

COMSATS Institute of Information Technology
Registrar Office, Principal Seat, Islamabad

No: CIIT-Reg/Notif-69912/1014

July 3, 2012

NOTIFICATION

Scheme of Studies of Master of Science (MS) in Chemistry


It is hereby notified that the Academic Council in its 13th meeting held on June 04, 2012 approved the following scheme of studies of Master of Science (MS) in Chemistry program for the session Fall 2012 only at CIIT:

	<u>Min No. of Courses</u>	<u>Min No. of Credit Hours</u>
1. MS Course Work		
i. Core Courses (List attached)	03	09
ii. Elective Courses (List attached)	05	15
Total Credit Hours of course work		24
2. MS Thesis		06
Total Credit Hours of the Program		30

Note:

All Rules and Regulations approved by BASAR from time to time shall be applicable

This issues with the approval of the Competent Authority.


Nadeem Uddin Qureshi
Additional Registrar

Encl: (pages 03 in total including this page)

Distribution:

1. Dean Faculty of Science, CIIT
2. All Directors CIIT System
3. Chairperson, Department of Chemistry, CIIT
4. All Incharges, Academic Sections, CIIT Campuses
5. All HoD's/Incharges, Department of Chemistry, CIIT Campuses
6. Controller of Examinations, CIIT
7. All Incharges, Examination Departments, CIIT Campuses

CC:

1. PS to Rector
2. PA to Registrar

List of Core Courses

Course Code	Course Title	Credit Hours
CHM522	Advanced Analytical Techniques	3(3, 0)
CHM542	Spectroscopic Techniques	3(3, 0)
CHM645	Research Methodology and Chemical Data Handling	3(3, 0)

Thesis

Course Code	Course Title	Credit Hours
CHM800	Thesis	6

Lists of Elective Courses

Course Code	Course Title	Credit Hours
CHM501	Bio-Statistics in Chemistry	2(2, 0)
CHM502	Fundamentals of Biochemistry	3(3, 0)
CHM503	Biophysical Analysis of Biologics	4(3, 1)
CHM504	Immunochemistry	3(3, 0)
CHM511	Advanced Physical Chemistry of Polymers	3(3, 0)
CHM512	Quantum Chemistry	3(3, 0)
CHM513	Electrode Processes and Kinetics	3(2, 1)
CHM514	Advanced Magnetic Resonance Spectroscopy	3(2, 1)
CHM521	Laser and Emission Spectroscopy	3(3, 0)
CHM523	XRD Analytical Technique	3(3, 0)
CHM524	Automation and Thermal Analysis	3(3, 0)
CHM525	X-Ray Analytical Technique	3(3, 0)
CHM531	Solid State Chemistry	3(3, 0)
CHM532	Chemical Group Theory	3(3, 0)
CHM533	Advanced Organometallic Compounds	3(3, 0)
CHM534	Main Group Organometallic Reagents	3(3, 0)
CHM541	Organic Synthesis and Stereochemistry	3(3, 0)
CHM571	Chemistry of Macromolecules	3(3, 0)
CHM572	Polymer and Allied Industries	3(3, 0)
CHM581	Petroleum, Petrochemical and Fuel Gases	3(3, 0)
CHM601	Protein Biosynthesis	3(3, 0)
CHM602	Advances in Recombinant DNA Techniques	3(3, 0)
CHM603	Antimicrobial Agents and Chemotherapy	3(3, 0)
CHM604	Current Trends In Biochemistry	3(3, 0)
CHM611	Mechanism of Chemical Kinetics	3(3, 0)
CHM612	Molecular Spectroscopy and Group Theory	3(2, 1)
CHM613	Photochemistry	3(3, 0)
CHM614	Advances in Catalysis	3(3, 0)
CHM626	Environmental Analysis	3(3, 0)
CHM627	Electro Analytical Techniques	3(3, 0)
CHM628	Advanced Applied Industrial Chemistry	3(3, 0)
CHM629	Advanced Atomic Absorption Spectroscopy	3(3, 0)
CHM631	Photochemical Reactions of Transition Metals	3(3, 0)

Course Code	Course Title	Credit Hours
CHM632	Applied Transition Metal Catalysis	3(3, 0)
CHM633	Inorganic Electronic Spectroscopy	3(3, 0)
CHM634	Kinetics and Mechanisms of Inorganic Reactions	3(3, 0)
CHM641	Organic Transformations	3(3, 0)
CHM642	Smart Synthesis	3(3, 0)
CHM643	Synthesis and Nature	3(3, 0)
CHM644	Chromatographic Techniques	3(3, 0)
CHM651	Food and Allied Industries	3(3, 0)
CHM652	Steel, Metallurgical Products & Electroplating	4(3, 1)
CHM653	Agrochemicals	3(3, 0)
CHM671	The Chemistry of Composite Materials	3(3, 0)
CHM672	Synthesis and Reaction Mechanisms of Polymer	3(3, 0)
CHM673	Fourth State of Matter	3(3, 0)
CHM701	Xenobiotics Metabolism	3(3, 0)
CHM702	Applications of Radio Isotopes in Biochemistry	3(3, 0)
BIO701	Clinical Biochemistry	4(4, 0)
BIO706	Protein Chemistry	4(4, 0)
BIO710	Research Techniques	3(3, 0)
CHM711	Advanced Thermodynamics	3(3, 0)
CHM712	Advanced Composite Materials	3(3, 0)
CHM713	Statistical Mechanics in Chemistry	3(3, 0)
CHM714	Chemistry of Solid State and Semiconductors	3(3, 0)
CHM715	Recent Advances and Applications in Computational Chemistry	3(3, 0)
CHM721	Nanochemistry in Metal Oxides	3(3, 0)
CHM722	Nanochemistry in Fuel Cells	3(3, 0)
CHM723	SPE and MSPE Techniques	3(3, 0)
CHM724	Advanced Catalysis	3(3, 0)
CHM731	Inorganic Chemistry of Biological Processes	3(3, 0)
CHM732	Nuclear and Radio-Chemistry	3(3, 0)
CHM733	Medicinal Uses of Transition Metals and Inorganic Compounds	3(3, 0)
CHM734	Inorganic Environmental Pollutants	3(3, 0)
CHM741	Carbohydrates in Synthesis and Drugs	3(3, 0)
CHM742	Drug Designing	3(3, 0)
CHM743	Drug Development	3(3, 0)
CHM744	Natural Product Chemistry	3(3, 0)
CHM745	Catalysis in Organic Synthesis	3(3, 0)
CHM746	Dead ends and Detours in Organic Synthesis	3(3, 0)
CHM747	Bioorganic Chemistry	3(3, 0)
CHM748	Biopolymer Chemistry	3(3, 0)
CHM749	Modern Trends in Organo-metallic Synthesis	3(3, 0)
CHM759	Industrial Water Conditioning	3(3, 0)
CHM767	Chemical Kinetics	3(3, 0)
CHM768	Corrosion Chemistry	3(3, 0)
CHM780	Chemistry of Coal Conversion Process	3(3, 0)
CHM781	Characterization of Fossil Fuels by Advanced Instrumental Techniques	3(3, 0)