



MANAV RACHNA UNIVERSITY
DEPARTMENT OF CHEMISTRY
M.SC (CHP01)
SCHEME-B (Effective from July 2019)

SEMESTER-1

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	COURSE NATURE (Hard/Soft/NTCC)	COURSE TYPE (Core/Elective etc)	L	T	P	O	CONTACT HOURS PER WEEK	NO. OF CREDITS
CHH 501B	Physical Chemistry-I	CH	Hard	Core	4	0	0	0	4	4
CHH 502B	Inorganic Chemistry-I	CH	Hard	Core	4	0	0	0	4	4
CHH 503B	Organic Chemistry-I	CH	Hard	Core	4	0	0	0	4	4
CHH 504B	Analytical Chemistry	CH	Hard	Core	4	0	0	0	4	4
CHH 505B	Laboratory-I	CH	Practical	Core	0	0	12	0	12	6
Total (L-T-P-O/Contact Hours/Credits)					16	0	12	0	28	22

SEMESTER - 2

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/NTCC)	COURSE TYPE (Core/Elective etc)	L	T	P	O	CONTACT HOURS PER WEEK	NO. OF CREDITS
CHH 506B	Physical Chemistry-II	CH	Hard	Core	4	0	0	0	4	4
CHH 507B	Inorganic Chemistry-II	CH	Hard	Core	4	0	0	0	4	4
CHH 508B	Organic Chemistry-II	CH	Hard	Core	4	0	0	0	4	4
CHH 509B	Molecular Spectroscopy	CH	Hard	Core	4	0	0	0	4	4
CHH 510B	Laboratory-II	CH	Practical	Core	0	0	8	0	8	4
CHN 511B	Scientific Research-I	CH	NTCC	Core	0	0	0	4	2	4
Total (L-T-P-O/Contact Hours/Credits)					16	0	8	4	26	24

SEMESTER - 3 (PHYSICAL CHEMISTRY)

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/NTCC)	COURSE TYPE (Core/Elective etc)	L	T	P	O	CONTACT HOURS PER WEEK	NO. OF CREDITS
CHH 601B	Symmetry & Group Theory	CH	Hard	Core	4	0	0	0	4	4
CHH 602B	Physical Special-I (Magneto-chemistry, Chemical Kinetics, Catalysis & ion transport)	CH	Hard	Special Core	4	0	0	0	4	4
CHH 603B	Physical Special-II (Irreversible thermodynamics, Transport Phenomenon, Photochemistry & Fast Reaction)	CH	Hard	Special Core	4	0	0	0	4	4
CHH 604B / CHH 605B	Physical Elective:(Advanced Spectroscopy/ Advanced Chemical Kinetics)	CH	Hard	Special Core	4	0	0	0	4	4
CHH 606B	Physical Laboratory	CH	Practical	Core	0	0	8	0	8	4
CHN 607B	Scientific Research-II	CH	NTCC	Core	0	0	0	4	2	4
Total (L-T-P-O/Contact Hours/Credits)					16	0	8	4	26	24

SEMESTER - 3 (INORGANIC CHEMISTRY)

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/NTCC)	COURSE TYPE (Core/Elective etc)	L	T	P	O	CONTACT HOURS PER WEEK	NO. OF CREDITS
CHH 601B	Symmetry & Group Theory	CH	Hard	Core	4	0	0	0	4	4
CHH 608B	Inorganic Special-I (Organometallic Chemistry of Transition Metals & Bio Inorganic Chemistry)	CH	Hard	Special Core	4	0	0	0	4	4
CHH 609B	Inorganic Special-II (Supramolecular Chemistry & Metal Clusters)	CH	Hard	Special Core	4	0	0	0	4	4
CHH 610B/ CHH 611B	Inorganic Elective: (Solid state Materials / Inorganic & Biological Catalysis)	CH	Hard	Special Core	4	0	0	0	4	4
CHH-612B	Inorganic Laboratory	CH	Practical	Core	0	0	8	0	8	4
CHN 607B	Scientific Research-II	CH	NTCC	Core	0	0	0	4	2	4
Total (L-T-P-O/Contact Hours/Credits)					16	0	8	4	26	24

SEMESTER - 3 (ORGANIC CHEMISTRY)

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/NTCC)	COURSE TYPE (Core/Elective etc)	L	T	P	O	CONTACT HOURS PER WEEK	NO. OF CREDITS
CHH 601B	Symmetry & Group Theory	CH	Hard	Core	4	0	0	0	4	4
CHH613B	Organic Special-I (Statistical Stereochemistry & Asymmetric Synthesis)	CH	HARD	SPECIAL CORE	4	0	0	0	4	4
CHH614B	Organic Special-II (Photochemistry & Pericyclic Reaction)	CH	HARD	SPECIAL CORE	4	0	0	0	4	4
CHH615B CHH616B CHH617B	Organic Elective (Modern Organic Synthetic Technique / Bioorganic Chemistry/ Chemistry of Natural Products)	CH	HARD	CORE ELECTIVE	4	0	0	0	4	4
CHH-618B	ORGANIC LABORATORY WORK	CH	PRACTICAL	CORE	0	0	8	0	8	4
CHN-607-B	SCIENTIFIC RESEARCH-2	CH	NTCC	CORE	0	0	0	4	2	4
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					16	0	8	8	26	24

SEMESTER - 4 (ALL SPECIALIZATION)

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	COURSE NATURE (Hard/Soft/ NTCC)	COURSE TYPE (Core/ Elective etc)	L	T	P	O	CONTACT HOURS PER WEEK	NO. OF CREDITS
CHN619B	MAJOR PROJECT (Industrial or research lab training)	CH	NTCC	CORE	0	0	0	12	0	12
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					0	0	0	12	0	12

Semester	Classroom Contact hours	Non teaching Outcome hrs	credits
FIRST SEMESTER	28	0	22
SECOND SEMESTER	26	4	24
THIRD SEMESTER	26	4	24
FOURTH SEMESTER	0	12	12
TOTAL	80	20	82