

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

No: CIIT-Reg/Notif/673/12/997

July 3, 2012

NOTIFICATION

Scheme of Studies of Doctor of Philosophy (PhD) 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 Doctor of Philosophy (PhD) in Chemistry program for the session Fall 2012 only at CIIT:

	<u>Minimum No. of Courses</u>	<u>Minimum No. of Credit Hours</u>
MS Course Work		
i. Core Courses (List attached)	01	03
ii. Elective Courses (List attached)	05	15
Total Credit Hours of course work		18
PhD Thesis		09

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 04 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
CHM645	Research Methodology and Chemical Data Handling	3(3, 0)

Thesis

Course Code	Course Title	Credit Hours
CHM900	Thesis	9

Lists of Elective Courses

Course Code	Course Title	Credit Hours
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)
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 and 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)

Course Code	Course Title	Credit Hours
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)
CHM775	Catalytic 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)
CHM801	Advanced Biochemistry	3(3, 0)
CHM802	Principles of Biochemical Toxicology	3(3, 0)
CHM803	Amino acids and their Metabolism	3(3, 0)
CHM804	Biochemistry and Mechanism of Drug's Action	3(3, 0)
CHM811	Chemistry of Colloids and Surfactants	3(3, 0)
CHM812	Applied Nuclear and Radiation Chemistry	3(3, 0)
CHM813	Biophysical Chemistry	3(3, 0)
CHM814	Physical Chemistry and Environment	3(3, 0)
CHM821	Electron Microscopic Techniques	3(3, 0)
CHM822	Luminescence, Fluorescence and Phosphorescence Spectroscopy	3(3, 0)
CHM823	Advanced Chromatographic Techniques	3(3, 0)
CHM824	Special Topics in Analytical Chemistry	3(3, 0)
CHM831	Special Topics in Inorganic Chemistry	3(3, 0)
CHM832	Advances in Periodic Table	3(3, 0)
CHM833	Chemistry of Advanced Materials	3(3, 0)

Course Code	Course Title	Credit Hours
CHM834	Inorganic Polymers and Cluster Compounds	3(3, 0)
CHM841	Advances in Organic Synthesis	3(3, 0)
CHM861	Industrial Effluent and Emission Analysis	3(3, 0)
CHM862	Environmentally Benign Technology	3(3, 0)
CHM863	Alternative Reaction Media	3(3, 0)
CHM871	Conjugated Polymers	3(3, 0)
CHM872	Polymer Technology	3(3, 0)
CHM873	Characterization Techniques for Polymers	3(3, 0)
CHM874	Thermodynamics and Kinetics of Polymerization	3(3, 0)
CHM881	Advances in Petroleum Production	3(3, 0)
CHM882	Alternate Energy Sources	3(3, 0)

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