 (3 + 2+0)		
Contact Hours	Lecture:45	Lab/Tutorial:30	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM101T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>-recognize the basis of volumetric and gravimetric analysis. -train the student to conduct calibrations of all kinds. - to train students on the gravimetric experiments of all kinds.</p>		
Course Name: Surface Chemistry & Catalysis			
Course Code	CHEM316 T		
College			
Department/ Program			
Year / Level:	6th /3th year		
Credit Hours	4(2+2)		
Contact Hours	Lecture:30	Lab/Tutorial:60	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 313 T and CHEM 212T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>-Understanding of the core concepts of catalysis, surface chemistry and colloidal materials.</p> <p>-Study some of catalytic reaction and adsorption of solutions on solid surfaces experimentally.</p> <p>-Practice the self-learning skills and continuous learning with the capacity for decision making</p>		
Course Name: Chromatographic Separation Methods			
Course Code	CHEM 332T		
College			
Department/ Program			
Year / Level:	5Th 3rd		
Credit Hours	3 (2 +2 +0)		
Contact Hours	Lecture:30	Lab/Tutorial:15	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM331T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>-separation Excellence ways and solvent extraction. -Comparing the different separation theories. -Experimenting with methods of separation within the methods of solvent extraction. - Experimenting with methods of separation of organic compounds and inorganic ways within the separation Chromatograph.</p>		
Course Name: Green Chemistry			
Course Code			
College			
Department/ Program			
Year / Level:	6 th 3 rd		
Credit Hours	2hrs.		
Contact Hours	Lecture:2	Lab/Tutorial:0	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM243T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>-the student is expected to Determine the principles and concepts of green chemistry .</p> <p>-Resolve certain environmental problems related to industrial wastes.</p> <p>-Explain the problems related to green chemistry ad providing solutions through higher – order thinking skills, defining, analyzing and discussing the outputs and information.</p> <p>Use the tools and equipment efficiently and assess the proper measurements and weights.</p>		
Course Name: Quantum chemistry			
Course Code	CHEM 314 T		
College			
Department/ Program			
Year / Level:	6th /3 rd		
Credit Hours	2 (2+0+0)hrs.		
Contact Hours	Lecture:30	Lab/Tutorial:0	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 102 T& MaSc221		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>-compare between the classical mechanics and quantum mechanics</p> <p>-know the properties of the operators in quantum chemistry.</p> <p>-Properties of operators used in solving the Schrodinger equation.</p>		
Course Name: Electrochemistry			
Course Code	CHEM315(1) T		
College			
Department/ Program			
Year / Level:	3 rd /6 th		
Credit Hours	4 (3Th +2Pr+0)		
Contact Hours	Lecture:45	Lab/Tutorial: 26	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 101T & CHEM 211T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>Acquires an appropriate amount of scientific knowledge, principles, laws and chemical theories</p> <p>2 - develops mental skills related to electrical chemistry such as:</p> <ul style="list-style-type: none"> • Conclusion of some of the results based on theoretical and practical observations, and predicted the associated changes in matter and energy and its impact on life and biology. <p>3. Develops practical skills through conducting various experiments related to different chemical knowledge.</p> <p>4. Follow the safety rules and be careful and careful while working in the chemistry laboratory.</p> <p>5 - Acquires a scientific trend characterized by the capacity of the horizon, objectivity and rationality, and respect for the views of others, and accept the different views based on sound scientific evidence, and guided curiosity, humility, and scientific honesty.</p> <p>6- The effect of chemistry on the evolution of technology and its impact on the development of the society and its paper, by observing the applications of electrical chemistry and the interaction of society with them.</p> <p>7. Preserve the environment and natural resources</p>		
Course Name: Chemical Pollution and Industrial Safety			
Course Code	CHEM. 361 T		
College			
Department/ Program			
Year / Level:	3 rd / 6 th		
Credit Hours	2 (2+0+0)		
Contact Hours	Lecture:30	Lab/Tutorial:	Training:
Language			

A brief Course Description :

Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input checked="" type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM. 331 T		
Co-Requests:			
Course Objectives:	<p>Upon successful completion of this course, the student must be able to:</p> <p>Know the types of pollution and differentiate them.</p> <p>How to combat and analyze them.</p>		
Course Name: Industrial inorganic chemistry			
Course Code	CHEM. 371 T		
College			
Department/ Program			
Year / Level:	3 rd /6 th		
Credit Hours	2(2+0+0)		
Contact Hours	Lecture:30	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input checked="" type="checkbox"/> Elective Course		

A brief Course Description :

Pre-requisites Course:	CHEM 102T		
Co-Requests:			
Course Objectives:	<p>the importance of industrial inorganic chemistry and its classification.</p> <p>-Types of raw materials ,metals and their industrial compounds: silicones , Chlorine and sulfur industries compounds, fertilizers.</p> <p>- Nuclear fuel cycle</p>		
Course Name: Transition Elements			
Course Code	CHEM 421T		
College			
Department/ Program			
Year / Level:	4 TH /7 TH		
Credit Hours	4(3+2)		
Contact Hours	Lecture:45	Lab/Tutorial:26	Training: 26
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 102 T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<ul style="list-style-type: none"> - know the transition elements properties . - classification ligands. - name the coordination compounds. - describe the bond between metal and ligands. - identify the theories of chemical bonding in transition metal . 		
Course Name: Instrumental Analysis 1			
Course Code	CHEM 433T		
College			
Department/ Program			
Year / Level:	4 TH / 7 TH		
Credit Hours	2 (2+0+0)		
Contact Hours	Lecture: 30	Lab/Tutorial:0	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 331T		
Co-Requests:			

A brief Course Description :

Course Objectives:	This course develops knowledge, experience and skills related to a variety of mainstream instrumental techniques in areas of spectroscopy to do qualitative and quantitative analysis for different samples .		
Course Name: Organic Reaction Mechanisms			
Course Code	CHEM 447T		
College			
Department/ Program			
Year / Level:	4 th /7 th		
Credit Hours	3(3+0+0)		
Contact Hours	Lecture:45	Lab/Tutorial:0	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM243 T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>Recognize of different types of mechanisms in organic chemical reactions</p> <ul style="list-style-type: none"> -Describes the problems ,with providing solutions using higher-order thinking skills and analyze the results information . -Practice the self-learning skills and continuous learning with the capacity for decision making 		
Course Name: Polymer Chemistry			
Course Code	CHEM448T		
College			
Department/ Program			
Year / Level:	4 th / 7 th		
Credit Hours	. 2(2+0+0)		
Contact Hours	Lecture:30	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input checked="" type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 243 T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>- Knowledge of polymer chemistry and classification of polymers. - To differentiate between chain growth and step growth polymerization</p>		
Course Name: Mechanism of Inorganic Reactions			
Course Code	CHEM-422 T		
College			
Department/ Program			
Year / Level:	4 th /7 th		
Credit Hours	2(2+0+0)		
Contact Hours	Lecture:30	Lab/Tutorial:0	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input checked="" type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM102T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<ul style="list-style-type: none"> -Determination of complex ions and their composition. -Differentiation of the mechanics reactions - Clarification of the pathways of some inorganic reactions. 		
Course Name: Nuclear and Radiochemistry			
Course Code	CHEM418		
College			
Department/ Program			
Year / Level:	4 th / 7 th		
Credit Hours	3 (3+0+0)		
Contact Hours	Lecture:45	Lab/Tutorial:0	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input checked="" type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 314T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>To provide the students the principles of Nuclear and Radiochemistry.</p> <p>-Practice the self-learning skills and continuous learning with the capacity for decision making</p>		
Course Name: Molecular spectroscopy and laser			
Course Code	CHEM 419 T		
College			
Department/ Program			
Year / Level:	4 th / 7 th		
Credit Hours	3 (3+0+0)		
Contact Hours	Lecture:45	Lab/Tutorial:0	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input checked="" type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 314T		
Co-Requests:			

A brief Course Description :

Course Objectives:	- The course aims to give the students the principles of Photochemistry and Laser.		
Course Name: Electrochemistry (2)			
Course Code	CHEM 417 T		
College			
Department/ Program			
Year / Level:	4 th /8 th		
Credit Hours	4 (3+2)		
Contact Hours	Lecture:45	Lab/Tutorial;26	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 315 (1)		
Co-Requests:			

A brief Course Description :

Course Objectives:	To understand the importance of Corrosion Science and link it with real life applications.		
Course Name: Chemistry of Lanthanides and Actinides			
Course Code	CHEM423T		
College			
Department/ Program			
Year / Level:	4 th /8 th		
Credit Hours	2(2+0+0)		
Contact Hours	Lecture:30	Lab/Tutorial:0	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 102 T		
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>-The ability to infer information for electronic configuration of the components of lanthanides and arranged logically and sequentially.</p> <p>-The ability to perceive determine the relationship between cause and effect in different oxidation states between the two sets of lanthanides and Actinides.</p> <p>- Comparing the properties and interactions of lanthanides and Actinides and separated ways.</p>		
Course Name: : Instrumental Analysis 2			
Course Code	CHEM 434T		
College			
Department/ Program			
Year / Level:	4 th /8 th		
Credit Hours	2(2+0+0)		
Contact Hours	Lecture:30	Lab/Tutorial:0	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 331		
Co-Requests:			

A brief Course Description :

Course Objectives:	This course develops knowledge, experience and skills related to a variety of mainstream instrumental techniques in areas of electroanalytical techniques to do qualitative and quantitative analysis for different samples .		
Course Name: Instrumental Analysis Lab			
Course Code	CHEM 435T		
College			
Department/ Program			
Year / Level:	4th / 8th		
Credit Hours	2(0+4+0)		
Contact Hours	Lecture:0	Lab/Tutorial:30	Training: 0
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM 433T		
Co-Requests:			

A brief Course Description :

Course Objectives:	Introduces students to the major concepts of instrumental analysis and to some of the instrumental techniques most commonly used in analytical and bioanalytical chemistry. It emphasizes the use of modern, commercial instrumentation to perform quantitative and qualitative analyses of the physical properties and chemical composition of samples.		
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:	4 th /8 th		
Credit Hours	3hrs.		
Contact Hours	Lecture:	Lab/Tutorial:90	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:	<p>.Linking science with technology and society Using internet in scientific research and contact with the .scientific and cultural bodies and events in the community Using technology in report writing and preparation of - .presentations, drawings models and statistical operations associated with the research subject. -Conduct a practical experiences - Clarifying problems that associated with graduation project and providing solutions to engage in higher-order thinking skills and analyze the results, information and explained and discussed . - practicing self-learning skills and continuous learning with the capacity of making decision and the formation of positive attitudes towards teamwork within the team and the development of individual responsibility . - Using tools and equipment efficiently and estimated standards and appropriate weights . .Write research reports according to the methods of scientific research-</p>		
Course Name: Organometallic Compounds			
Course Code	CHEM424T		
College			
Department/ Program			
Year / Level:	4 th /8 th		
Credit Hours	2(2+0+0)		
Contact Hours	Lecture:30	Lab/Tutorial:0	Training: 0
Language			

A brief Course Description :

Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input checked="" type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:	CHEM. 421T		
Co-Requests:			
Course Objectives:	<p>This course will be studied the chemistry of organometallic compounds of the main-group elements and of the transition elements. the course present the fundamental information of these compounds which is include the preparation methods , the classification of organometallic compounds ,energy, polarity and reactivity of M-carbon bond, organometallic compounds reactions , finally the course.</p>		
Course Name: Natural Products Chemistry			
Course Code	CHEM449T		
College			
Department/ Program			
Year / Level:	4 th /8 th		
Credit Hours	2(2+0+0)		
Contact Hours	Lecture:30	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input checked="" type="checkbox"/> Elective Course		

A brief Course Description :

Pre-requisites Course:	CHEM345T		
Co-Requests:			
Course Objectives:	<p>After studying the course, the student is expected to be able to:</p> <ul style="list-style-type: none"> -Characterize the structural structure of natural products. -Explains the natural synthesis of natural products. - Use natural product naming methods. 		
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name:			
Course Code			
College			
Department/ Program			
Year / Level:			
Credit Hours			
Contact Hours	Lecture:	Lab/Tutorial	Training:
Language			
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input type="checkbox"/> Elective Course		
Pre-requisites Course:			
Co-Requests:			

A brief Course Description :

Course Objectives:			
Course Name: Molecular spectroscopy and laser			
Course Code	CHEM 419T		
College			
Department/ Program			
Year / Level:	8 th /4 th year		
Credit Hours	3(3+0)		
Contact Hours	Lecture:2	Lab/Tutorial	Training:
Language	Arabic		
Track (Select)	<input type="checkbox"/> University Requirement <input type="checkbox"/> College Requirement <input type="checkbox"/> Department Requirement <input checked="" type="checkbox"/> Elective Course :✓		
Pre-requisites Course:	CHEM 314T		
Co-Requests:	-		

A brief Course Description :

Course Objectives:

- The course aims to give the students the principles of Photochemistry and Laser.