

| MANAV RACHNA UNIVERSITY | | | | | | | | | | |
|---|--|-----------------------|--|---|-----------|----------|----------|----------|-------------------------------|----------------|
| DEPARTMENT OF MATHEMATICS | | | | | | | | | | |
| B.Sc. (Hons.) Mathematics (MAU01) | | | | | | | | | | |
| SEMESTER - 1 | | | | | | | | | | |
| 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 |
| MAH107B | ALGEBRA | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH108B | CALCULUS-I | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| CSH105B - T | PROGRAMMING FOR PROBLEM SOLVING USING C | CS | HARD | CORE | 2 | 1 | 0 | 0 | 5 | 4 |
| CSH105B - P | PROGRAMMING FOR PROBLEM SOLVING USING C LAB | | | | 0 | 0 | 2 | 0 | | |
| PHH106B -T | ESSENTIALS OF PHYSICS | PH | HARD | CORE | 3 | 1 | 0 | 0 | 6 | 5 |
| PHH106B -P | ESSENTIALS OF PHYSICS LAB | | | | 0 | 0 | 2 | 0 | | |
| MAH109B | MATHS LAB - I | MA | HARD | CORE | 0 | 0 | 2 | 0 | 2 | 1 |
| HLS102 | COMMUNICATIVE ENGLISH | HL | SOFT | CORE | 1 | 0 | 2 | 0 | 3 | 2 |
| TOTAL (L-T-P-O/CONTACT HOURS/CREDITS) | | | | | 12 | 4 | 8 | 0 | 24 | 20 |
| 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 |
| MAH115B | CALCULUS-II | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH111B | STATISTICS - I | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH112B | ORDINARY DIFFERENTIAL EQUATIONS | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH113B | GEOMETRY OF TWO AND THREE DIMENSIONS | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH114B | MATH LAB - II | MA | HARD | CORE | 0 | 0 | 2 | 0 | 2 | 1 |
| CHH137 | ENVIRONMENTAL SCIENCE | CH | HARD | UNIVERSITY COMPULSORY | 2 | 0 | 0 | 2 | 2 | 4 |
| TOTAL (L-T-P-O/CONTACT HOURS/CREDITS) | | | | | 14 | 4 | 2 | 2 | 20 | 21 |
| MAO116B | VALUE ADDED SUMMER COURSE - POST 2nd SEMESTER | | | | | | | | | 2 |
| 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 |
| MAH204B | REAL ANALYSIS | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH205B | STATISTICS - II | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH206B | GROUP THEORY | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH207B | PARTIAL DIFFERENTIAL EQUATIONS | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH208B | MATH LAB - III | MA | HARD | CORE | 0 | 0 | 2 | 0 | 2 | 1 |
| EDS288/ EDS289/ EDS290/ MCS231/ MCS232/ CDO203/ MAN209B | APPLIED PHILOSOPHY/ APPLIED PSYCHOLOGY/APPLIED SOCIOLOGY/ BASICS OF ECONOMICS/ INTRODUCTION TO FINANCE/ QUANTITATIVE APTITUDE - I/ MINI PROJECT - I | ED/MC/ CDC/MA | SOFT/ NTCC | ELECTIVE (ANY ONE) | 1 | 0 | 2 | 0 | 3 | 2 |
| FLS103 | FRENCH - I | MRCFL | SOFT | UNIVERSITY COMPULSORY | 1 | 1 | 0 | 0 | 2 | 2 |
| FLS101 | SPANISH - I | | | | | | | | | |
| FLS102 | GERMAN - I | | | | | | | | | |
| TOTAL (L-T-P-O/CONTACT HOURS/CREDITS) | | | | | 14 | 5 | 4 | 0 | 23 | 21 |

| 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 |
| MAH210B | ADVANCED ANALYSIS | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH211B | ADVANCED ALGEBRA | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH212B | MECHANICS-I | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH213B | INTEGRAL TRANSFORMS & APPLICATION | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH214B | SET & NUMBER THEORY | MA | HARD | ELECTIVE (ANY ONE) | 3 | 1 | 0 | 0 | 4 | 4 |
| CSH210B -T | DATA STRUCTURES | CS | | | 3 | 0 | 0 | 0 | 5 | |
| CSH210B -P | DATA STRUCTURES LAB | | | | 0 | 0 | 2 | 0 | | |
| MAH215B | ACTUARIAL STATISTICS | MA | | | 3 | 1 | 0 | 0 | 4 | |
| MAH216B | SURVEY SAMPLING & INDIAN OFFICIAL STATS | MA | | | 3 | 1 | 0 | 0 | 4 | |
| CHS234/ ECS306B/ CDO204/LWS32 3 | ESD/ E-WASTE/ QUANTITATIVE APTITUDE-II/ CYBER LAWS | CH/EC/CDC/L W/MA | SOFT/ NTCC | ELECTIVE (ANY ONE) | 1 | 0 | 2 | 0 | 3 | 2 |
| MAN218B | MINI PROJECT-II | | | | | | | | | |
| CDO205 | CAREER SKILLS - I | CDC | SOFT | API/ AF | 2 | 0 | 0 | 0 | 2 | 0 |
| TOTAL (L-T-P-O/CONTACT HOURS/CREDITS) | | | | | 16 | 4 OR 5 | 2 OR 4 | 0 | 21 OR 22 | 22 |
| 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 |
| MAH301B | NUMERICAL ANALYSIS | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH302B | LINEAR ALGEBRA | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH303B | METRIC SPACES | MA | HARD | CORE | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH304B | INFORMATION THEORY & CODING | MA | HARD | ELECTIVE (ANY ONE) | 3 | 1 | 0 | 0 | 4 | 4 |
| CSH321B-T | INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS | CS | | | 3 | 0 | 0 | 0 | 5 | |
| CSH321B-P | INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS LAB | | | | 0 | 0 | 2 | 0 | | |
| MAH305B | MATHEMATICS OF FINANCE | MA | | | 3 | 1 | 0 | 0 | 4 | |
| MAH306B | STATISTICAL INFERENCE | MA | | | 3 | 1 | 0 | 0 | 4 | |
| MAH307B | MATH LAB - IV | MA | HARD | CORE | 0 | 0 | 2 | 0 | 2 | 1 |
| CDO303 | CAREER SKILLS - II | CDC | SOFT | API/ AF | 2 | 0 | 0 | 0 | 2 | 0 |
| MAN308B | MINOR PROJECT | MA | NTCC | CORE | 0 | 0 | 0 | 2 | 2 | 2 |
| TOTAL (L-T-P-O/CONTACT HOURS/CREDITS) | | | | | 13 | 3 OR 4 | 4 OR 6 | 2 | 22 OR 23 | 19 |
| 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 |
| MAH309B | LINEAR PROGRAMMING & GAME THEORY | MA | HARD | ELECTIVE (ANY TWO) | 3 | 1 | 0 | 0 | 8 | 8 |
| MAH310B | MECHANICS-II | | | | | | | | | |
| MAH311B | DISCRETE MATHEMATICS | | | | | | | | | |
| MAH312B | MATHEMATICAL MODELING | | | | | | | | | |
| MAH313B | APPLICATIONS OF ALGEBRA | | | | | | | | | |
| MAH314B | INDUSTRIAL MATHEMATICS | MA | HARD | ELECTIVE (ANY ONE) | 3 | 1 | 0 | 0 | 4 | 4 |
| MAH315B | BIO MATHS | | | | | | | | | |
| MAH316B | CRYPTOGRAPHY | CS | HARD | ELECTIVE (ANY ONE) | 3 | 0 | 0 | 0 | 5 | 4 |
| CSE322B-T | FUNDAMENTALS OF MACHINE LEARNING | | | | | | | | | |
| CSE322B -P | FUNDAMENTALS OF MACHINE LEARNING LAB | | | | 0 | 0 | 2 | 0 | | |
| MCH393 | MANAGEMENT OF BANKING & INSURANCE | MC | | | 3 | 1 | 0 | 0 | 4 | |
| MAH317B | ECONOMETRICS | MA | | | 3 | 1 | 0 | 0 | 4 | |
| MCH109 | ENTREPRENEURSHIP THEORY & PRACTICE | MC | | | 3 | 1 | 0 | 0 | 4 | |
| MAN318B | PROJECT | MA | NTCC | CORE | 0 | 0 | 0 | 6 | 2 | 6 |
| CDO305 | CAREER SKILLS - III | CDC | SOFT | API/ AF | 2 | 0 | 0 | 0 | 2 | 0 |
| TOTAL (L-T-P-O/CONTACT HOURS/CREDITS) | | | | | 9 | 2 OR 3 | 0 OR 2 | 6 | 16 OR 17 | 18 |
| GRAND TOTAL OF CREDITS | | | | | | | | | | 123 |