

A Don Bosco Institution of Higher Education, Founded in 1951 \* Affiliated to Thiruvalluvar University, Vellore \* Autonomous since 1987 Accredited by NAAC (4<sup>th</sup> Cycle – under RAF) with CGPA of 3.31 / 4 at 'A+' Grade

## Name of the Programme: B.Sc Chemistry

Name of the Course	Course Code	Name of the Program	Activities with direct bearing on Employability/ Entrepreneurship/ Skill development	Year of introduction
Inorganic Chemistry-I	CH216	B.Sc Chemistry	Entrepreneurship: Content: acids and bases Activity: Determining the TDS in water, estimating borax using volumetric analysis	2021-22
Organic Chemistry-III	CH416	B.Sc Chemistry	Entrepreneurship: Content: Spectroscopy Activity: Elucidating the structure of organic molecules.	2021-22
Physical Chemistry-II	CH417	B.Sc Chemistry	Entrepreneurship: Content: Colloids, Electrical double layer Activity: Find out the separation process of colloidal contamination in water treatment process by electrophoresis and electro osmosis techniques	2021-22

Organic Chemistry-IV	CH545	B.Sc Chemistry	Entrepreneurship: Content: Synthesizing organic compounds from carbonyl compounds Activity: Preparation of organic compounds from carbonyl precursors, differentiating reactivity of carbonyl compounds from other organic compounds.	2021-22
Analytical Chemistry-II	CH548	B.Sc Chemistry	Entrepreneurship: Content: Spectroscopy Activity: Analyze the metals and organic compounds using spectroscopy technique.	2021-22
Elective-I Pharmaceutical Chemistry	CH549A	B.Sc Chemistry	Entrepreneurship: Content: Diabetes, Pharmacology Activity: Estimate the blood sugar level in bio clinical laboratory	2021-22
Elective-I Forensic Chemistry	CH549B	B.Sc Chemistry	Entrepreneurship: Content: Crime Scene assessing, Forensic chemistry Activity: Identify the problems and analysing the physical evidence by suitable methods in Crime detecting system	2021-22
Elective-II Applied Chemistry	CH550A	B.Sc Chemistry	Entrepreneurship: Content: Analysis of water and food products Activity: Analyse and eliminate the water	2021-22

			contamination in water purification process, Analyse the food preservatives and nutritional value of food in food industry	
Elective-II Cheminformatics	CH550C	B.Sc Chemistry	Entrepreneurship: Content: Application of Chemoinformatics Activity: Docking of small molecules using the software. Develop the software's for structure searching and designing the new drug and optimization by virtually.	2021-22
Organic Chemistry-V	СН639	B.Sc Chemistry	Entrepreneurship: Content: Natural Products. Activity: Extraction, Structural Elucidation	2021-22
Physical Chemistry-IV	CH641	B.Sc Chemistry	Entrepreneurship: Content: Application of EMF measurements, Battery Activity: Determine the transport number, solubility and equilibrium constant of a cell reaction, Construct the fuel cells and find out the suitable electrolytes in battery applications.	2021-22

Elective-III Polymer Chemistry	CH642A	B.Sc Chemistry	Entrepreneurship: Content: Commercial polymer, Conducting polymer and biomaterials Activity: Exploring the commercial preparation of polymers, Synthesis the conducting polymer as a electrolyte in electrochromic devices. Preparation of biomaterials	2021-22
Elective-III Inductrial and Environmental Chemistry	CH642B	B.Sc Chemistry	Entrepreneurship: Content: Purification process Activity: Evaluating methods of purifying water from industrial waste water, solid waste management. Determine the quality of water for drinking purpose	2021-22
Elective-III Green Chemistry	CH642C	B.Sc Chemistry	Entrepreneurship: Content: Future trends in green chemistry Activity: Designing next generation agrochemicals from natures, Developing recyclable products from reaction wastes	2021-22
Elective-III Water Chemistry and Inorganic Materials of Industrial Importance	CH642E	B.Sc Chemistry	Entrepreneurship: Content: Fertilizers, Surface Coatings and Batteries Activity:	2021-22

			Manufacture the fertilizers, Evaluating different surface coatings and their applications, Working principle of fuel cells and	
Gravimetric and Organic Analysis	PCH621	B.Sc Chemistry	solar cells product, quantitatively measure the ion present in the compound. Entrepreneurship: Content: Preparation of organic compound Activity: Prepare compound from precursor	2021-22