



**MANAV RACHNA UNIVERSITY**  
**DEPARTMENT OF CHEMISTRY**  
**M.SC (CHP01)**  
**SCHEME-A (Effective from July 2018)**

**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
CHH501	INORGANIC CHEMISTRY-I	CH	Hard	CORE	4	0	0	0	4	4
CHH502	ORGANIC CHEMISTRY-I	CH	Hard	CORE	4	0	0	0	4	4
CHH503	PHYSICAL CHEMISTRY-I	CH	Hard	CORE	4	0	0	0	4	4
CHH504	ANALYTICAL CHEMISTRY	CH	Hard	CORE	4	0	0	0	4	4
CHH505	LABORATORY WORK-I	CH	Hard	CORE	0	0	8	0	8	4
CHW506	WORKSHOP	CH	Hard	CORE	0	0	3	0	3	2
PHS-501	RESEARCH METHODOLOGY	CH	Hard	CORE	1	0	2	0	3	2
<b>Total (L-T-P-O/Contact Hours/Credits)</b>					<b>17</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>30</b>	<b>24</b>

**SEMESTER - 2**

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE	COURSE TYPE	L	T	P	O	CONTACT HOURS PER	NO. OF CREDITS
CHH508	INORGANIC CHEMISTRY-II	CH	Hard	CORE	4	0	0	0	4	4
CHH509	ORGANIC CHEMISTRY-II	CH	Hard	CORE	4	0	0	0	4	4
CHH510	PHYSICAL CHEMISTRY-II	CH	Hard	CORE	4	0	0	0	4	4
CHH511	SPECTROSCOPY	CH	Hard	CORE	4	0	0	0	4	4
CHH512	LABORATORY WORK-II	CH	Hard	CORE	0	0	8	0	8	4
CHW513	WORKSHOP	CH	Hard	CORE	0	0	3	0	3	2
CHS538	MINOR PROJECT-I	CH	Soft	CORE	1	0	2	0	3	2
CHW514	SUMMER TRAINING	-	-	-	-	-	-	-	-	3
<b>Total (L-T-P-O/Contact Hours/Credits)</b>					<b>17</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>30</b>	<b>27</b>

**SEMESTER - 3 (INORGANIC CHEMISTRY)**

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE	COURSE TYPE	L	T	P	O	CONTACT HOURS PER	NO. OF CREDITS
CHH 629	INSTRUMENTATION TECHNIQUES AND SEPARATION METHODS	CH	Hard	CORE	4	0	0	0	4	4
CHH630	SOLID STATE CHEMISTRY	CH	Hard	CORE	4	0	0	0	4	4
CHH617 CHH618 CHH631	ELECTIVE-I A. BIOINORGANIC CHEMISTRY & ORGANOMETALLIC CHEMISTRY B. DRUG DESIGN C. POLYMER CHEMISTRY	CH	Hard	CORE	4	0	0	0	4	4
CHH632	METAL CLUSTERS AND ADVANCED COORDINATION CHEMISTRY	CH	Hard	CORE	4	0	0	0	4	4

CHH620	LABORATORY WORK-III	CH	Hard	CORE	0	0	6	0	6	3
CHH637	LABORATORY WORK-IV -I	CH	Hard	CORE	0	0	6	0	6	3
CHN639	MINOR PROJECT -II	CH	Soft	CORE	0	0	0	2	2	2
<b>Total (L-T-P-O/Contact Hours/Credits)</b>					<b>16</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>30</b>	<b>24</b>

### SEMESTER - 3 (ORGANIC CHEMISTRY)

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE	COURSE TYPE	L	T	P	O	CONTACT HOURS PER	NO. OF CREDITS
CHH615	CONFORMATIONAL ANALYSIS, ASYMMETRIC SYNTHESIS & BIOMOLECULES	CH	Hard	CORE	4	0	0	0	4	4
CHH616	MODERN ORGANIC SYNTHESIS (REAGENTS & SYNTHETIC TECHNIQUES)	CH	Hard	CORE	4	0	0	0	4	4
CHH617 CHH618 CHH631	ELECTIVE-I A. BIOINORGANIC CHEMISTRY & ORGANOMETALLIC CHEMISTRY B.DRUG DESIGN C.POLYMER CHEMISTRY	CH	Hard	CORE	4	0	0	0	4	4
CHH619	PHOTOCHEMISTRY & PERICYCLIC REACTIONS	CH	Hard	CORE	4	0	0	0	4	4
CHH620	LABORATORY WORK-III	CH	Hard	CORE	0	0	6	0	6	3
CHH621	LABORATORY WORK-IV –O	CH	Hard	CORE	0	0	6	0	6	3
CHN639	MINOR PROJECT -II	CH	Soft	CORE	0	0	0	2	2	2
<b>Total (L-T-P-O/Contact Hours/Credits)</b>					<b>16</b>	<b>0</b>	<b>12</b>	<b>2</b>	<b>30</b>	<b>24</b>

### SEMESTER - 4 (INORGANIC CHEMISTRY)

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	*COURSE NATURE	COURSE TYPE	L	T	P	O	CONTACT HOURS PER	NO. OF CREDITS
CHH634	APPLIED ORGANOMETALLIC AND APPLIED BIO-CATALYSIS	CH	Hard	CORE	4	0	0	0	4	4
CHH635	NUCLEAR, RADIOCHEMISTRY AND LASERS	CH	Hard	CORE	4	0	0	0	4	4
CHH625 CHH626 CHH636	ELECTIVE-II (A) BIOORGANIC CHEMISTRY (B) GROUP THEORY AND ITS APPLICATIONS (C) NANOSCALE MATERIALS: SYNTHESIS, PROPERTIES AND APPLICATIONS	CH	Hard	CORE	4	0	0	0	4	4
CHH633	LABORATORY WORK-V -I	CH	Hard	CORE	4	0	0	0	4	4
CHH628	MAJOR PROJECT	CH	Hard	CORE	0	0	6	0	6	3

Total (L-T-P-O/Contact Hours/Credits)

16	0	6	0	22	19
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**SEMESTER - 4 (ORGANIC CHEMISTRY)**

SUBJECT CODES	SUBJECT NAME	OFFERING DEPARTMENT	COURSE NATURE (Hard/Soft)	COURSE TYPE (Core)	L	T	P	O	CONTACT HOURS PER WEEK	NO. OF CREDITS
CHH634	ADVANCED HETEROCYCLIC CHEMISTRY	CH	Hard	CORE	4	0	0	0	4	4
CHH635	CHEMISTRY OF NATURAL PRODUCTS	CH	Hard	CORE	4	0	0	0	4	4
CHH625 CHH626 CHH636	ELECTIVE-II (A) BIOORGANIC CHEMISTRY (B) GROUP THEORY AND ITS APPLICATIONS (C) NANOSCALE MATERIALS: SYNTHESIS, PROPERTIES AND APPLICATIONS	CH	Hard	CORE	4	0	0	0	4	4
CHH627	LABORATORY WORK-V -O	CH	Hard	CORE	4	0	0	0	4	4
CHH628	MAJOR PROJECT	CH	Hard	CORE	0	0	6	0	6	3
<b>Total (L-T-P-O/Contact Hours/Credits)</b>					<b>16</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>22</b>	<b>19</b>
	<b>TOTAL</b>	<b>CH</b>	<b>Hard</b>	<b>CORE</b>						<b>96</b>