



إعلان الاختبار التحريري لقبول الماجستير

Department of chemistry is pleased to congratulate you for initial admission to the Master program in Chemistry, and we would inform you that there will be a written examination on **WEDNESDAY**

18/06/2025 at 9:30 am.

The purpose of this examination is to fulfill the admission requirements.

- **For male applicants:** College of Science (Building n. 313-A) at room 080.
- **For Female applicants:** Female campus in the College of Science (Building # 323) at Room

يسر قسم الكيمياء بكلية العلوم تهنئتك بالقبول المبدئي في برنامج ماجستير العلوم – في الكيمياء، ونفيذك بأنه سيتم إجراء اختبار تحريري للمتقدمين والمتقدمات في يوم **الأربعاء** الموافق ١٨/٠٦/٢٠٢٥ الساعة ٩:٣٠ صباحاً، وذلك لاستكمال متطلبات معايير القبول.

- **للتطالِب** مقر الاختبار هو كلية العلوم مبنى ٣١٣ - أ القاعة ٠٨٠ في الدور الثالث
- **للتطالِبات** مقر الاختبار هو كلية العلوم بقسم الطالبات مبنى ٣٢٣ القاعة في الدور

Below is the topics covered in the MSc admission examination:

General Chemistry: Principal of general chemistry, SI and derived units, Significant figures, Atomic structure, Chemical Bonding, Periodic Properties, Acids, Bases, and Non-Aqueous Solvents

Inorganic Chemistry: Chemical, s-Block and p-Block Elements, Chemistry of Noble Gases, Transition Series Elements, Coordination Compounds, Oxidation and Reduction, Lanthanide and Actinide Chemistry, Ionic Solids, Metal-Ligand Bonding, Bio-Inorganic Chemistry, Organometallic Chemistry, Solid-State Chemistry, Spectroscopy and Magnetic Properties, Inorganic Polymers, Industrial Fuels and Chemicals, Thermodynamic and Kinetic Aspects of Complexes

Physical Chemistry: Mathematical Concepts - Gaseous and Liquid States - Chemical Kinetics and Thermodynamics - Solutions and Colligative Properties - Chemical and Phase Equilibrium – Electrochemistry - Solid-State Chemistry - Colloidal State - Quantum Chemistry - Molecular Structure and Spectroscopy - Nuclear Chemistry – Photochemistry.

Organic Chemistry: Structure and Bonding - Fundamentals of Organic Chemistry - Alkanes, Alkenes, Alkynes, Cycloalkanes - Aromaticity and Arenes - Stereochemistry of Organic Compounds - Alkyl and Aryl Halides - Alcohols, Ethers, and Epoxides - Aldehydes, Ketones, and Phenols - Carbonyl Chemistry (Oxidation & Reduction) - Carboxylic Acids and Derivatives - Organic Spectroscopy - Heterocyclic Compounds - Alkaloids, Terpenes, and Vitamins - Peptides, Proteins, and Nucleic Acids - Organic Synthesis via Enolates - Fats, Oils, Detergents, and Polymers,

Analytical Chemistry: Atomic Structure,

References:

- **General Chemistry**, by R. Chang, 11th Edition, McGraw Hill, ISBN-10 : 1259911152
- **Inorganic Chemistry**, G. Missler et. al. Publisher: Pearson, ISBN-10 : 9780321811059
- **Physical Chemistry**, by Peter Atkins, Julio de Paula, James Keeler. Oxford University Press ISBN: 0198769865
- **Organic Chemistry**, by J. McMurray, 10th Edition, Publisher: Cengage Learning, ISBN-10 : 1305080483.
- **Fundamentals of Analytical Chemistry**, by Douglas Skoog, Donald West, F. Holler, Stanley Crouch, 10th Edition, Publisher : Cengage Learning, ISBN-10 : 0357450396.
- **Principal of Instrumental Analysis**, by D. Skoog, 7th Edition, Publisher : Cengage Learning, ISBN-10 : 9781305577213.