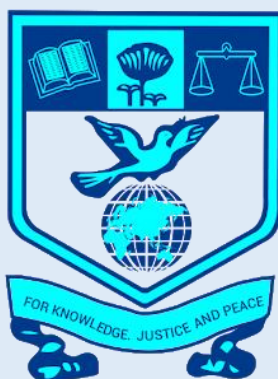


# NEHRU MEMORIAL COLLEGE

(AUTONOMOUS)

NATIONALLY ACCREDITED WITH "A" GRADE BY NAAC

PUTHANAMPATTI, TRICHY – 621007



## Chemistry

1.1.1 Curricula developed and implemented have relevance to the local, national, regional and global developmental needs

<b>Name of the Programme</b>	<b>Course code</b>	<b>Title of Course</b>	<b>Need</b>	<b>Description</b>
B.Sc., Chemistry	19Y101	CC-I-General chemistry-I	Local needs	Students can gain knowledge about Electronic structure and periodic properties, chemical bonding, alkanes and gaseous state.
B.Sc., Chemistry	19Y102L	CC-II- Practical-I- Volumetric analysis	Global needs	To get employment opportunity in global level.
B.Sc., Chemistry	19Y205	CC-III- General Chemistry – II	Local needs	To get knowledge in principle of titration, alkenes ,alkynes and electrical and magnetic properties of molecules.
B.Sc., Chemistry	19Y307	CC-IV-General Chemistry – III	National needs	students acquire requisite knowledge in p-block elements, Inner transition elements and chemical kinetics and that will be enable them to pursue a carrier in chemical industry.
B.Sc., Chemistry	19Y308L	CC-V-Practical-II- Micro qualitative analysis	Global needs	Students will make a detailed study of the inorganic qualitative analysis
B.Sc., Chemistry	19Y411	CC-VI-General Chemistry – IV	National needs	To understand the hydroxyl derivatives and catalysis and to place in biochemical industry
B.Sc., Chemistry	19Y513	CC-VII-Inorganic chemistry I	Global needs	Students will learn about coordination compounds and the reaction mechanism and employability in research lab.
B.Sc., Chemistry	19Y514	CC-VIII-Organic chemistry- I	Global needs	Structural identification and placement in pharmaceutical lab.
B.Sc., Chemistry	19Y515	CC-IX-Physical chemistry – I	Local needs	To get knowledge in thermodynamics and basic principles of electrochemistry

B.Sc., Chemistry	19Y516L	CC-X-Gravimetric and Organic analysis	Global needs	Students acquire knowledge in gravimetric estimation and organic compound analysis
B.Sc., Chemistry	19Y517L	CC-XI-Physical chemistry Experiments and organic preparations	Global needs	Students learn about research related to organic preparation and conductivity and potentiometric titration
B.Sc., Chemistry	19Y518	EC-I – Analytical chemistry	Local and National needs	Exposure in various instrument and employability in national and international labs
B.Sc., Chemistry	19Y619	CC-XII-Inorganic chemistry – II	Local needs	Understanding of solid state chemistry and crystal chemistry
B.Sc., Chemistry	19Y620	CC-XIII-Organic chemistry – II	Local and Global needs	Students can get exposure in reaction mechanism, rearrangements and get placement in national and international chemical labs.
B.Sc., Chemistry	19Y621	EC-II-Physical chemistry – II	National needs	structural identification using spectroscopy and placed in international labs
B.Sc., Chemistry	19Y622	EC-III-Molecular dynamics	Local needs	Students can gain knowledge in basic concept of quantum mechanics and related problems. It helps to place in research labs.
B.Sc., Chemistry	19YC	Comprehensive chemistry	Local and National needs	To help to appear entrance and competitive examination
B.Sc., Chemistry	19EVS	Environmental studies	Local and National needs	To understand the global warming and international quality of standards of pollutions.
B.Sc., Chemistry	19XY21	SKBC-I- Material Chemistry and Nanotechnology	Local and Global needs	Students can get exposure in different material and its applications
B.Sc., Chemistry	19XY32	SKBC-II- Chemistry of consumer products	Local needs	Industrial exposure to the students and become an entrepreneur in local or national

B.Sc., Chemistry	19Y4N	NMEC-I- Agricultural Science	Local needs	Students can get exposure in agriculture and get employability in agricultural fields.
B.Sc., Chemistry	19Y5N	NMEC-II-Dairy Chemistry	Local needs	Students familiar in dairy chemistry and become an entrepreneur.
M.Sc., Chemistry	19PY101	Inorganic Chemistry-I	Global needs	The subject exemplifies the wide use in each biological system and the acid base concepts in household cleaning products and fertilizers.
M.Sc., Chemistry	19PY102	Organic Chemistry-I	National needs	The study of carbon compounds and its uses in pharmaceutical fields, industries and creation of new molecules.
M.Sc., Chemistry	19PY103	Physical chemistry-I	Regional	To identify the compounds and quality of absorbance.
M.Sc., Chemistry	19PY104L	organic chemistry practical-I	Regional	The student are exposed to identify the functional groups and separation techniques.
M.Sc., Chemistry	19PY105L	Physical Chemistry practical - I	Global needs	The relation between the rate and progress of the reaction, intermediate formation and decomposition of the intermediate is educated.
M.Sc., Chemistry	19PY206	Inorganic Chemistry-II	National needs	The students are imparted about the knowledge of complex and its medicinal, electrical and industrial potential.
M.Sc., Chemistry	19PY207	Organic Chemistry-II	Regional	The importance of spectroscopic methods in quality control and proposal of mechanism are limelighter
M.Sc., Chemistry	19PY208L	Inorganic Chemistry Practical-II	Global needs	Students are challenged to call upon their manipulative and observational skills to provide the basis for

				identifying a substance or a mixture of substances.
M.Sc., Chemistry	19PY209L	Physical chemistry practical - II	National needs	Study of the conductance, potential, corrosion resistance are used in national level.
M.Sc., Chemistry	19PY210	Advanced Topics in Physical Chemistry	Global needs	students can gain knowledge in basic concept of quantum mechanics and related problems and get exposure in molecular spectroscopy and photo chemistry
M.Sc., Chemistry	19PY211	Green and Industrial Chemistry/Forensic science	Global needs	Technically skilled for meeting the emerging trends in Environmental chemistry and industrial chemistry
M.Sc., Chemistry	19PY312	Inorganic Chemistry-III	Regional needs	The students are imparted about the knowledge of complex and its medicinal, electrical and industrial potential for regional needs.
M.Sc., Chemistry	19PY313	Organic Chemistry-III	National needs	Students get knowledge in addition reactions, retero synthesis and structural identification using NMR spectroscopy.
M.Sc., Chemistry	19PY314	Physical Chemistry-III	National needs	The importance of the statistical thermodynamics, Data analysis and Nano materials are explored to the students in national level.
M.Sc., Chemistry	19PY315L	Inorganic chemistry practical - II	Regional needs	The students get exposure in estimation of ions, preparation of the inorganic complex in regional level.
M.Sc., Chemistry	19PY316L	Organic chemistry practical-II	Global needs	The students are refrained to detect the functional groups, double stage preparation of the compounds in global level.
M.Sc., Chemistry	19PY317	Instrumentation and Material chemistry	Global needs	The knowledge of Instrumentation and Techniques of IR, Raman ,

				NMR and NQR spectroscopy are used in national and global level
M.Sc., Chemistry	19PY418	Special Topics in organic Chemistry	Global needs	The students are imparted about the knowledge in organic photo chemistry, per cyclic reaction , ORD and CD
M.Sc., Chemistry	19PY419	Electro and Surface chemistry	Regional needs	To understand the electro chemistry, surface chemistry and Heterogeneous catalysis in regional level
M.Sc., Chemistry	19PY420P	Project Work	Regional needs	Project work focuses on applying, not imparting, specific knowledge or skills, and on improving student involvement and motivation in order to foster independent thinking, self-confidence, and social responsibility for regional needs.