



**MANAV RACHNA UNIVERSITY**  
**DEPARTMENT OF CHEMISTRY**  
**B.SC (CHU01)**  
**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
MAH110B / MAH105B	FUNDAMENTAL OF MATHEMATICS/ STATISTICAL MATHEMATICS	MA	HARD	ALLIED CORE	3	1	0	0	4	4
PHH106B-T	ESSENTIALS OF PHYSICS	PH	HARD	ALLIED CORE	3	1	0	0	4	4
PHH106B-P	ESSENTIALS OF PHYSICS LAB	PH	PRACTICAL	ALLIED CORE	0	0	2	0	2	1
HLS 102	COMMUNICATIVE ENGLISH	HUM	SOFT COURSE	ALLIED CORE	1	0	2	0	3	2
CSH 105 B-T	PROGRAMMING FOR PROBLEM SOLVING USING C	CS	HARD	ALLIED CORE	2	1	0	0	3	3
CHS 105 B-P	PROGRAMMING FOR PROBLEM SOLVING USING C- LAB	CS	PRACTICAL	ALLIED CORE	0	0	2	0	2	1
CHH101B-T	GREEN CHEMISTRY	CH	HARD	CORE	3	1	0	0	4	4
CHH101B-P	GREEN CHEMISTRY-LAB	CH	PRACTICAL	CORE	0	0	2	0	2	1
<b>TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)</b>					<b>12</b>	<b>4</b>	<b>8</b>	<b>0</b>	<b>24</b>	<b>20</b>

**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
CHH102B-T	PHYSICAL CHEMISTRY I	CH	HARD	CORE	3	1	0	0	4	4
CHH102B-P	PHYSICAL CHEMISTRY I-LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
CHH103B-T	INORGANIC CHEMISTRY I	CH	HARD	CORE	3	1	0	0	4	4
CHH103B-P	INORGANIC CHEMISTRY I-LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
CHH104B-T	ORGANIC CHEMISTRY-I	CH	HARD	CORE	3	1	0	0	4	4
CHH104B-P	ORGANIC CHEMISTRY-I LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
CHH137B	ENVIRONMENTAL SCIENCE	CH	HARD	CORE	2	0	0	2	2	4
<b>TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)</b>					<b>11</b>	<b>3</b>	<b>9</b>	<b>2</b>	<b>23</b>	<b>20.5</b>

SUMMER TRAINING ON VALUE ADDED MODULES (CHN105B): 2 CREDITS

### SEMESTER - 3

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
CHH201B-T	PHYSICAL CHEMISTRY II	CH	HARD	CORE	3	1	0	0	4	4
CHH201B-P	PHYSICAL CHEMISTRY II-LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
CHH202B-T	INORGANIC CHEMISTRY II	CH	HARD	CORE	3	1	0	0	4	4
CHH202B-P	INORGANIC CHEMISTRY II-LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
CHH203B-T	ORGANIC CHEMISTRY II	CH	HARD	CORE	3	1	0	0	4	4
CHH203B-P	ORGANIC CHEMISTRY II-LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
ODD SEMESTER OPEN ELECTIVE	ODD SEMESTER BASKET OF ELECTIVES: EDUCATION: APPLIED PSYCHOLOGY, ENVIRONMENT: ENVIRONMENT AND SUSTAINABLE DEVELOPMENT MANAGEMENT: BASICS OF ECONOMICS LAW: CONSTITUTIONAL LAW MINI PROJECT-1 (CHN204B)		SOFT/NTCC		2 0	0 0	0 0	0 2	2 0	2
	FOREIGN LANGUAGE: GERMAN/SPANISH/FRENCH	MRCFL	SOFT	ALLIED ELECTIVE	1	1	0	0	2	2
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					12/ 10	4	9	0/2	25/23	20.5

### SEMESTER - 4

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
CHH205B-T	PHYSICAL CHEMISTRY III	CH	HARD	CORE	3	1	0	0	4	4
CHH205B-P	PHYSICAL CHEMISTRY III- LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
CHH206B-T	INORGANIC CHEMISTRY III	CH	HARD	CORE	3	1	0	0	4	4
CHH206B-P	INORGANIC CHEMISTRY III- LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
CHH207B-T	ORGANIC CHEMISTRY III	CH	HARD	CORE	3	1	0	0	4	4
CHH207B-P	ORGANIC CHEMISTRY III-LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
CHH208B CHH209B	POLYMER CHEMISTRY/ INDUSTRIAL CHEMISTRY	CH	HARD	ELECTIVE	3	1	0	0	4	4
EVEN SEMESTER OPEN ELECTIVE	EVEN SEMESTER BASKET OF ELECTIVES: Education: Applied Philosophy Mathematics: Auantitative Aptitude Management: Introduction to Finance LAW: IPR TECHNOLOGY: E-waste management MINI PROJECT-2, (CHN-210B)		SOFT	ELECTIVE	2 0	0 0	0 0	0 2	2 0	2
TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)					14/ 12	4	9	0/ 2	27/ 25	22.5

### SEMESTER - 5

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
CHH301B-T	PHYSICAL CHEMISTRY IV	CH	HARD	CORE	3	1	0	0	4	4
CHH301B-P	PHYSICAL CHEMISTRY IV- LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
CHH302B-T	BIOCHEMISTRY & NATURAL PRODUCTS	CH	HARD	CORE	3	1	0	0	4	4
CHH302B-P	BIOCHEMISTRY & NATURAL PRODUCTS-LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
CHH303B-T	ANALYTICAL CHEMISTRY & SPECTROSCOPY	CH	HARD	CORE	3	1	0	0	4	4
CHH303B-P	ANALYTICAL CHEMISTRY & SPECTROSCOPY- LAB	CH	PRACTICAL	CORE	0	0	3	0	3	1.5
DOMAIN SPECIFIC ELECTIVES	CHEMISTRY IN AGRICULTURE (CHS304B)/ FUEL CHEMISTRY (CHS305B)/ NANO TECHNOLOGY (CHS306B)/ MINOR PROJECT (CHN307B)	CH			2 0	0 0	0 0	0 2	0 2	2
<b>TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)</b>					<b>9/ 11</b>	<b>3</b>	<b>9</b>	<b>0/2</b>	<b>21/ 23</b>	<b>18.5</b>

### SEMESTER - 6

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
CHH308B CHH309B	FOOD SCIENCE / INSTRUMENTAL METHOD OF CHEMICAL ANALYSIS	CH	HARD	Elective	3	1	0	0	4	4
CHH310B CHH311B	CHEMICALS & ENVIRONMENT / CLINICAL & PHARMACEUTICAL CHEMISTRY /	CH	HARD	Elective	3	1	0	0	4	4
CHN312B	MAJOR PROJECT	CH	NTCC	CORE	0	0	0	8	2	8
<b>TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)</b>					<b>6</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>10</b>	<b>16</b>

\*\* Student going for Industrial training can opt elective courses in semester 6 as equivalent MOOC course.

\*\* Departmental Core elective subjects will be conducted only when 25% of the students register for particular course.

\*\* Major project will be evaluated by report submission and oral examination.

\* Student may opt equivalent MOOC course to map the credits of odd and even semester basket of skill enhancement.

Semester	Classroom Contact hours	Non-teaching Outcome hrs	Credits
First Semester	24	0	20
Second Semester	23	2	20.5
Summer Training	NA	NA	2
Third Semester	23-25	0—2	20.5
Fourth Semester	25-27	0—2	22.5
Fifth Semester	21-23	0—2	18.5
Sixth Semester	10	8	16
Total	126 to 132	10 to 16	120