Chemistry

Department

Email: info@sharif.edu

Website: http://ch.sharif.edu/

Address: Chemistry Department, Sharif University of Technology, P.O. Box 11156-3516, Tehran, Iran.

Telephone number: +98 21 6616 5301-2

Sharif has one of the leading chemistry departments in the country with a state of the art laboratories, and international- level research in a wide range of areas, including synthesis and catalysis, medicinal and biological chemistry, structural chemistry, organometallic chemistry, sustainable energy, chemo-metric studies, environmental analytical chemistry, electrochemistry, advanced materials, polymer and composite chemistry, innovative measurement and theoretical and computational chemistry. The department has an unrivalled track record in commercializing the innovative work of research staff, which has raised millions for the University.

Undergraduate Course Structure

Course Structure (Pure Chemistry)

1st year	2nd year	3rd year	4th year
• General Chemistry (I), (II) • General Chemistry Lab (I), (II) • Math. (I), (II) • Physics (I), (II) • Physics Lab (I), (II) • General Workshop • Chemistry Language	• Inorganic Chemistry (I), (II) • Physical Chemistry (I), (II) • Analytical Chemistry (I), (II) • Organic Chemistry (I), (II) • Chemistry Language • Related Lab Courses • How to Use Chemistry References and Databanks • Differential Equations	• Organic Chemistry (III) • Instrumental Analytical Chemistry • Principles of Quantum Chemistry • Organometallic Chemistry • Qualitative Organic Chemistry Lab. • Principle of Chemical Industry • Chemistry Language • Computer Programming • Spectroscopic Characterization of Organic Compounds	• Biochemistry • Physical Organic Chemistry • Molecular Spectroscopy • Research Project • Instrumental Analytical Chemistry Lab.

Course Structure (Applied Chemistry)

1st year	2nd year	3rd year	4th year
• General Chemistry (I), (II)	• Inorganic Chemistry (I), (II)	• Organic Chemistry (III)	• Industrial Chemistry (II)
• General Chemistry Lab (I), (II)	• Physical Chemistry (I), (II)	• Instrumental Analytical Chemistry	• Industrial Chemistry Calculations
• Math. (I), (II)	• Analytical Chemistry (I), (II)	• Principles of Quantum Chemistry	• Water and Wastewater Treatment
• Physics (I), (II)	• Organic Chemistry (I), (II)	• Organometallic Chemistry	• Corrosion Technology
• Physics Lab (I), (II)	• Chemistry Language	• Qualitative Organic Chemistry Lab.	• Research Project
• General Workshop	• Related Lab Courses	• Principle of Chemical Industry	• Industrial Chemistry Lab
• Chemistry Language	• How to Use Chemistry References and Databanks	• Chemistry Language	
	• Differential Equations	• Computer Programming	
	• Industrial Chemistry (I)	• Spectroscopic Characterization of Organic Compounds	

Graduate Program

Graduate degrees are offered in four areas of Chemistry

- Inorganic Chemistry, MSc, PhD
- Analytical Chemistry, MSc, PhD
- Organic Chemistry, MSc, PhD
- Theoretical and Computational Chemistry, MSc, PhD
- Physical Chemistry, MSc, PhD

Graduate Research Fields:

- Synthesis and Catalytic reaction of the new metal-organic complexes
- Environmental Analytical Chemistry
- Polymer Chemistry
- Natural Products extraction
- New synthetic methodology in Organic Chemistry
- Chemo metric study and Statistical Chemistry
- Electrochemistry and Electrochemical methods
- Crystallography and Structural Inorganic Chemistry
- Synthesis and physicochemical study of the organometallic complexes
- Thermodynamics and Molecular Modeling
- Protein-Ligand interactions, protein folding and unfolding studies
- Computational Chemistry
- Organic synthesis under solvent-free conditions and in water as solvent
- Conceptual foundations of physics and chemistry, Quantum theory, Statistical physics, Thermodynamics, Information theory
- Design, fabrication and application of electrochemical sensors
- Dynamic NMR spectroscopy (DNMR), Structure elucidation of saccharides

Career Opportunities Chemistry

Chemistry provides an excellent opportunity for the development of the critical faculties and intellect, and also instills important transferable skills that will serve graduates well whatever their subsequent choice of career may be. Many of our Chemistry graduates go on to do research or further study. Others enter professions in industry, publishing and marketing.