

B.Sc. Industrial Chemistry Honours

6 Semester Course

List of the Courses

Sl No	Name of the Course	Semester	Course Code	Credit	Marks in the Course	Name of the Programme	Programme Code	Course outcome	Linking on Employability/ Entrepreneurship	Introduction year of new course	BoS Date	Percentage of Revision	BoS Date
1	INORGANIC CHEMISTRY- I, ORGANIC CHEMISTRY- I & PHYSICAL CHEMISTRY- I	1	INCA-P-1-T	10	75	INDUSTRIAL CHEMISTRY HONOURS	INCA	•Students will acquire an idea about the Valence bond theory, Stereochemistry, reaction mechanism, Atomic Structure, Chemical periodicity, Chemical Bonding, Ideal and Real gases, Thermodynamics.	While teaching these courses teachers involve the students with the course materials in such a way that they get the training which directly help them to get placed in industry as a R&D chemist.	2014-15	03.07.2014		
2	INORGANIC CHEMISTRY	1	INCA-P-1-P	4	25	INDUSTRIAL CHEMISTRY HONOURS	INCA	• Development of the concept of the detection of acid & basic radicals and quantitative analysis of inorganic samples.	Skill upon chemical analysis of inorganic compounds can be grwon for the students in this field.	2014-15	03.07.2014		
3	INORGANIC CHEMISTRY- II, ORGANIC CHEMISTRY- II & PHYSICAL CHEMISTRY- II	2	INCA-P-2-T	10	75	INDUSTRIAL CHEMISTRY HONOURS	INCA	• This course will provide a comprehensive idea about the aliphatic nucleophilic substitution, elimination mechanisms, Nucleophilic addition to carbonyl compound, acid base theory, concept of a redox titration, concept of electrochemical cells.	Students may develop their skill on basic electrical applications and oranic mechanism which is being used in chemical and biochemical industries and also in research area based on those properties.	2014-15	03.07.2014		
4	ORGANIC CHEMISTRY	2	INCA-P-2-P	4	25	INDUSTRIAL CHEMISTRY HONOURS	INCA	• Development of the concept of the detection of special elements and functional groups of organic samples..	Skill upon functional group analysis of organic samples can be grwon for the students in the appropriate field.	2014-15	03.07.2014		
5	MATERIALS SCIENCE, METALLURGY & SPECTROSCOPY	3	INCA-P-3-T	10	75	INDUSTRIAL CHEMISTRY HONOURS	INCA	• Students will acquire an idea about the Rotational & Vibrational spectroscopy, concept of lattice, lattice energy. symmetry, crystal class, crystal system, unit cell and concept of Pyrometallurgy, hydrometallurgy & electrometallurgy	It may be very helpful for the students to get employed in the "Research & Development" section of any chemical industries and also the skill to handling of basic instruments on research purpose will be developed.			25	03.07.2014
6	PHYSICAL CHEMISTRY	3	INCA-P-3-P	4	25	INDUSTRIAL CHEMISTRY HONOURS	INCA	• Students will gain an idea about the acid base titrations methods, Instrumental method of analysis for Surface tension, viscosity, Partition Coefficient.	Skill on basic instrumentation and testing of chemicals may be improved, providing the scope of emplobility in chemical based industries.				

7	CHEMICAL ENGINEERING & POLYMER SCIENCE	4	INCA-P-4-T	10	75	INDUSTRIAL CHEMISTRY HONOURS	INCA	<ul style="list-style-type: none"> This course will provide an idea about the concept of materials balance & energy balance, heat transfer co-efficient and concept of Polymerization methods & their kinetics. 	These course be very helpful for the students to get employed in the chemical industry & polymer industry.			25	26.10.2017
8	MATERIALS SCIENCE	4	INCA-P-4-P	4	25	INDUSTRIAL CHEMISTRY HONOURS	INCA	<ul style="list-style-type: none"> Students will acquire an idea about the synthesis approach and characterizations tools of materials. 	Employment in "Materials Testing laboratory" and "Research and Development" section of any respective industry can be achieved by the students.				
9	CERAMIC TECHNOLOGY, PETROLEUM & UNIT PROCESS	5	INCA-P-5-T	13	100	INDUSTRIAL CHEMISTRY HONOURS	INCA	<ul style="list-style-type: none"> Concept of the white wares, refractoriness, glass formation technology & petroleum Refinery. 	During these course students will develop their knowledge in white wares, refractory, glass & petroleum which will provide the capability to get the job opportunity in ceramic industries & petroleum industries.			25	03.07.2014
10	CEMENT TESTING, UNIT OPERATION, PROJECT WORK-I & INDUSTRIAL TRAINING AND REPORTING	5	INCA-P-6-P	13	100	INDUSTRIAL CHEMISTRY HONOURS	INCA	<ul style="list-style-type: none"> Students will acquire an idea about the Nitration, Oxidation, Partial reduction, Esterification, Polymerization & chemical analysis methods of cement. 	These course provides the capability to employable in chemical industries.	2018-19	26.10.2017		
11	HEAVY INORGANIC CHEMICALS, PETROCHEMICALS, INDUSTRIAL & ENVIRONMENTAL POLLUTION, FUEL & FURNACE, ANALYTICAL CHEMISTRY	6	INCA-P-7-T	13	100	INDUSTRIAL CHEMISTRY HONOURS	INCA	<ul style="list-style-type: none"> Concept of Heavy Inorganic chemicals & Petrochemicals and the concept of industrial pollution, water pollution & solid waste management. 	Skill on basic instrumentation and testing of chemicals may be improved, providing the scope of employability in chemical based industries.			20	26.10.2017
12	CHEMICAL ENGINEERING, FUEL & FURNACE, PROJECT WORK-II, SEMINAR PRESENTATION	6	INCA-P-8-P	13	100	INDUSTRIAL CHEMISTRY HONOURS	INCA	<ul style="list-style-type: none"> Development of the concept of the Flow measurement & analysis of fuels and during these course students will expand their idea on research. 	While teaching these courses teachers involve the students with the course materials in such a way that they get the training which directly help them to get placed in oil industries.				

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