

M.Sc. CHEMISTRY
(Two years Regular Programme)
(For Students Admitted from 2022-23)

Programme Specific Objectives:

- PSO1:** The student will acquire knowledge on Physical, Inorganic, Organic, Analytical, Computational and Industrial Chemistry
- PSO2:** Apply appropriate techniques for the qualitative and quantitative analysis of chemicals in laboratories
- PSO3:** Relate the knowledge acquired about chemical reactions and their mechanisms to design novel eco-friendly and sustainable synthetic pathways
- PSO4:** Deduce the chemical structures using data set obtained with the help of spectroscopic techniques
- PSO5:** Students will gain knowledge and practical skills to work in research projects at Different industries and research/academic institutions
- PSO6:** Consolidate and deliver chemistry related knowledge through effective written, graphical/virtual communications and interact effectively with people from various backgrounds
- PSO7:** Students will achieve in noble profession of teaching and helping in nation building through innovative research and entrepreneurship

PREAMBLE

Introduced a new elective course on Computational Chemistry in the 1st Semester.

Programme Structure
Program Code: PCH

Sem.	Subject Code	Course	Subject Title	Hrs. / wk.	Credit	CIA	ESE	Total
I	HMCHC11	Core-I	Organic Chemistry-I	6	5	40	60	100
	HMCHC12	Core-II	Inorganic Chemistry-I	6	5	40	60	100
	HMCHC13	Core-III	Physical Chemistry-I	6	5	40	60	100
	HMCHC14P	Core –IV	Organic Chemistry practicals	6	5	40	60	100
	HMCHE1A/ HMCHE1B/ HMCHE1C	DSE –I	a. Instrumental Methods of Analysis -# internship (or) b. Green and Environmental Chemistry (or) c. Computational Chemistry	6	5	40	60	100
	HMCHX1/ HMCHX1O	Extra Credit-I	Forensic Chemistry / online Course*	-	2	-	100	100
			Total	30	25+2	200	300 + 100	500 + 100
	HMCHC21	Core-V	Organic Chemistry-II	6	5	40	60	100
	HMCHC22	Core-VI	Inorganic Chemistry-II • Integrated with online course	6	5	40	60	100
	HMCHC23	Core-VII	Physical Chemistry-II	6	5	40	60	100

II	HMCHC24P	Core-VIII	Inorganic Chemistry practicals	6	5	40	60	100
	HMCHE2A/ HMCHE2B	DSE-II	a. Applied Electrochemistry (or) b. Polymer Chemistry	6	5	40	60	100
	HMCHX2/ HMCHX2O	Extra Credit-II	Applied Chemistry/ online Course*	-	2	-	100	100
			Total	30	25+2	200	300 + 100	500 + 100
III	HMCHC31	Core -XI	Organic Chemistry-III	6	5	40	60	100
	HMCHC32	Core –XII	Inorganic Chemistry-III • Integrated with online course	6	5	40	60	100
	HMCHC33	Core –XIII	Physical Chemistry-III	6	5	40	60	100
	HMCHC34P	Core –XIV	Physical Chemistry practical	6	5	40	60	100
	HMCHE3A/ HMCHE3B	DSE –III	a. Nanoscience and Nanotechnology (or) b. Material Chemistry - # internship	6	5	40	60	100
	HMCHX3/ HMCHX3O	Extra Credit- III	Employability Skills/online Course*	-	2	100	-	100
			Total	30	25+2	200 + 100	300	500 + 100
IV	HMCHC41P W	Core -XIII	Project	30	15	100	100	200
	HMCHX4/ HMCHX4O	Extra credit- IV	Agricultural Chemistry/ online Course*	-	2	-	100	100
			Total	30	15+2	100	100 + 100	200 + 100
			Grand Total	120	90 + 8	700	1000 + 400	1700 + 400

DSE - Discipline Specific Elective; *For online certification credit alone will be assigned on submission of certificate obtained through appearing for online examination from Spoken Tutorial, EDX, SWAYAM, NPTEL or Coursera.