



**MANAV RACHNA UNIVERSITY**  
**DEPARTMENT OF CHEMISTRY**  
**B.SC (CHU01)**

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
MAH113-T	ESSENTIALS OF MATHEMATICS	MA	HARD	CORE	3	1	0	0	4	4
MAH114-T	FUNDAMENTALS OF MATHEMATICS									
MAH113-P	ESSENTIALS OF MATHEMATICS LAB	MA	HARD	CORE	0	0	2	0	2	1
MAH114-P	FUNDAMENTALS OF MATHEMATICS LAB									
PHH107-T	ESSENTIALS OF PHYSICS	PH	HARD	CORE	3	1	0	0	4	4
PHH107-P	ESSENTIALS OF PHYSICS LAB									
CHH101-T	GREEN CHEMISTRY	CH	HARD	CORE	3	1	0	0	4	4
CHH101-P	GREEN CHEMISTRY LAB									
CSH101-T	STRUCTURED PROGRAMMING	CS	HARD	CORE	3	1	0	0	4	4
CSH101-P	STRUCTURED PROGRAMMING LAB									
HLS101	BUSINESS ENGLISH	HL	SOFT	CORE	1	0	2	0	3	2
CSW151	COMPUTING WORKSHOP	CS	WORKSHOP	CORE	0	0	3	0	3	1.5
CHH137	ENVIRONMENTAL SCIENCE	CH	HARD	CORE	2	0	0	2	2	4
	ENGLISH LANGUAGE FOR COMPETITIVE EXAMS *		SOFT	ELECTIVE						
	HISTORY OF ENGLISH LANGUAGE AND LITERATURE *		SOFT	ELECTIVE						
<b>TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)</b>					<b>16</b>	<b>4</b>	<b>13</b>	<b>1</b>	<b>32</b>	<b>27.5</b>

\* In place of Business English student may opt soft course of English through NPTEL

**SEMESTER - 2**

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
CHH106-T	PHYSICAL CHEMISTRY I	CH	HARD	CORE	3	1	0	0	4	4
CHH106-P	PHYSICAL CHEMISTRY I LAB									
CHH107-T	INORGANIC CHEMISTRY I	CH	HARD	CORE	3	1	0	0	4	4
CHH107-P	INORGANIC CHEMISTRY I LAB									
MAH117-T	ADVANCED MATHEMATICS	MA	HARD	CORE	3	1	0	0	4	4
MAH118-T	FUNDAMENTALS OF MATHEMATICS-II									
MAH117-P	ADVANCED MATHEMATICS LAB									
MAH118-P	FUNDAMENTALS OF MATHEMATICS-II LAB									
PHH108-T	MODERN PHYSICS	PH	HARD	CORE	3	1	0	0	4	4
PHH108-P	MODERN PHYSICS LAB									
HLS102	COMMUNICATIVE ENGLISH	HL	SOFT	CORE	1	0	2	0	3	2
CHW109	CHEMISTRY IN EVERYDAY LIFE	CH	WORKSHOP	CORE	0	0	3	0	3	1.5
<b>TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)</b>					<b>13</b>	<b>4</b>	<b>13</b>	<b>0</b>	<b>30</b>	<b>23.5</b>

**SUMMER TRAINING POST 2nd SEMESTER CHO110**

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**SEMESTER - 3**

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
CHH211-T	INORGANIC CHEMISTRY II	CH	HARD	CORE	3	1	0	0	4	4
CHH211-P	INORGANIC CHEMISTRY II LAB									
CHH212-T	PHYSICAL CHEMISTRY II	CH	HARD	CORE	3	1	0	0	4	4
CHH212-P	PHYSICAL CHEMISTRY II LAB									
CHH213-T	ORGANIC CHEMISTRY I	CH	HARD	CORE	3	1	0	0	4	4
CHH213-P	ORGANIC CHEMISTRY I LAB									
CHH214-T	ANALYTICAL CHEMISTRY & SPECTROSCOPY	CH	HARD	CORE	3	1	0	0	4	4
CHH214-P	ANALYTICAL CHEMISTRY & SPECTROSCOPY LAB									
MCS-231	MANAGEMENT ELECTIVES: (1) Basics for Economics	MAN	SOFT	ELECTIVE	1	0	2	0	3	2
MCS-232	(2) Introduction to Finance									
EDS-290	HUMANITIES ELECTIVES: (1) Sociology	HUM	SOFT	ELECTIVE	1	0	2	0	3	2
EDS-289	(2) Philosophy									
EDS-288	(3) Psychology									
CHW215	EXTRACTION & SYNTHESIS	CH	WORKSHOP	CORE	0	0	3	0	3	1.5
FLS103	FRENCH-I	MRCFL	SOFT	UNIVERSITY COMPULSORY	1	1	0	0	2	0
FLS101	SPANISH-I									
FLS102	GERMAN-I									
	CORPORATE SOCIAL RESPONSIBILITY*		SOFT	ELECTIVE						
	SUSTAINABILITY THROUGH GREEN MANUFACTURING SYSTEMS: AN APPLIED APPROACH*		SOFT	ELECTIVE						
<b>TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)</b>					<b>17</b>	<b>5</b>	<b>15</b>	<b>0</b>	<b>35</b>	<b>25.5</b>

\*For Humanities and Management Electives student may opt for course through NPTEL

## SEMESTER - 4

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
CHH216-T	INORGANIC CHEMISTRY III	CH	HARD	CORE	3	1	0	0	4	4
CHH216-P	INORGANIC CHEMISTRY III LAB				0	0	2	0	2	1
CHH217-T	PHYSICAL CHEMISTRY III	CH	HARD	CORE	3	1	0	0	4	4
CHH217-P	PHYSICAL CHEMISTRY III LAB				0	0	2	0	2	1
CHH218-T	ORGANIC CHEMISTRY II	CH	HARD	CORE	3	1	0	0	4	4
CHH218-P	ORGANIC CHEMISTRY II LAB				0	0	2	0	2	1
CHH219-T	POLYMER CHEMISTRY	CH	HARD	ELECTIVE	3	1	0	0	4	4
CHH220-T	CLINICAL AND PHARMACEUTICAL CHEMISTRY				0	0	2	0	2	1
CHH219-P	POLYMER CHEMISTRY LAB				0	0	2	0	2	1
CHH220-P	CLINICAL AND PHARMACEUTICAL CHEMISTRY LAB	MA	SOFT	CORE	1	0	2	0	3	2
MAS 230	QUANTITATIVE APTITUDE				1	0	2	0	3	2
ECS-249 CHS234	ENVIRONMENT ETHICS AND SUSTAINABLE DEVELOPMENT: 1. E-Waste: Environmental problem and management 2. Environmental Sustainable Development	EC	SOFT	ELECTIVE	1	0	2	0	3	2
		CH								
CHW221	WORKSHOP ON COROSION	CH	WORKSHOP	CORE	0	0	3	0	3	1.5
<b>TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)</b>					<b>14</b>	<b>4</b>	<b>15</b>	<b>0</b>	<b>33</b>	<b>25.5</b>

## SUMMER TRAINING POST 4TH SEMESTER (CHO222)

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## SEMESTER - 5

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
CHH323-T	INSTRUMENTAL METHOD OF CHEMICAL ANALYSIS	CH	HARD	CORE	3	1	0	0	4	4
CHH323-P	INSTRUMENTAL METHOD OF CHEMICAL ANALYSIS				0	0	2	0	2	1
CHH324-T	ORGANIC CHEMISTRY III	CH	HARD	CORE	3	1	0	0	4	4
CHH324-P	ORGANIC CHEMISTRY III LAB				0	0	2	0	2	1
CHH325-T	PHYSICAL CHEMISTRY IV	CH	HARD	CORE	3	1	0	0	4	4
CHH325-P	PHYSICAL CHEMISTRY IV LAB				0	0	2	0	2	1
CHH326-T	FOOD CHEMISTRY & TECHNOLOGY	CH	HARD	ELECTIVE	3	1	0	0	4	4
CHH327-T	GREEN TECHNOLOGY				0	0	2	0	2	1
CHH326-P	FOOD CHEMISTRY & TECHNOLOGY LAB	CH	HARD	ELECTIVE	0	0	2	0	2	1
CHH327-P	GREEN TECHNOLOGY LAB				0	0	2	0	2	1
CHN328	Minor Project	CH	NTCC	CORE	0	0	0	2	0	2
<b>TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)</b>					<b>12</b>	<b>4</b>	<b>8</b>	<b>2</b>	<b>24</b>	<b>22</b>

## SEMESTER - 6

SUBJECT CODES	SUBJECT NAME	**OFFERING DEPARTMENT	*COURSE NATURE (Hard/Soft/Workshop/NTCC)	COURSE TYPE (Core/Elective / University Compulsory)	L	T	P	O	NO. OF CONTACT HOURS PER WEEK	NO. OF CREDITS
CHH329-T	INDUSTRIAL & APPLIED CHEMISTRY-I	CH	HARD	CORE	3	1	0	0	4	4
CHH329-P	INDUSTRIAL & APPLIED CHEMISTRY LAB-I				0	0	2	0	2	1
CHH330-T	CHEMISTRY OF BIOMOLECULES & NATURAL PRODUCTS	CH	HARD	CORE	3	1	0	0	4	4
CHH330-P	CHEMISTRY OF BIOMOLECULES & NATURAL PRODUCTS LAB				0	0	2	0	2	1
CHH331-T	INDUSTRIAL & APPLIED CHEMISTRY-II	CH	HARD	ELECTIVE	3	1	0	0	4	4
CHH332-T	CHEMICALS & ENVIRONMENT				0	0	2	0	2	1
CHH331-P	INDUSTRIAL & APPLIED CHEMISTRY LAB-II	CH	HARD	ELECTIVE	0	0	2	0	2	1
CHH332-P	CHEMICALS & ENVIRONMENT LAB				0	0	2	0	2	1
CHN333	PROJECT	CH	NTCC	CORE	0	0	0	5	5	5
<b>TOTAL (L-T-P-O/CONTACT HOURS/CREDITS)</b>					<b>9</b>	<b>3</b>	<b>6</b>	<b>5</b>	<b>23</b>	<b>20</b>

S.No.	Semester	Credits
1	I	27.5
2	II	23.5
3	SUMMER TRAINING (POST 2nd SEM)	3
4	III	25.5
5	IV	25.5
6	SUMMER TRAINING (POST 4th SEM)	3
7	V	22
8	VI	20
	Life Skill Program	2
	<b>TOTAL CREDITS</b>	<b>152</b>