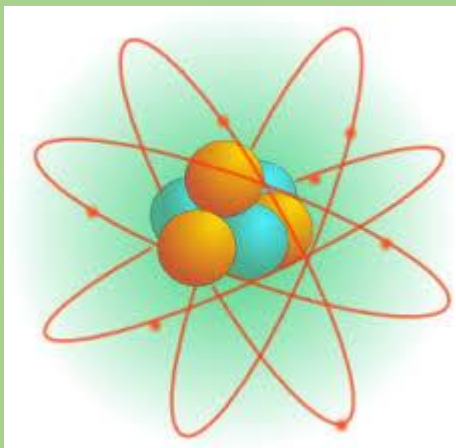


1436/1437



# Courses Teaching Methods

CHEMISTRY DEPARTMENT

## Courses Teaching Methods

Courses code	Courses Name	Teaching Methods
Chem111	general chemistry(1)	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorial discussions</li> <li>• Homework assignments</li> <li>• Laboratory work and assignment</li> <li>• Problem solving</li> </ul>
Chem 121	Organic chemistry(1)	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Laboratory</li> <li>• Discussion</li> <li>• E-learning</li> </ul>
CHEM122	Inorganic chemistry ( main group elements)	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorial</li> <li>• Discussions</li> <li>• Homework</li> <li>• Assignments</li> <li>• Problem solving in the tutorial</li> </ul>
CHEM211	Organic chemistry 2	<ul style="list-style-type: none"> <li>• Lectures -format presentation</li> <li>• Practical sessions</li> <li>• Home assignment</li> <li>• Small group teaching.</li> <li>• collaborative education</li> </ul>
CHEM212	Physical chemistry- Phase Rule	<ul style="list-style-type: none"> <li>• lecture discussion,</li> <li>• mutual dialogue</li> <li>• problems, Laboratory study</li> </ul>



## Courses Teaching Methods

		<ul style="list-style-type: none"> <li>• Working in groups within the lab</li> <li>• Collective seminars</li> </ul>
CHEM213	General chemistry 2	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Discussion</li> <li>• Experiments</li> <li>• Researches</li> <li>• Solving problems.</li> </ul>
CHEM 221	Heterocyclic Compounds chemistry	<ul style="list-style-type: none"> <li>• Lectures -format presentation</li> <li>• Practical sessions</li> <li>• Home assignment</li> <li>• Small groups of students are given individual assignments</li> </ul>
CHEM222	Quantum Chemistry(1)	<ul style="list-style-type: none"> <li>• lecture</li> <li>• discussion</li> <li>• mutual dialogue</li> <li>• Working in groups within the lab</li> <li>• Collective seminars</li> <li>• Problems</li> <li>• research</li> </ul>
CHEM223	Physical organic chemistry	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• E-learning</li> </ul>
CHEM224	Descriptive Analytical Chemistry	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Exercises</li> <li>• Discussion</li> </ul>

## Courses Teaching Methods

		<ul style="list-style-type: none"> <li>• Problems</li> <li>• research, study</li> </ul>
CHEM225	Electro-Reversible Chemistry 1	<ul style="list-style-type: none"> <li>• lecture discussion,</li> <li>• mutual dialogue</li> <li>• Working in groups within the lab</li> <li>• Collective seminars</li> <li>• Problems</li> <li>• research</li> <li>• Practical</li> </ul>
CHEM311	Quantum Chemistry(2)	<ul style="list-style-type: none"> <li>• lecture</li> <li>• discussion</li> <li>• mutual dialogue</li> <li>• Working in groups within the lab</li> <li>• Collective seminars</li> <li>• Problems</li> <li>• research</li> </ul>
CHEM312	Thermodynamic chemistry	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Discussion</li> <li>• Experiments</li> <li>• Researches</li> <li>• Homework to develop the skills of self-study.</li> <li>• The practical studies as groups.</li> <li>• The work of -Intramural Research</li> <li>• Internet search</li> <li>• PowerPoint Offers</li> </ul>
CHEM314	organic chemistry (polymers and patrol)	<ul style="list-style-type: none"> <li>• Lecture</li> </ul>

## Courses Teaching Methods

		<ul style="list-style-type: none"> <li>• Laboratory</li> <li>• Discussion</li> <li>• E-learning</li> </ul>
CHEM315	Quantitative Analytical Chemistry	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Exercises</li> <li>• Discussion</li> <li>• Experiments</li> <li>• Divide in the form of practical sets</li> </ul>
CHEM316	Physical Chemistry ( Surfaces, Colloid s & Catalysis)	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Discussion</li> <li>• Experiments</li> <li>• Researches</li> <li>• Homework to develop the skills of self-study.</li> <li>• The practical studies as groups.</li> <li>• The work of -Intramural Research</li> <li>• Internet search</li> </ul> <p style="text-align: center;">PowerPoint Offers</p>
CHEM321	Biochemistry 1	<ul style="list-style-type: none"> <li>• Lecture. Scientific Discussion.</li> <li>• Q&amp;A.</li> <li>• Presentation.</li> <li>• Practical Training</li> </ul>
CHEM322	inorganic chemistry( transition elements)	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Tutorial</li> <li>• discussions</li> <li>• Homework assignments</li> <li>• Problem solving in the tutorial</li> </ul>

## Courses Teaching Methods

CHEM323	Electro-Reversible Chemistry 2	<ul style="list-style-type: none"> <li>• lecture discussion,</li> <li>• mutual dialogue</li> <li>• Working in groups within the lab</li> <li>• Collective seminars</li> <li>• Problems</li> <li>• research</li> <li>• Practical</li> </ul>
CHEM324	Coordination chemistry	<ul style="list-style-type: none"> <li>• Use computer and internet in teaching procedure</li> <li>• Use photos and diagrams</li> <li>• Encourage students to make dialogs</li> <li>• Improve laboratory skills of the students</li> <li>• Groups during tutorial</li> <li>• Group assignment</li> <li>• Communications of the student</li> <li>• Lectures</li> </ul>
CHEM411	Instrumental Analysis Chemistry	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Exercises</li> <li>• Discussion</li> <li>• Divide in the form of practical sets.</li> </ul>
CHEM412	Kinetic Chemistry	<ul style="list-style-type: none"> <li>• lecture discussion,</li> <li>• mutual dialogue</li> <li>• Working in groups within the lab</li> <li>• Collective seminars</li> <li>• Problems</li> <li>• research</li> <li>• Practical</li> </ul>
CHEM413	Dyes chemistry	<ul style="list-style-type: none"> <li>• Lecture</li> </ul>



## Courses Teaching Methods

		<ul style="list-style-type: none"> <li>• Laboratory</li> <li>• Discussion</li> <li>• E-learning</li> </ul>
CHEM414	Biochemistry 2	<ul style="list-style-type: none"> <li>• Lecture. Scientific Discussion.</li> <li>• Q&amp;A.</li> <li>• Presentation.</li> <li>• Practical Training</li> </ul>
CHEM 421	Natural Products Chemistry	<ul style="list-style-type: none"> <li>• Lectures -format presentation</li> <li>• Practical sessions</li> <li>• Home assignment</li> <li>• Small groups of students are given individual assignments</li> </ul>
CHEM422	Chemistry of organic reactions mechanisms	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• E-learning</li> </ul>
CHEM423	organic chemistry (Organic Compounds Spectra	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Laboratory</li> <li>• Discussion</li> <li>• E-learning</li> </ul>
CHEM424	Nuclear and Radiation Chemistry	<ul style="list-style-type: none"> <li>• Lectures</li> <li>• Discussion</li> <li>• Experiments</li> <li>• Researches</li> <li>• Homework to develop the skills of self-study.</li> <li>• The practical studies as groups.</li> <li>• The work of -Intramural Research</li> </ul>

## Courses Teaching Methods

		<ul style="list-style-type: none"><li>• Internet search</li><li>• PowerPoint Offers</li></ul>
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