

**List of Courses having focus on Local, National, Regional and Global Developmental Needs offered  
Department of PG Chemistry**

<b>M.Sc CHEMISTRY</b>						
Programme: M.Sc., Chemistry					2018 Batch I and II Semesters 2017 Batch III and IV Semesters	
Cours Code	Course Title	Need				Rationale
		Local	National	Regional	Global	
18PCY101	Inorganic Chemistry -I- Solid state and Nuclear Chemistry		✓	✓		Smart materials/ Competitive examination like, SET/NET/GATE/ JAM/ TNPSC/ novel energymaterial synthesis
18PCY102	Organic Chemistry – I- Reactions and Mechanisms		✓	✓	✓	New innovative compounds can be synthesized by using the mechanisms like antiviral, anti-cancer drugs
18PCY103	Physical Chemistry -I- Group Theory and Chemical Kinetics		✓			Competitive exams, rate of the reaction are useful for studying the reaction.
18PCY204	Inorganic Chemistry -II-Coordination and Organometallic Chemistry		✓	✓		Anti-cancer drugs, antipyretic and other drugs can be synthesized, biomedical applications
18PCY205	Organic Chemistry-II – Organic Reactions and Stereochemistry		✓	✓		Stereo specific and regio selective drugs can be synthesized, Pharmaceutical importance
18PCY206	Physical Chemistry-II – Quantum and Electrochemistry		✓			Competitive exams/scientific computation of molecular energy /simulation/docking/ molecular modelling studies / energy materials/ corrosion control

18PCY2N1	*Non Major Elective-I Chemistry in day to day life	✓	✓	✓	✓	To control the pollutions and reduction of plastic usage
18PCY2N2	Non Major Elective-II Chemistry in context	✓	✓	✓	✓	Helpful to know the various chemical applications
18PCY207	Inorganic Chemistry Practical –I		✓	✓		New skills are helpful to improve the efficiency and manage time during newer materials preparation
18PCY208	Organic Chemistry Practical –I		✓	✓		
18PCY209	Physical Chemistry Practical –I		✓	✓		
17PCY310	Organic chemistry III		✓	✓	✓	Helpful to know the application of natural products
17PCY311	Physical Chemistry –III – Classical and Statistical Thermodynamics			✓	✓	Helpful to know the mechanism of Classical and Statistical Thermodynamics. To apply the knowledge for developing new machineries.
17PCY3E2	Major Elective –II * Green, Nano chemistry and Cyber security	✓	✓	✓	✓	* Greener methods and nanoscale materials can be prepared with enormous energy efficient devices and battery materials, semiconductors, solar cells/ current needs.
17PCY412	Inorganic Chemistry –III- Bioinorganic and Inner Transition		✓	✓		Competitive exams/ greener synthesis/ medicinal applications/ catalyst/ role metals in biological systems.

	Elements					
17PCY4E3	Major Elective –III * Applied Electro chemistry	✓	✓	✓	✓	To develop a knowledge on battery application
17PCY413	Physical methods in Chemistry		✓			Useful for characterization of materials/ compounds/separation techniques.
17PCY414	Inorganic Chemistry Practical –II		✓			New skills are helpful to improve the efficiency and manage time during newer materials preparation
17PCY415	Organic Chemistry Practical –II		✓			
17PCY416	Physical Chemistry Practical –II		✓			
17PCY417	Project Work & Vivavoce	✓	✓	✓	✓	Helps to identify the potential of students as scientist and chemists/ able to develop and design nextgeneration materials for benefit of society.

*u. B. H.*

BoS Chairman

Dr. K. POONKODI  
HEAD  
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Principal

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