



Program Outcomes, Program Specific Outcomes & Course Outcomes



Redefining the Meanings of Education

Redefining the Meanings of Education

GOVT. RAZA P. G. COLLEGE, RAMPUR

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PREFACE

Program outcome represent the knowledge, skills, and attitudes of the students at the end of a degree program and Course Outcomes are the resultant knowledge skills that the students acquire at the end of the course. It defines the cognitive processes a course provides.

The IQAC of the college along with the concerned departments prepares the program outcomes and course outcomes in alignment with the university prescribed syllabus, the core values, and the objectives of the college. At the beginning of the session the teachers orient the students on the programme outcomes and course outcomes of all courses. The Programme outcomes and course outcomes are made available in the college website for ready reference. Hard copy of syllabi and learning outcomes are available in all the departments for ready reference to the teachers and students. The course plans are prepared in the departments by the teachers handling each course. It is designed to incorporate the teaching, learning, and assessment strategies in such a way as to give enough weightage to each of the specified learning activities and attainment of outcomes.

Along with the prescribed curriculum and traditional teaching methods like lectures, assessments, quiz, notes sharing, assignments etc. smart boards, ICT tools, projectors are employed, partially automated library with text books, reference books and e-resources. There is an effective and transparent continuous internal evaluation system comprising of sessional test, attendance and assignment which helps in the improvement of students' performance. After completion of the programme students go to higher studies, some students are recruited in different sectors and some start their own business.

Table of Contents

B.Sc MATHEMATICS	1
B.A./B.Sc. Year: First Semester: First Subject: Mathematics	1
B.A./B.Sc. I (SEMESTER-I) Paper-II Practical Programme:.....	1
B.A./B.Sc. I (SEMESTER-II) PAPER-I Matrices and Differential Equations & Geometry	2
Course Title: Matrices and Differential Equations & Geometry	2
B.A./B.Sc.II (SEMESTER-III) PAPER-I Algebra & Mathematical Methods Programme: Course Title: Algebra & Mathematical Methods	3
B.A./B.Sc. II (SEMESTER-IV) PAPER-I Differential Equations & Mechanics	3
Course Title: Differential Equations & Mechanics	3
B.A./B.Sc. III (SEMESTER-V) PAPER-I Group and Ring Theory & Linear Algebra Programme:.....	4
Course Title: Group and Ring Theory & Linear Algebra	4
B.A./B.Sc. III (SEMESTER-V) PAPER-II (i) Number Theory & Game Theory Programme: Course Title: Number Theory & Game Theory.....	4
B.A./B.Sc. III (SEMESTER-V) PAPER-II (ii) Graph Theory & Discrete Mathematics Course Title: Graph Theory & Discrete Mathematics	5
B.A./B.Sc. III (SEMESTER-V) PAPER-II (iii) Differential Geometry & Tensor Analysis	5
Course Title: Differential Geometry & Tensor Analysis	5
B.A./B.Sc. III (SEMESTER-VI) PAPER-I METRIC SPACES & COMPLEX ANALYSIS	6
Course Title: METRIC SPACES & COMPLEX ANALYSIS	6
B.A./B.Sc. III (SEMESTER-VI) PAPER-II Numerical Analysis & Operation Research.....	6
Course Title: Numerical Analysis & Operations Research	6
B.A./B.Sc. III (SEMESTER-VI) PAPER-III Practical Programme:.....	7
Course Title: Practical	7
M.Sc. Mathematics	7
Program Outcome:	7
Semester I Course Name: Advanced Algebra	7
Course Name: Real Analysis.....	8
Course Name: Differential Equation with applications.....	8
Course Name: Fluid Dynamics	8
Course Name: Power point presentation and viva-voce	8
Course Name: Theory of differential Equations-Course Name: Information Theory-I.....	8
Semester II Course Name: Advanced Complex Analysis.....	9
Course Name: Topology.....	9
Course Name: Project/Survey/Dissertation/Industrial	9
Discipline Centric Elective Courses-Course Name: Advanced Discrete Mathematics.....	9
Course Name: Differential Geometry	9
Course Name: Advanced Abstract Algebra	10
Minor Elective Courses-Course Name Mathematical Modelling.....	10
Course Name: Number Theory.....	10
Semester III Course Name: Partial Differential Equation with Applications	10
Course Name: Operations Research.....	11
Course Name: Functional Analysis.....	11
Course Name: Seminar Presentation and Viva Voce.....	11
Discipline Centric Elective Courses-Course Name: Difference Equations.....	11
Course Name: Fuzzy set Theory	11
Minor Elective Courses for M.Sc. (Mathematics)	12
Course Name: Measure Theory and Integration	12

Course Name: Introduction to Cryptography	12
Semester IV Course Name: Mathematical Statistics	12
Course Name: Advanced Fluid Dynamics	12
Course Name: Project/Dissertation/Survey/Industrial Training and Viva-Voce	13
Discipline Centric Elective Courses - Course Name: Integral Equations	13
Course Name: Theory of Elasticity	13
Course Name: Tensors and General Relativity	13
Course name: Information Theory- II	13
Course Name: Bio-Mathematics	14
Course Name: Mathematics for Finance and Insurance	14
Course Name: Wavelet Analysis	14
Course Name: Differential Geometry of Manifolds	14
B.SC.CHEMISTRY	14
Course Title: Fundamentals of Chemistry	15
Semester-I, Paper-2 (Practical) Course Title: Quantitative Analysis	16
Semester-II Paper-1 Course Title: Bioorganic and Materials Chemistry Course Title: Bioorganic and Medicinal Chemistry	16
Semester-II , Paper-2 (Practical) Course Title: Biochemical Analysis	16
Semester III, Paper-1 (Theory) Course Title: Chemical Dynamics & Coordination Chemistry	17
Semester III, Paper-2 (Practical): Course Title: Physical Analysis	17
Semester IV Paper-1 (Theory) Course Title: Quantum Mechanics and Analytical Techniques	17
Semester IV, Paper-2 (Practical) Course Title: Instrumental Analysis.....	18
Semester V, Paper-1 (Theory) Course Title: Organic Synthesis A Programme:	18
Semester-V Paper-2 Course Title: Rearrangements and Chemistry of Group Elements Programme:.....	19
Semester V, Paper-3 (Practical) Course Title: Qualitative Analysis A	19
Semester-VI Paper-1 Course Title: Organic Synthesis B	20
Semester-VI Paper-2 Course Title: Chemical Energetics and Radio Chemistry Programme:	20
Semester VI, Paper-3 (Practical) Course Title: Analytical Methods.....	20
M.Sc Chemistry	21
Course/program structure:.....	21
Research project in postgraduate program:	21
Program Outcomes:	21
B.Sc. PHYSICS	22
Course Title: Mathematical Physics & Newtonian Mechanics	23
First Semester:Course Title: Mechanical Properties of Matter	24
Course Title: Thermal Physics & Semiconductor Devices.....	24
Course Title: Thermal Properties of Matter & Electronic Circuits.....	24
Course Title: Electromagnetic Theory & Modern Optics	25
Course Title: Demonstrative Aspects of Electricity & Magnetism	25
Course Title: Perspectives of Modern Physics & Basic Electronics.....	25
Course Title: Basic Electronics Instrumentation.....	26
Course Title: Classical & Statistical Mechanics.....	26
Course Title: Quantum Mechanics & Spectroscopy	27
Course Title: Solid State & Nuclear Physics	27
Course Title: Analog & Digital Principles & Applications	27
M.Sc. Physics	28
Paper I: Mathematical Physics (PCT 101)	28
Paper II: Classical Mechanics (PCT 102)	28
Paper III: Quantum Mechanics I (PCT 103)	29

Paper IV: Electronic Devices (PCT 104)	30
Paper VI (Minor Elective) Computer Programming- C & MATLAB (PEM 106)	30
Paper I: Atomic & Molecular Spectroscopy (PCT 201).....	31
Paper II: Statistical Mechanics (PCT 202)	32
Paper III: Solid State Physics (PCT 203).....	32
Paper IV: Physics of Nanoscale Materials (PCT 204)	33
Semester III Paper I: Nuclear Physics- I (PCT 301)	34
Paper II: Electromagnetic Theory (PCT 302)	34
Condensed Matter Physics I (PST 303 (B))	35
Advanced Solid State Physics (PET 304 (A)).....	35
Quantum Mechanics- II (PCT 401)	36
Paper II: NUCLEAR PHYSICS- II (PCT 402)	36
Condensed Matter Physics II (PST 403 (B))	37
Material Science and Energy Devices (PET 404(C))	37
B.Sc.BOTANY	38
Course Title: Microbiology & Plant Pathology	38
Course Title: Techniques in Microbiology &Plant Pathology	39
Course Title: Archegoniates and Plant Architecture	39
Course Title: Land Plants Architecture.....	39
Course Title: Flowering Plants Identification & Aesthetic Characteristics	40
Course Title: Plant Identification technology	40
Course Title: Economic Botany, Ethnomedicine and Phytochemistry	41
Course Title: Commercial Botany & Phytochemical Analysis	41
Course Title: Plant Physiology, Metabolism & Biochemistry	41
Course Title: Molecular Biology & Bioinformatics.....	42
Course Title: Experiments in physiology, Biochemistry & molecular biology	42
Course Title: Project in Botany for Pre-graduation.....	42
Course Title: Cytogenetics, Plant Breeding & Nanotechnology.....	43
Course Title: Ecology & Environment	43
Course Title: Lab on Cytogenetics, Conservation & Environment management	43
Course Title: Project in Botany for Graduation.....	43
M.Sc. Botany	44
Programme outcomes (POs):	44
SEMESTER: I Paper: Algae, Fungi, Lichens and Bryophytes.....	45
Paper: Pteridophytes, Gymnosperms and Palaeobotany.....	45
Paper: Plant Systematics and Reproductive Biology	46
Paper: Microbiology.....	46
Paper: Practical Lab 1	47
SEMESTER: II Paper: Biomolecules and Cell Biology.....	47
Paper: Molecular Biology.....	48
Paper: Genetics.....	48
Paper: Plant Anatomy.....	48
Paper: Practical Lab 2	49
SEMESTER: III Paper: Plant Physiology	50
Paper: Growth and Developmental Biology	50
Paper: Ecology and Evolution.....	50
Paper: Environmental Issues and Policies.....	51
Paper: Practical lab 3	51
SEMESTER: IV Paper: Analytical Techniques in Plant Science	52
Paper: Biotechnology and Plant Tissue Culture.....	52
Paper: Biophysical Chemistry and Bioenergetics.....	53

Paper: Plant Pathology	53
Paper: Practical Lab 4	54
B.Sc.-ZOOLOGY	54
Programme Objectives (POs)	54
Course Title: Cytology, Genetics and Infectious Diseases	55
Course Title: Cell Biology & Cytogenetics Lab	55
Course Title: Biochemistry and Physiology	56
Course Title: Physiological, Biochemical & Hematology Lab	56
Course Title: Molecular Biology, Bioinstrumentation & Biotechniques	56
Course Title: Bioinstrumentation & Molecular Biology Lab	57
Course Title: Gene Technology, Immunology and Computational Biology	57
Course Title: Genetic Engineering and Counselling Lab	57
Course Title: Diversity of Non-Chordates and Economic Zoology	58
Course Title: Diversity of Chordates and Comparative Anatomy	58
Course Title: Lab on Virtual Dissection, Anatomy, Economic Zoology and Parasitology	58
Course Title: Evolutionary and Developmental Biology	59
Course Title: Ecology, Ethology, Environmental Science and Wildlife	59
Course Title: Lab on Ecology, Environmental Science, Behavioral Ecology & wildlife	60
M.Sc. ZOOLOGY	60
Non-Chordata	60
Animal Physiology	60
ZOOLCC-103: Biochemistry and Cell Biology	60
ZOOLCC-104: Biodiversity	61
ZOOLCC-201: Biosystematics, Evolutionary Biology and Conservation	61
ZOOLCC-202: Developmental Biology and Immunology	61
ZOOLCC-203: Quantitative Biology and Bioinstrumentation	61
ZOOLCC-204: Animal Behaviour	62
ZOOLCC-301: Chordata	62
ZOOLCC-302: Environmental Biology, Wildlife and Toxicology	62
ZOOLEL-301A: Principles of Endocrinology	63
ZOOLEL-301B: Insect Taxonomy, Morphology and Ecology	63
ZOOLEL-301C: Fish Biology and Genetic Resources	63
ZOOLEL-301D: General Parasitology	63
ZOOLCC-302A: Biology of Reproduction	64
ZOOLEL-302B: Insect Physiology	64
ZOOLEL-302C: Fish Ecology, Aquaculture and Capture Fisheries	64
ZOOLEL-302D: Biology of parasites	64
ZOOLCC-401: Molecular Biology and Genetics	64
ZOOLEL-401A: Endocrine Disorders and their Diagnostics	65
ZOOLEL-401B: Applied Entomology and Pest Management	65
ZOOLEL-401C: Applied Fish and Fisheries	65
ZOOLEL-401D: IMMUNOPARASITOLOGY	66
ZOOLMT-401: Master Thesis/Dissertation	66
B.SC.-INDUSTRIAL CHEMISTRY	66
Course Title: Fundamentals of Industrial Chemistry	67
Course Title: Basic Analytical Methods	68
Course Title: Material Science and Techniques in Chemical Industries	68
Course Title: Materialistic Analysis	68
Course Title: Process Instrumentation and Industrial Chemical Analysis	69
Course Title: Industrial Chemical and Instrumental Analysis	69
Course Title: Process Chemistry	69

Course Title: Qualitative and Synthetic Methods	69
Course Title: Pollution, its Management and Industrial Economics	70
Course Title: Industrial chemicals and pollution management	70
Course Title: Synthetic Polymer.....	70
Course Title: Polymerization Techniques and Characterization	71
Course Title: Synthesis and Analysis of Polymers	71
Course Title: Pharmaceutical and Phytochemicals	71
Course Title: Medicinal Chemistry and Toxicology	71
Course Title: Experimental Pharmaceutical Chemistry	72
Course Title: Experimental Pharmaceutical Chemistry	72
Course Title: General & Halogenated Insecticides.....	72
Course Title: Fungicides and Herbicides	73
BA-ENGLISH.....	73
Course Title: English Prose and Writing Skills	75
Course Title: English Poetry	76
Course Title: British and American Drama.....	77
Course Title: Indian Literature in Translation	78
Course Title: Classical Literature & History of English Literature	79
Course Title: Fiction.....	80
Course Title: Indian & New Literatures in English	80
Course Title: Media and Journalistic Writing	81
M.A. English	82
Functional English (Minor Elective) (14th – 17th Century).....	82
Paper-1: English Literature	82
Paper-2: English Literature (18th – 20th Century).....	83
PAPER 3: Background to History of English Literature	83
Paper-4: Indian English Literature	84
PAPER: 5- (PPT Presentation & Viva Voce).....	85
Paper-1: Literary Criticism and Theories.....	85
Paper-2: Colonial and Post-Colonial Literature	85
Paper-3 (A): Translation and Folk Literature	86
Paper-3 (B): Literature and Environment	87
Paper-4: Research Methodology	87
PAPER: 5- (Project & Viva Voce)	88
Part:2; Sem:3 PAPER 1: AMERICAN LITERATURE	90
Paper-2: Linguistics and ELT.....	90
PAPER 3: SAARC LITERATURE	91
PAPER 4(A): AUSTRALIAN & CANADIAN LITERATURE	92
PAPER: 4(B)- STYLISTICS AND DISCOURSE ANALYSIS	92
PAPER: 5- (Seminar, Paper Presentation and Viva Voce).....	93
Part:2; Sem:4 PAPER: 1- GENDER STUDIES	93
Paper: 2- CULTURAL STUDIES AND MARGINALITY	94
PAPER: 3- Children’s Literature	94
Paper: 4(A) - ADVANCED LITERARY STUDIES IN FILMS, THEATRE AND PERFORMING ARTS.....	94
PAPER: 5- Dissertation & Viva Voce	95
BA-History	95
Ancient and Early Medieval India (Till 1206 A.D.)	97
History of Medieval India (1206 A.D - 1757 A.D)	98
History of Modern India (1757 A.D –1857 A.D).....	98
History of Modern India (1857 A.D – 1950A.D).....	98

Nationalism in India	99
Era of Gandhi and Mass Movement	99
History of Modern World (1815A.D- 1945A.D)	99
M.A. (History).....	100
Sem-I Paper 1: HISTORIOGRAPHY: CONCEPTS, METHODS AND TOOLS- I.....	100
Paper 2: THE ANCIENT WORLD	100
Paper 3: INDIAN NATIONAL MOVEMENT.....	101
Paper 4 (B): POLITICAL HISTORY OF MEDIEVAL INDIA, C. 1206 – 1398	101
Sem-II Paper 7: HISTORIOGRAPHY: CONCEPTS, METHODS AND TOOLS- II.....	102
Paper 8: THE MEDIEVAL WORLD.....	102
Paper 9B: POLITICAL HISTORY OF MEDIEVAL INDIA, C. 1398 - 1526	102
Paper 11A: HISTORY OF ECOLOGY AND ENVIRONMENT: INDIA.....	103
Sem-III Paper 13: HISTORY OF MODERN EUROPE, C. 1789 - 1919	103
Paper 14: HISTORY OF THE MODERN WORLD, C. 1920-60.....	104
Paper 15 B: POLITICAL HISTORY OF MEDIEVAL INDIA, C. 1526-1658	104
Paper 16 B: ART AND CULTURE IN MEDIEVAL INDIA, C. 1206-1526	105
Sem-IV Paper 19 B: POLITICAL HISTORY OF MEDIEVAL INDIA, C. 1658-1761.....	105
Paper 20 B: POLITY AND ADMINISTRATION IN MEDIEVAL INDIA	106
Paper 21 B: SOCIETY AND ECONOMY IN MEDIEVAL INDIA, C. 1526 - 1750	106
Paper 22 B: ART AND CULTURE IN MEDIEVAL INDIA, C. 1526 - 1750	107
BA-GEOGRAPHY	107
Course Title: Physical Geography	108
Course Title: Human Geography	108
Course Title: Thematic, Weather and Geological Maps	108
Course Title: Environment, Disaster Management and Climate Change.....	108
Course Title: Statistical Techniques.....	109
Course Title: Economic Geography	109
Course Title: Practical: Surveying.....	109
Course Title: Regional Geography.....	109
Course Title: Basics of Remote Sensing and GIS.....	109
Course Title: Project Report-1	110
Course Title: Geography of India.....	110
Course Title: Evolution of Geographical Thought.....	110
Course Title: Remote Sensing and GIS	110
Course Title: Project Report-2	110
M.A. Geography	111
Programme outcomes (After two years of study):	111
BA-Political Science Programme.....	111
Indian National Movement & Constitution of India	111
Awareness of Rights &Laws:	112
Political Theory & Concepts.....	112
Political Process in India:.....	112
Field Work Tradition In Social Sciences :.....	112
Western Political Thought:.....	112
Comparative Government And Politics UK, USA, Switzerland & China	113
Principles of Public Administration.....	113
Public Policy Formulation & Administration in India	113
PROJECT WORK I.....	113
Indian Political Thought	113
International Relations & Politics	114
PROJECT WORK (2)	114

MA Political science.....	114
Program Specific Outcome.....	114
Sem-I Paper -1 Political theory	114
Paper 2- Indian political thoughts.....	115
Paper -3 - Indian political system: Constitution and institutions part -1.....	115
Paper-4- Research Methodology	115
Sem-III Paper -1 International relations *part 2	115
Paper 2-Foreign policy of India	116
Paper -3 -Public administrators	116
Paper-4 Western political thoughts	116
Indian political system: Constitution and institutions part -2	116
International Relations *part 2	116
Comparative politics	116
Western political thoughts part -2	117
Western political thoughts part -2	117
Foreign policies of USA Russia and china	117
BA-Psychology Program.....	117
Course Title: Foundations of Psychology.....	118
Course Title: Lab Work/ Psychological Testing	118
Course Title: Basic Methodology and Statistics	118
Course Title: Lab Work/ Psychological Testing	118
Course Title: Psychology of Social Behavior.....	119
Course Title: Lab Work and Measurement of Social Behavior	119
Course Title: Abnormal Psychology	119
Course Title: Screening and Assessment	119
Course Title: Human Development.....	120
Course Title: Positive Psychology.....	120
Course Title: Lab Work/Survey/Field Visit.....	120
Course Title: Problem Identification & Research Proposal Writing.....	120
Course Title: Community and Health Psychology	120
Course Title: Counseling Psychology	121
Course Title: Survey/Field Visit.....	121
Course Title: Research Project.....	121
MA Psychology	121
PROGRAM OUTCOME.....	121
Sem-I Paper 1- Systems and Theories.....	122
Paper 2 - Cognitive Psychology	122
Paper 3 Research Methodology	122
Paper 4 Social Psychology	122
Paper 5 Practical	123
Semester-II.....	123
Paper -01 Psychology of Personality	123
Paper -02, PSY 202 Motivation And Emotion	123
Paper- 03, PSY 203 Advanced statistics	123
Paper -04, PSY 204 Biological Basis of Behaviour	123
Lab work and testing	123
Samester-3 Paper-1 Psychological assessment.....	124
Paper 2 Psychopathology.....	124
Paper-3 Development psychology	124
Paper 4 Counting psychology	124
Paper -5Lab work	124

Semester 4th Paper 1 Positive psychology	124
Paper 2 Psychotherapeutic intervention	125
Paper 3 Stress health	125
Paper-4 Socio-emotional development in children	125
Lab work-paper 5	125
BA-SOCIOLOGY	125
Introduction to Basic Concepts of Sociology	126
Society in India: Structure, Organization & Change.	126
Writing skill development on topics of Contemporary Sociological Importance	126
Social Change and Social Movement in India.....	126
Social Problems & Issues of Development in India	127
Project on Sustainable Society	127
Classical Sociological Thought	127
Research Methodology in Social Sciences	127
Practical Application of Research Methodology/Project Work.....	128
Pioneers of Indian Sociology	128
Gender and Society.....	128
Field Work/Case Study/ Project Work.....	128
BA-Philosophy	128
Course Title: Indian Philosophy	129
Course Title: Western Philosophy.....	129
Course Title: Yoga.....	130
Course Title: Ethics (Indian and Western)	130
Course Title: Yoga.....	130
Course Title: Problems of Philosophy (Indian and Western)	131
Course Title: Applied Philosophy	131
Course Title: Research Project I	131
Course Title: Philosophy of Religion	131
Course Title: Socio-Political Philosophy.....	131
Course Title: Yoga.....	131
Course Title: Research Project II	132
BA-PHYSICAL EDUCATION	132
Course Title: Elements of Physical Education.....	132
Course Title: FITNESS & YOGA.....	132
Course Title: Sports organization and Management	132
Course Title: Anatomy and Exercise Physiology.....	132
Course Title: Sports Psychology and Recreational Activities	133
Course Title: Athletic Injuries and Physiotherapy.....	133
Course Title: Kinesiology and Biomechanics in Sports	133
Course Title: Research Project.....	133
Course Title: Research Methods	133
Course Title: Physical education for DIVYANG.....	133
Course Title: Research and Sports.....	133
Course Title: Research Project.....	134
BA-Hindi Literature	134
कार्यालयी हिन्दी और कम्प्यूटर	135
हिन्दी गद्य	135
हिन्दी अनुवाद	135
मौखिकी एवं परियोजना कार्य	136
साहित्यशास्त्र और हिन्दी आलोचना.....	136

हिन्दी का राष्ट्रीय काव्य	136
COURSE TITTE: भाषा विज्ञान, हिन्दी भाषा तथा देवनागरी लिपि	136
COURSE TITTE: लोक साहित्य एवं लोक संस्कृति	136
स्नातकोत्तर हिन्दी	137
स्नातकोत्तर हिंदी प्रोग्राम आउटकम्स (P.O.)	137
प्रथम सत्र, प्रथम प्रश्नपत्र, हिन्दी साहित्य का इतिहास	137
स्नातकोत्तर हिन्दी, प्रथम सत्र, द्वितीय प्रश्नपत्र आदिकालीन हिन्दी काव्य	138
स्नातकोत्तर हिन्दी, प्रथम सत्र, तृतीय प्रश्नपत्र -हिन्दी नाटक एवं एकांकी	138
स्नातकोत्तर हिन्दी, प्रथम सत्र, चतुर्थ प्रश्नपत्र-हिन्दी भाषा और देवनागरी लिपि	139
स्नातकोत्तर हिन्दी, द्वितीय सत्र, प्रथम प्रश्नपत्र मध्यकालीन हिन्दी काव्य	139
स्नातकोत्तर हिन्दी, द्वितीय सत्र, द्वितीय प्रश्नपत्र हिन्दी कथा साहित्य (उपन्यास एवं कहानी).....	140
स्नातकोत्तर हिन्दी, द्वितीय सत्र, तृतीय प्रश्नपत्र-निबन्ध एवं स्फुट गद्य विधाएँ.....	140
स्नातकोत्तर हिन्दी, द्वितीय सत्र, चतुर्थ प्रश्नपत्र-आधुनिक आख्यानमूलक काव्य	141
स्नातकोत्तर (हिंदी) तृतीय सेमेस्टर प्रथम प्रश्न पत्र	141
स्नातकोत्तर (हिंदी) तृतीय सेमेस्टर, द्वितीय प्रश्न पत्र	142
स्नातकोत्तर हिंदी (तृतीय सेमेस्टर) तृतीय प्रश्न पत्र	142
स्नातकोत्तर(हिंदी) तृतीय सेमेस्टर, चतुर्थ प्रश्न पत्र	143
स्नातकोत्तर (हिंदी)तृतीय सेमेस्टर पंचम प्रश्न पत्र-परियोजना कार्य एवं साक्षात्कार	143
स्नातकोत्तर हिंदी चतुर्थ सेमेस्टर प्रथम प्रश्न पत्र-अस्मिता मूलक विमर्श	143
स्नातकोत्तर (हिंदी) चतुर्थ सेमेस्टर, द्वितीय प्रश्न पत्र-भारतीय साहित्य	144
एम.ए.हिंदी चतुर्थ सेमेस्टर तृतीय प्रश्न पत्र-आधुनिक काव्य प्रगीत व मुक्तक परंपरा	144
एम. ए.हिंदी चतुर्थ सेमेस्टर चतुर्थ प्रश्न पत्र-कबीर	145
स्नातकोत्तर (हिंदी) चतुर्थ सेमेस्टर पंचम प्रश्न पत्र-परियोजना कार्य एवं साक्षात्कार	145
BA-Economics	145
Title: Principle of Micro Economics	147
Course Title: Macro Economics	147
Course Title: History of Economic Thought:.....	148
Course Title: Money, Banking and Public Finance.....	148
Course Title: Economic Growth and Development.....	148
Course Title: Environmental Economics	149
Course Title: International Economics	149
Course Title: Elementary Statistics based Project	150
Course Title: Indian Economy & Economy of Uttar Pradesh:	150
Course Title: Agriculture Economics:.....	151
Course Title: Elementary Mathematics:	151
Course Title: Project/Dissertation:	152
M.A. Economics	152
SEMESTER I MICRECONOMICS – I	152
MACROECONOMICS – I	152
ECONOMICS OF GROWTH & DEVELOPMENT	152
QUANTITATIVE METHODS.....	153

RURAL DEVELOPMENT	153
ECONOMICS OF INFRASTRUCTURE	153
SEMESTER II MICRECONOMICS – II	153
MACRECONOMICS – II	153
RESEARCH METHODOLOGY	154
HISTORY OF ECONOMIC THOUGHT	154
INTERNATIONAL REGIONAL ECONOMIC COOPERATION	154
ECONOMICS OF EDUCATION & HEALTH	154
SEMESTER III PUBLIC ECONOMICS	154
INDIAN ECONOMIC POLICY	155
AGRICULTURE ECONOMICS	155
ADVANCED STATISTICS	155
INDIA'S FOREIGN TRADE	155
INDUSTRIAL ECONOMICS & ENTREPRENEURSHIP	155
NATURAL RESOURCE ECONOMICS	156
GENDER ECONOMICS	156
SEMESTER IV FINANCIAL INSTITUTIONS & MARKETS	156
INTERNATIONAL ECONOMICS	156
DEMOGRAPHY	156
ECONOMETRICS	157
LABOUR ECONOMICS	157
ENVIRONMENTAL ECONOMICS	157
विषय- संस्कृत (स्नातक स्तर)	157
प्रश्न पत्र शीर्षक - संस्कृत पद्य साहित्य एवं व्याकरण	158
प्रश्न पत्र शीर्षक - संस्कृत गद्य साहित्य, अनुवाद एवं संगणक अनुप्रयोग	158
प्रश्न पत्र शीर्षक - संस्कृत नाटक एवं व्याकरण	159
प्रश्न पत्र शीर्षक - काव्यशास्त्र एवं संस्कृत लेखन कौशल	159
प्रश्न पत्र शीर्षक- प्रथम प्रश्न पत्र- वैदिक वाङ्मय एवं भारतीय दर्शन	159
प्रश्न पत्र शीर्षक - द्वितीय प्रश्न पत्र व्याकरण एवं भाषा विज्ञान	160
प्रश्न पत्र शीर्षक - प्रथम प्रश्न पत्र आधुनिक संस्कृत साहित्य	160
प्रश्न पत्र शीर्षक- द्वितीय प्रश्न पत्र- क (वैकल्पिक) - योग एवं प्राकृतिक चिकित्सा	161
प्रश्न पत्र शीर्षक - द्वितीय प्रश्न पत्र-ख (वैकल्पिक) आयुर्वेद एवं स्वास्थ्य विज्ञान	161
प्रश्न पत्र शीर्षक- द्वितीय प्रश्न पत्र-ग (वैकल्पिक)- भारतीय वास्तुशास्त्र	161
प्रश्न पत्र शीर्षक- द्वितीय प्रश्न पत्र-घ (वैकल्पिक)- ज्योतिष शास्त्र के मूलभूत सिद्धांत	161
प्रश्न पत्र शीर्षक- द्वितीय प्रश्न पत्र-ङ (वैकल्पिक) नित्य नैमित्तिक - अनुष्ठान	162
Course Outcomes (Urdu).....	162
B.A. 1st Year (Semester First).....	162
B.A. 1st Year (Semester Second).....	162
B.A. 2nd Year (Semester Third).....	163
B.A. 2nd Year (Semester Four).....	163
B.A. 3rd Year (Semester 5 th Paper I).....	164
B.A. 3rd Year (Semester 5 th Paper II).....	164
B.A. 3rd Year (Semester 6 th Paper I).....	165
B.A. 3rd Year (Semester 6 th Paper II).....	165
B.A. 3rd Year (Semester 6 th Paper II Optional).....	166
M.A. First Year First Sem. (Ist paper).....	166
M.A. Ist Year Ist Sem. (II nd paper).....	166
M.A. Ist Year Ist Sem. (III rd paper).....	167
M.A. Ist Year Ist Sem. (4 th paper).....	167

M.A. Ist Year IInd Seme. (Ist paper)	167
M.A. Ist Year IInd Sem. (IInd paper)	168
M.A. Ist Year IInd Sem. (III paper)	168
M.A. Ist Year IInd Sem. (4th paper)	168
M.A. IInd Year IIIrd Sem. (Ist paper)	168
M.A. IInd Year IIIrd Sem. (IInd paper)	169
M.A. IInd Year IIIrd Sem. (IIIrd paper).....	169
M.A. IInd Year IIIrd Sem. (4th paper).....	169
M.A. IInd Year 4th Sem. (I paper Elective Paper)	170
M.A. IInd Year 4th Sem. (II nd paper)	170
M.A. IInd Year 4th Sem. (III paper)	170
M.A. IInd Year 4th Sem. (4 th paper)	171
BA (PERSIAN)	172
Programme Outcomes	172
Programme Specific Outcomes(PSOs).....	173
Programme Specific Outcomes(PSOs).....	174
Programme Specific Outcomes(PSOs)	174
Undergraduate Commerce (B.Com.)	175
Course Title: Business Organization.....	176
Course Title: Business Statistics.....	176
Course Title: Business Communication	176
Course Title: Introduction to Computer Application	176
Course Title: Business Management	177
Course Title: Financial Accounting	177
Course Title: Computerised Accounting (Practical).....	177
Course Title: Essentials of E-commerce	177
Course Title: Business Economics	177
Course Title: Company Law	178
Course Title: Cost Accounting	178
Course Title: Business Regulatory Framework	178
Course Title: Inventory Management.....	178
Course Title: Income Tax Law and Accounts.....	179
Course Title: Fundamentals of Marketing	179
Course Title: Digital Marketing (Practical).....	179
Course Title: Fundamentals of Entrepreneurship.....	179
Course Title: Tourism and Travel Management.....	180
Course Title: Corporate Accounting.....	180
Course Title: Goods and Services Tax	180
Course Title: Business Finance	180
Course Title: Principles and Practices of Insurance	180
Course Title: Monetary Theory and Banking in India	181
Course Title: Accounting for Mangers.....	181
Course Title: Auditing	181
Course Title: Financial Market Operations.....	181
Course Title: Human Resource Management.....	182
Course Title: Business Ethics and Corporate Governance	182
M.Com. Post Graduate.....	182
Programme Course Outcomes	182
M.Com 1st Sem Paper— 1. Business Research Methodology	183
Paper— 2. Statistical Methods.....	183
Paper—3. Managerial Economics	183

Paper—4. Advance Management Accounting	184
M.Com 2nd Sem Paper—1. Management Concept and Organisation Behaviour	184
Paper—2 Advance Financial Accounting.....	184
Paper—3 International Business	185
Paper—4 Supply Chain Management and Logistic Management	185
M.Com 3rd Sem Paper—1 Advance Financial Management	186
Paper—2 Strategic Management.....	186
Paper—3 Advertising and Sales Management	186
Paper—4 International Marketing Management.....	187
M.Com 4th Sem Paper—1 International Marketing Management	187
Paper—2 Corporate Taxation and Planning	187
Paper—3 Operational Research.....	188
Paper—4 Consumer Behaviour	188
Paper—5 Marketing Research	188

B.Sc MATHEMATICS

Programme Outcome:

- PO1: It is to give foundation knowledge for the students to understand basics of Mathematics including applied aspects for the same.
- PO2: It is to develop enhanced quantitative skills and pursuing higher mathematics and research as well.
- PO3: Students will be able to develop solution oriented approach towards various issues related to their environment
- PO4: Students will become employable in various govt. and private sectors
- PO5: Scientific temper in general and mathematical temper in particular will be developed in students.

B.A./B.Sc. Year: First Semester: First Subject: Mathematics

Title: Differential Calculus & Integral Calculus Course outcomes

- CO1: The programme outcome is to give foundation knowledge for the students to understand basics of mathematics including applied aspects for developing enhanced quantitative skills and pursuing higher mathematics and research as well.
- CO2: By the time students complete the course they will have wide ranging application of the subject and have the knowledge of real valued functions such as sequence and series. They will also be able to know about convergence of sequence and series. Also, they have knowledge about curvature, envelope and evolutes and trace curve in polar, Cartesian as well as parametric curves.
- CO3: The main objective of the course is to equip the student with necessary analytic and technical skills. By applying the principles of integral he learns to solve a variety of practical problems in science and engineering.
- CO4: The student is equipped with standard concepts and tools at an intermediate to advance level that will serve him well towards taking more advance level course in mathematics.

B.A./B.Sc. I (SEMESTER-I) Paper-II Practical Programme:

Title: Practical Course outcomes

- CO1: The main objective of the course is to equip the student to plot the different graph and solve the different types of equations by plotting the graph using different

computer software such as Mathematica /MATLAB /Maple /Scilab/Maxima etc.

CO2. After completion of this course student would be able to know the convergence of sequences through plotting, verify Bolzano-Weierstrass theorem through plotting the sequence, Cauchy's root test by plotting n th roots and Ratio test by plotting the ratio of n th and $(n + 1)$ th term.

CO3. Student would be able to plot Complex numbers and their representations, Operations like addition, subtraction, Multiplication, Division, Modulus and Graphical representation of polar form.

CO4: Student would be able to perform following task of matrix as Addition, Multiplication, Inverse, Transpose, Determinant, Rank, Eigenvectors, Eigenvalues, Characteristic equation and verification of the Cayley-Hamilton theorem, Solving the systems of linear equations.

B.A./B.Sc. I (SEMESTER-II) PAPER-I Matrices and Differential Equations & Geometry

Course Title: Matrices and Differential Equations & Geometry

Course outcomes:

CO1: The subjects of the course are designed in such a way that they focus on developing mathematical skills in algebra, calculus and analysis and give in depth knowledge of geometry, calculus, algebra and other theories.

CO2: The student will be able to find the rank, eigen values of matrices and study the linear homogeneous and non-homogeneous equations. The course in differential equation intends to develop problem solving skills for solving various types of differential equation and geometrical meaning of differential equation.

CO3: The subjects learn and visualize the fundamental ideas about coordinate geometry and learn to describe some of the surface by using analytical geometry.

CO4: On successful completion of the course students have gained knowledge about regular geometrical figures and their properties. They have the foundation for higher course in Geometry.

**B.A./B.Sc.II (SEMESTER-III) PAPER-I Algebra & Mathematical
Methods Programme: Course Title: Algebra & Mathematical
Methods**

Course outcomes:

- CO1: Group theory is one of the building blocks of modern algebra. Objective of this course is to introduce students to basic concepts of Group, Ring theory and their properties.
- CO2: A student learning this course gets a concept of Group, Ring, Integral Domain and their properties. This course will lead the student to basic course in advanced mathematics and Algebra.
- CO3: The course gives emphasis to enhance students' knowledge of functions of two variables, Laplace Transforms, Fourier Series.
- CO4: On successful completion of the course students should have knowledge about higher different mathematical methods and will help him in going for higher studies and research.

**B.A./B.Sc. II (SEMESTER-IV) PAPER-I Differential Equations &
Mechanics**

Course Title: Differential Equations & Mechanics

Course outcomes:

- CO1: The objective of this course is to familiarize the students with various methods of solving differential equations, partial differential equations of first order and second order and to have qualitative applications.
- CO2: A student doing this course is able to solve differential equations and is able to model problems in nature using ordinary differential equations. After completing this course, a student will be able to take more courses on wave equation, heat equation, diffusion equation, gas dynamics, non linear evolution equation etc. These entire courses are important in engineering and industrial applications for solving boundary value problem.
- CO3: The object of the paper is to give students knowledge of basic mechanics such as simple harmonic motion, motion under other laws and forces.
- CO4: The student, after completing the course can go for higher problems in mechanic

such as hydrodynamics, this will be helpful in getting employment in industry.

B.A./B.Sc. III (SEMESTER-V) PAPER-I Group and Ring Theory & Linear Algebra Programme:

Course Title: Group and Ring Theory & Linear Algebra

Course outcomes:

- CO1: Linear algebra is a basic course in almost all branches of science. The objective of this course is to introduce a student to the basics of linear algebra and some of its applications.
- CO2: Students will be able to know the concepts of group, ring and other related properties which will prepare the students to take up further applications in the relevant fields.
- CO3: The student will use this knowledge in computer science, finance mathematics, industrial mathematics and bio mathematics. After completion of this course students appreciate its interdisciplinary nature.

B.A./B.Sc. III (SEMESTER-V) PAPER-II (i) Number Theory & Game Theory Programme: Course Title: Number Theory & Game Theory

Course outcomes:

- CO1: Upon successful completion, students will have the knowledge and skills to solve problems in elementary number theory and also apply elementary number theory to cryptography.
- CO2: This course provides an introduction to Game Theory. Game Theory is a mathematical framework which makes possible the analysis of the decision making process of interdependent subjects. It is aimed at explaining and predicting how individuals behave in a specific strategic situation, and therefore help improve decision making.
- CO3: A situation is strategic if the outcome of a decision problem depends on the choices of more than one person. Most decision problems in real life are strategic.
- CO4: To illustrate the concepts, real-world examples, case studies, and classroom experiments might be used.

B.A./B.Sc. III (SEMESTER-V) PAPER-II (ii) Graph Theory & Discrete Mathematics

Course Title: Graph Theory & Discrete Mathematics

Course outcomes:

CO1: Upon successful completion, students will have the knowledge of various types of graphs, their terminology and applications.

CO2: After Successful completion of this course students will be able to understand the isomorphism and homomorphism of graphs. This course covers the basic concepts of graphs used in computer science and other disciplines. The topics include path, circuits, adjacency matrix, tree, coloring. After successful completion of this course the student will have the knowledge graph coloring, color problem, vertex coloring.

CO3: After successful completion, students will have the knowledge of Logic gates, Karnaugh maps and skills to proof by using truth tables. After Successful completion of this course students will be able to apply the basics of the automation theory, transition function and table.

CO4: This course covers the basic concepts of discrete mathematics used in computer science and other disciplines that involve formal reasoning. The topics include logic, counting, relations, hasse diagram and Boolean algebra. After successful completion of this course the student will have the knowledge in Mathematical reasoning, combinatorial analysis, discrete structures and Applications.

B.A./B.Sc. III (SEMESTER-V) PAPER-II (iii) Differential Geometry & Tensor Analysis

Course Title: Differential Geometry & Tensor Analysis

Course outcomes:

CO1: After Successful completion of this course, students should be able to determine and calculate curvature of curves in different coordinate systems.

CO2: This course covers the Local theory of Curves, Local theory of surfaces, Geodesics, Geodesics curvature, Geodesic polars, Curvature of curves on surfaces, Gaussian curvature, Normal curvature etc.

CO3: After Successful completion of this course, students should have the knowledge of

tensor algebra, different types of tensors, Riemannian space, Ricci tensor, Einstein space and Einstein tensor etc.

B.A./B.Sc. III (SEMESTER-VI) PAPER-I METRIC SPACES & COMPLEX ANALYSIS

Course Title: METRIC SPACES & COMPLEX ANALYSIS

Course outcomes:

- CO1: The course is aimed at exposing the students to foundations of analysis which will be useful in understanding various physical phenomena and gives the student the foundation in mathematics.
- CO2: After completion of this course the student will have rigorous and deeper understanding of fundamental concepts in Mathematics. This will be helpful to the student in understanding pure mathematics and in research.
- CO3: Students will be able to know the concepts of metric space, basic concepts and developments of complex analysis which will prepare the students to take up further applications in the relevant fields.

B.A./B.Sc. III (SEMESTER-VI) PAPER-II Numerical Analysis & Operation Research

Course Title: Numerical Analysis & Operations Research

Course outcomes:

- CO1: The aim of this course is to teach the student the application of various numerical technique for variety of problems occurring in daily life. At the end of the course the student will be able to understand the basic concept of Numerical Analysis and to solve algebraic and differential equation.
- CO2: The main outcome will be that students will be able to handle problems and finding approximated solution. Later he can opt for advance course in Numerical Analysis in higher Mathematics.
- CO3: The student will be able to solve various problems based on convex sets and linear programming. After successful completion of this paper will enable the students to

apply the basic concepts of transportation problems and its related problems to apply in further concepts and application of operations research.

B.A./B.Sc. III (SEMESTER-VI) PAPER-III Practical Programme:

Course Title: Practical

Course outcomes:

The main objective of the course is to equip the student to solve the transcendental and algebraic equations, system of linear equations, ordinary differential equations, Interpolation, Numerical Integration, Method of finding Eigenvalue by Power method (up to 4×4), Fitting a Polynomial Function (up to third degree).

M.Sc. Mathematics

Program Outcome:

Graduate will be able to

- a) Progress the critical analysis and problem solving skills required for research and development organisation and industry.
- b) Communicate confidently and effectively with industry and society at large, regarding complex problem and solution of the problem, existing around.
- c) Engage independent and lifelong learning with a high level of enthusiasm and commitment to improve knowledge and competence continuously.
- d) Contribute significantly in academics through teaching and research.
- e) Demonstrate knowledge and understanding of various structure of mathematics and apply the same to one's own work, as a member and leader in a team, manage projects efficiently after consideration of economical and financial factors.
- f) Apply ethical principles and commit to professional ethics and responsibilities and norms of the professional practice.

Semester I Course Name: Advanced Algebra

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Explain the fundamental concepts of advanced algebra such as groups and rings and their role in modern mathematics and applied contexts.
- 2: Demonstrate accurate and efficient use of advanced algebraic techniques.
- 3: Demonstrate capacity for mathematical reasoning through analysing, proving and explaining concepts from advanced algebra.
- 4: Apply problem-solving using advanced algebraic techniques applied to diverse situations in physics, engineering and other mathematical contexts.

Course Name: Real Analysis

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand many properties of the real line and learn to define sequence in terms of functions from \mathbb{N} to a subset of \mathbb{R} .
- 2: Recognize bounded, convergent, divergent, Cauchy and monotonic sequences. To calculate the limit superior, limit inferior of sequences and limit of a bounded sequence, Riemann integration theory.
- 3: Recognize Riemann-Stieltjes integral and integration of vector valued function.
- 4: Recognize bounded variation, total variation, directional derivatives, partial derivative and derivative as a linear transformation.

Course Name: Differential Equation with applications

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand the stability and Poincare Bendixson theory of ordinary differential equations.
- 2: Understand the behaviour of solutions of differential equations.
- 3: Understand the Sturm theory for second order ODES.
- 4: Understand the construction of Green's functions and their applications to solve ODES.

Course Name: Fluid Dynamics

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand the basic principles of fluid dynamics, such as Lagrangian and Eulerian approach etc.
- 2: Use the concept of stress in fluids with applications.
- 3: Analyse Irrotational and rotational flows in fluids and some of their properties
- 4: Find analytical solution of Navier Stokes equation and solutions of some benchmark problems

Course Name: Power point presentation and viva-voce

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Will be able to present the subject in interviews.
- 2: Get ability to face interviews.
- 3: Skills to write subject in own way.
- 4: Get knowledge of preparing Dissertation, Thesis and Books.

Course Name: Theory of differential Equations-Course Name: Information Theory-I

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand the basic concepts of information theory, different types of entropies with their properties and applications.
- 2: Analyse how different coding techniques will perform in different situations.
- 3: Understand about discrete channels and their properties with applications.

4: Understand about continuous channels and their properties with applications.

Semester II Course Name: Advanced Complex Analysis

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand the basics of logarithmically convex function that helps in extending maximum modulus theorem.
- 2: Be familiar with metric on spaces of analytic, meromorphic and analytic functions, equicontinuity and normal families leading to Arzela-Ascoli and related theorems.
- 3: Appreciate the richness of simply connected region which connects various fields topology, analysis and algebra.
- 4: Know how big the range of an entire function is as well as Picard and related theorems.

Course Name: Topology

Course Outcomes:

After completing this course, student is expected to learn the following

- 1: Construct topological spaces from metric spaces and using general properties of neighbourhoods, open sets, close sets, basis and sub-basis
- 2: Apply the properties of open sets, close sets, interior points, accumulation points and derived sets in deriving the proofs of various theorems
- 3: Understand the concepts of countable spaces and separable spaces
- 4: Learn the concepts and properties of the compact and connected topological spaces.

Course Name: Project/Survey/Dissertation/Industrial

Course Outcomes:

After completing this course, student is expected to learn the following

- 1: Will be able to present research work in the field.
- 2: Get ability to write subject in own way.
- 3: Skills to know future of the subject.
- 4: Get knowledge of preparing Dissertation, Thesis and Books.

Discipline Centric Elective Courses-Course Name: Advanced Discrete Mathematics

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Analyse logical propositions using truth tables.
- 2: Understand the concept of lattice.
- 3: Learn about the applications of Boolean algebra in switching theory.
- 4: Use the concept of planar graphs, trees and study for their properties.

Course Name: Differential Geometry

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Learn about the concepts of curvature, torsion, involutes and evolutes.
- 2: Familiarize with several concepts of tangent plane, Helicoids, metric and direction coefficients.

- 3: Understand the concepts of developable surfaces.
- 4: Use the several notions of curvatures such as geodesic curvature and Gaussian curvatures.

Course Name: Advanced Abstract Algebra

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Explain the fundamental concepts of modules and their role in modern mathematics and applied contexts.
- 2: Demonstrate accurate and efficient use of finitely generated Abelian groups.
- 3: Apply the theorems: fundamental structure theorem of finitely generated modules over the principal ideal domain, Noether- Lasker theorem, Hilbert basis theorem, and Wedderburn - Artin theorem, Maschke's theorem
- CO4: Solve the problem using Nilradical and Jacobson radicals, operations on ideals, extension and contractions applied to diverse situations in physics, engineering, and other mathematical contexts.

Minor Elective Courses-Course Name Mathematical Modelling

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand what a mathematical model is and explain the series of steps involved in a mathematical modelling process.
- 2: Use applications of mathematical modelling through difference equations.
- 3: Understand and apply the concept of mathematical modelling through difference equations in population dynamics, genetics and probability theory.
- 4: Apply the concept of mathematical modelling through graph theory.

Course Name: Number Theory

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand the properties of divisibility and prime numbers, compute the greatest common divisor and least common multiples and handle linear Diophantine equations.
- 2: Use the operations with congruence's, linear and non-linear congruence equations
- 3: Apply the theorems: Chinese Remainder Theorem, Lagrange theorem, Fermat's theorem, Wilson's theorem.
- 4: Analyse arithmetic functions in areas of mathematics.

Semester III Course Name: Partial Differential Equation with Applications

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand the solution of first order PDEs by characteristics method, Hamilton Jacobi's equations, Hopf-Lax formula etc.
- 2: Use applications of various solutions methods to solve PDEs.
- 3: Understand and apply similarity solution methods.
- 4: Apply different methods to find numerical solutions of Elliptic, Parabolic and Hyperbolic equations.

Course Name: Operations Research

Course Outcomes:

After completing this course, student is expected to learn the following

- 1: Understand linear programming problems and to find their solutions by using different methods.
- 2: Understand the network problems.
- 3: Understand and solve different queuing models.
4. Find optimal solution of linear programming model using Game Theory. Also learn about sequencing problems.

Course Name: Functional Analysis

Course Outcomes:

After completing this course, student is expected to learn the following

- 1: Verify the requirements of a norm, completeness with respect to a norm, relation between compactness and dimension of a space, check boundedness of a linear operator and relate to continuity, convergence of operators by using a suitable norm, compute the dual spaces.
- 2: Distinguish between Banach spaces and Hilbert spaces, decompose a Hilbert space in terms of orthogonal complements.
- 3: Check totality of orthonormal sets and sequences, represent a bounded linear functional in terms of inner product, classify operators into self-adjoint, unitary and normal operators.
- 4: Extend a linear functional under suitable conditions, compute adjoint of operators, check reflexivity of a space, ability to apply uniform boundedness theorem, open mapping theorem and closed graph theorem, check the convergence of operators and functional and weak and strong convergence of sequences.

Course Name: Seminar Presentation and Viva Voce

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Will be able to present the subject in interviews.
- 2: Get ability to face interviews.
- 3: Skills to write subject in own way.
- 4: Get knowledge of preparing Dissertation, Thesis and Books.

Discipline Centric Elective Courses-Course Name: Difference Equations

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1 : Understand the occurring of difference equations and linear difference equations. Also will be able to solve these equations
- 2: Understand the non-linear difference equations and their linearization.
- 3: Understand the System of difference equations.
4. Understand the nonlinear difference equations and their systems.

Course Name: Fuzzy set Theory

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Construct appropriate fuzzy numbers corresponding to uncertain and inconsistent collected data.
- 2: Understand the basic concepts of t- norms, t- conforms and operation of α - cut interval.
- 3: Use the concepts of approximation of triangular fuzzy number, operations of trapezoidal fuzzy number, bell shape fuzzy number, crisp function and its applications.
- 4: Analyse the Integration and differentiation of fuzzy function product set, and understand the basic concepts of composition of fuzzy relation, fuzzy graph, projection and cylindrical extension

Minor Elective Courses for M.Sc. (Mathematics)

Course Name: Measure Theory and Integration

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Use the concepts of measurable set and measurable function
- 2: State and explain the construction of the Lebesgue integral and use it
- 3: Apply the theorems of monotone and dominated convergence and Fatou's lemma
- 4: Describe the construction of product measure and to apply Fubini's theorem

Course Name: Introduction to Cryptography

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand the operations with congruence's, linear and non-linear congruence equations.
- 2: Use the basics of RSA security and be able to break the simplest instances and analyse the basic concepts of remote coin flipping, elliptic curve based cryptography.
- 3: Apply the theorems: Fermat's last theorem, prime number theorem and zeta function.
- 4: Understand and use the numbers: Perfect numbers, Fermat number s, Mersenne primes and amicable numbers, and Fibonacci numbers.

Semester IV Course Name: Mathematical Statistics

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Explore the basic ideas about measures of central tendency, dispersion, skewness and kurtosis with their applications and basic idea about probability theory.
- 2: Demonstrate the understanding of random variable, expectation, variance and some discrete distributions.
- 3: Explain the different types of continuous distributions and their utilization.
- 4: Deal with formulation of hypotheses as per situations and their testing.

Course Name: Advanced Fluid Dynamics

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand the stress tensors
- 2: Understand the vortex motion
- 3: Understand the boundary layer theory.
- 4: Understand the magneto-hydrodynamics.

Course Name: Project/Dissertation/Survey/Industrial Training and Viva-Voce

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Will be able to present research work in the field.
- 2: Get ability to write subject in own way.
- 3: Skills to know future of the subject.
- 4: Get knowledge of preparing Dissertation, Thesis and Books.

Discipline Centric Elective Courses - Course Name: Integral Equations

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Use the concept of different kernels and techniques for solving various kinds of integral equations.
- 2: Find the solutions of Volterra integral equations using Neumann series method.
- 3: Understand the relation between differential and integral equations.
- 4: Understanding of Hilbert Schmidt theorem and solutions by using symmetric kernels.

Course Name: Theory of Elasticity

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Use the indicial notation and knowledge of tensor.
- 2: Analyse strain, stress and deformation.
- 3: Understand the basic principles and field equations of linear elastic solids.
- 4: Formulate the solution strategies of various two-dimensional problems.
- 5: Analyse the propagation of surface waves.

Course Name: Tensors and General Relativity

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand tensor and symbols used for tensor. Understands the Riemannian metric.
- 2: Understands the Einstein's field equations.
- 3: Understand the keplers law and Schwarzschild external solution.

Course name: Information Theory- II

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand the basic concepts of information theory, different types of entropics with their properties and applications.
- 2: Analyse how different coding techniques will perform in different situations.
- 3: Understand about discrete channels and their properties with applications.
- 4: Understand about continuous channels and their properties with applications.

Course Name: Bio-Mathematics

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand the basic concepts of information theory, different types of entropies with their properties and applications.
- 2: Analyse how different coding techniques will perform in different situations.
- 3: Understand about discrete channels and their properties with applications.
- 4: Understand about continuous channels and their properties with applications.

Course Name: Mathematics for Finance and Insurance

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Demonstrate knowledge of the terminology related to nature, scope, goals, risks and decisions of financial management.
- 2: Predict various types of returns and risks in investments and take necessary protective measures for minimizing the risk.
- 3: Develop ability to understand, analyse and solve problems in bonds, finance and insurance.
- 4: Build skills for computation of premium of life insurance and claims for general insurance using probability distributions.

Course Name: Wavelet Analysis

Course Outcomes:

After completing this course, student is expected to learn the following:

- 1: Understand the approximation of functions (signals) by frame theory.
- 2: Use the applications of frames in stable analysis and decompositions of functions.
- 3: Learn the applications of wavelets in the construction of orthonormal bases by wavelets.
- 4: Analyse different types of transforms in term of operators.

Course Name: Differential Geometry of Manifolds

Course Outcomes:

After completing this course, student is expected to learn the following:

1. Understand tensor and symbols used for tensor.
2. Understand the Riemannian metric.
3. Understands the Christoffels and Ricci tensor.

B.SC.CHEMISTRY

Program's Outcomes

PO1. Students will have a firm foundation in the fundamentals and application of current chemical and scientific theories including those in analytical, Inorganic, Organic and Physical Chemistries.

PO2. Students will be able to design and carry out scientific experiments as well as accurately record and analyze the results of such experiments.

PO3. Students will be skilled in problem solving, critical thinking and analytical reasoning as applied to scientific problems.

PO4. Students will be able to explore new areas of research in both chemistry and allied fields of science and technology.

PO5. Students will appreciate the central role of chemistry in our society and use this as a basis for ethical behavior in issues facing chemists including an understanding of safe handling of chemicals, environmental issues and key issues facing our society in energy, health and medicine.

PO6. Students will be able to explain why chemistry is an integral activity for addressing social, economic, and environmental problems.

PO7. Students will be able to function as a member of an interdisciplinary problem solving team.

Course Title: Fundamentals of Chemistry

Course outcomes:

There is nothing more fundamental to chemistry than the chemical bond. Chemical bonding is the language of logic for chemists. Chemical bonding enables scientists to take the 100-plus elements of the periodic table and combine them in myriad ways to form chemical compounds and materials. Periodic trends, arising from the arrangement of the periodic table, provide chemists with an invaluable tool to quickly predict an element's properties. These trends exist because of the similar atomic structure of the elements within their respective group families or periods, and because of the periodic nature of the elements. Reaction mechanism gives the fundamental knowledge of carrying out an organic reaction in a step-by-step manner. This course will provide a broad foundation in chemistry that stresses scientific reasoning and analytical problem solving with a molecular perspective. Students will gain an understanding of

CO1. Molecular geometries, physical and chemical properties of the molecules.

CO2. Current bonding models for simple inorganic and organic molecules in order to predict structures and important bonding parameters

CO3. The chapter Recapitulation of basics of organic chemistry gives the most primary and utmost important knowledge and concepts of organic Chemistry.

CO4. This course gives a broader theoretical picture in multiple stages in an overall chemical reaction. It describes reactive intermediates, transition states and states of all the bonds broken and formed. It enables to understand the reactants, catalyst, stereochemistry and major and minor products of any organic reaction.

CO5. It describes the types of reactions and the Kinetic and thermodynamic aspects one should know for carrying out any reaction and the ways how the reaction mechanism can be determined.

CO6. The chapters Stereochemistry gives the clear picture of two-dimensional and three-dimensional structure of the molecules, and their role in reaction mechanism.

Semester-I, Paper-2 (Practical) Course Title: Quantitative Analysis

Course outcomes:

Upon completion of this course the students will have the knowledge and skills to: understand the laboratory methods and tests related to estimation of metals ions and estimation of acids and alkali contents in commercial products.

CO1: Potability tests of water samples.

CO2: Estimation of metal ions in samples

CO3: Estimation of alkali and acid contents in samples

CO4: Estimation of inorganic salts and hydrated water in samples

Semester-II Paper-1 Course Title: Bioorganic and Materials Chemistry Course Title: Bioorganic and Medicinal Chemistry

Course outcomes:

Biomolecules are important for the functioning of living organisms. These molecules perform or trigger important biochemical reactions in living organisms. When studying biomolecules, one can understand the physiological function that regulates the proper growth and development of a human body. This course aims to introduce the students with basic experimental understanding of carbohydrates, amino acids, proteins, nucleic acids and medicinal chemistry. Upon completion of this course students may get job opportunities in food, beverage and pharmaceutical industries.

Semester-II , Paper-2 (Practical) Course Title: Biochemical Analysis

Course outcomes:

This course will provide basic qualitative and quantitative experimental knowledge of biomolecules such as carbohydrates, proteins, amino acids, nucleic acids drug molecules. Upon successful completion of this course students may get job opportunities in food, beverage and pharmaceutical industries.

Semester III, Paper-1 (Theory) Course Title: Chemical Dynamics & Coordination Chemistry

Course outcomes:

Upon successful completion of this course students should be able to describe the characteristic of the three states of matter and describe the different physical properties of each state of matter. kinetic theory of gases, laws of crystallography , liquid state and liquid crystals, conductometric, potentiometric, optical methods, polarimetry and spectrophotometer technique to study Chemical kinetics and chemical equilibrium. After the completion of the course, Students will be able to understand .metal- ligand bonding in transition metal complexes, thermodynamic and kinetic aspects of metal complexes.

Semester III, Paper-2 (Practical): Course Title: Physical Analysis

Course Outcomes:

Upon successful completion of this course students should be able to calibrate apparatus and prepare solutions of various concentrations, estimation of components through volumetric analysis; to perform dilatometric experiments: one and two component phase equilibrium experiments.

Semester IV Paper-1 (Theory) Course Title: Quantum Mechanics and Analytical Techniques

Course Outcomes::

Upon successful completion of this course students should be able to describe atomic structure, elementary quantum mechanics ,wave function and its significance ;Schrodinger wave equation and its applications; Molecular orbital theory, basic ideas – Criteria for forming molecular orbital from atomic orbitals , Molecular Spectroscopy, Rotational Spectrum ,vibrational Electronic Spectrum: photo chemistry and kinetics of photo chemical reaction Analytical chemistry plays an enormous role in our society, such as in drug manufacturing, process control in industry, environmental monitoring, medical diagnostics, food production, and forensic surveys. It is also of great importance in different research areas. Analytical chemistry is a science that is directed towards creating new knowledge so that chemical analysis can be improved to respond to increasing or new demands.

- CO1. Students will be able to explore new areas of research in both chemistry and allied fields of science and technology.

- CO2. Students will be able to function as a member of an interdisciplinary problem solving team.
- CO3. Students will be skilled in problem solving, critical thinking and analytical reasoning as applied to scientific problems
- CO4. Students will gain an understanding of how to determine the structure of organic molecules using IR and NMR spectroscopic techniques
- CO5. To develop basic skills required for purification, solvent extraction, TLC and column chromatography

Semester IV, Paper-2 (Practical) Course Title: Instrumental Analysis

Course outcomes:

Upon completion of this course, chemistry majors are able to employ critical thinking and scientific inquiry in the performance, design, interpretation and documentation of laboratory experiments, at a level suitable to succeed at an entry-level position in chemical industry or a chemistry graduate program.

- CO1. Students will be able to explore new areas of research in both chemistry and allied fields of science and technology.
- CO2. Students will be able to function as a member of an interdisciplinary problem solving team.
- CO3. Students will be skilled in problem solving, critical thinking and analytical reasoning as applied to scientific problems
- CO4. Students will gain an understanding of how to determine the structure of organic molecules using IR and NMR spectroscopic techniques
- CO5. To develop basic skills required for purification, solvent extraction, TLC and column chromatography

Semester V, Paper-1 (Theory) Course Title: Organic Synthesis A Programme:

Course outcomes:

Hydrocarbons are the principal constituents of petroleum and natural gas. They serve as fuels and lubricants as well as raw materials for the production of plastics, fibers, rubbers, solvents and industrial chemicals. This course will provide a broad foundation in for the synthesis of hydrocarbons. Hydroxy and carbonyl compounds are industrially important compounds The

industries of plastics, fibers, petroleum and rubbers will specially recognize this course. Students will gain an understanding of which are used as solvents and raw material for synthesis of drug and other pharmaceutically important compounds.

CO1.Synthesis and chemical properties of aliphatic and aromatic hydrocarbons.

CO2.Synthesis and chemical properties of alcohols, halides carbonyl compounds, carboxylic acids and esters.

CO3.How to design and synthesize aliphatic and aromatic hydrocarbons.

CO4.How to convert aliphatic and aromatic hydrocarbons to other industrially important compounds.

CO5. Functional group interconversion.

Semester-V Paper-2 Course Title: Rearrangements and Chemistry of Group Elements Programme:

Course outcomes:

This paper provides detailed knowledge of synthesis of various class of organic compounds and functional groups inter conversion. Organic synthesis is the most important branch of organic chemistry which provides jobs in production & QC departments related to chemicals, drugs, medicines, FMCG etc. industries.

CO1. It relates and gives an analytical aptitude for synthesizing various industrially important compounds.

CO2. This paper also provides a detailed knowledge on the elements present in our surroundings, their occurrence in nature. Their position in periodic table, their physical and chemical properties as well as their extraction. This paper also gives detailed understanding of the s, p, d and f block elements and their characteristics.

Semester V, Paper-3 (Practical) Course Title: Qualitative Analysis

A

Course outcomes:

Upon completion of this course the students will have the knowledge and skills to: understand the laboratory methods and tests related to inorganic mixtures and organic compounds.

CO1.Identification of acidic and basic radicals in inorganic mixtures

CO2.Separation of organic compounds from mixture

CO3.Elemental analysis in organic compounds

CO4.Identification of functional group in organic compounds

CO5. Identification of organic compound.

Semester-VI Paper-1 Course Title: Organic Synthesis B

Course outcomes:

This paper provides detailed knowledge of synthesis of various class of organic compounds and functional groups inter conversion. Organic synthesis is the most important branch of organic chemistry which provides jobs in production & QC departments related to chemicals, drugs, medicines, FMCG etc. industries. The study of natural products and heterocyclic compounds offers an excellent strategy toward identifying novel biological probes for a number of diseases. Historically, natural products have played an important role in the development of pharmaceutical drugs for a number of diseases including cancer and infection.

CO1. It relates and gives an analytical aptitude for synthesizing various industrially important compounds.

CO2. Learn the different types of alkaloids, & terpenes etc and their chemistry and medicinal importance.

CO3. Explain the importance of natural compounds as lead molecules for new drug discovery.

Semester-VI Paper-2 Course Title: Chemical Energetics and Radio Chemistry Programme:

Course outcomes:

Upon successful completion of this course students should be able to describe laws of thermodynamics and its applications, phase equilibria of one and two component system, electro chemistry ,ionic equilibrium applications of conductivity and potentiometric measurements.

Semester VI, Paper-3 (Practical) Course Title: Analytical Methods

Course Outcomes:

Upon successful completion of this course students should be able to quantify the product obtained through gravimetric method; determination of R_f values and identification of organic compounds through paper and thin layer chromatography laboratory techniques: perform thermo chemical reactions

M.Sc Chemistry

Course/program structure:

- There will be only one Major Subject in Post graduate program.
- Postgraduate program will run under C.B.C.S. and semester system.
- There will be four theory papers (each of 4 credit) leading to 16 credits in each semester. Lab exercises would comprise of 6 credits in each semesters. In addition, there will be 6 credits for project/ dissertation in each third and fourth semester.
- In the second semester, there will be one optional paper.
- In the 3rd and 4th semester of post graduate program, students will have to opt for 2 elective papers based on specialization as per his/her choice, available in the institution.
- These paper will be of 4 credits.

Research project in postgraduate program:

- Student will have to do a research dissertation/ project related to major subject Elected by him in 3rd and 4th semester.
- This research project may be interdisciplinary/ multidisciplinary. It may be in the form of Industrial training/ internship/ survey work etc.
- The research project must be completed under supervision of the college faculties. If necessary, the students can take a joint support in supervision from any concern industrial/ corporate/ technical or research institute personnel.
- The research project/ seminar would be of 6 credits each in 3rd and 4th semester.

Excursion tour for PG students of 3rd semester will be organized for visiting various industrial units/ research institutions under the supervision of faculties.

Students must

submit one page report and presentation about the tour. The tour should be financed by both the students and the institutes.

Program Outcomes:

The purpose of the syllabus is to Solve and understand of major concepts in all disciplines of Chemistry independently and in group as well as draw logical conclusions through Project and Seminar Presentation.

- PO1. Employ critical thinking and the scientific knowledge to design, carry out, record and analyze the results of Chemistry experiments.
- PO2. Equip students to face the employment challenges and instill confidence to turn into entrepreneur and also step into research career.
- PO3. Generate new scientific insights or to the innovation of new applications of chemical research.
- PO4. Apply modern methods of analysis to chemical systems in a laboratory setting.
- PO5. Enhance students' ability to develop global level research opportunities to pursue Ph.D. program targeted approach of CSIR/UGC – NET examination and specific competitive exams conducted by service commission.

B.Sc. PHYSICS

PROGRAMME OUTCOMES (POs)

The practical value of science for productivity, for raising the standard of living of the people is surely recognized. Science as a power, which provides tools for effective action for the benefit of mankind or for conquering the forces of Nature or for developing resources, is surely highlighted everywhere. Besides the utilitarian aspect, the value of Science, lies in the fun called intellectual enjoyment. Science teaches the value of rational thought as well as importance of freedom of thought. Our teaching so far has been aimed more at formal knowledge and understanding instead of training and application oriented. Presently, the emphasis is more on training, application and to some extent on appreciation, the fostering in the pupils of independent thinking and creativity. Surely, teaching has to be more objective based. The process of application based training, whether we call it a thrill or ability, is to be emphasized as much as the content. Physics is a basic science; it attempts to explain the natural phenomenon in as simple a manner as possible. It is an intellectual activity aimed at interpreting the Multiverse. The starting point of all physics lies in experience. Experiment, whether done outside or in the laboratory, is an important ingredient of learning physics and hence the present programme integrates six experimental physics papers focusing on various aspects of modern technology based equipments. With all the limitations imposed (even the list of experiments as given in the syllabus) if the spirit of discovery by investigation is kept in mind, much of the thrill can be experienced.

- PO1. The main aim of this programme is to help cultivate the love for Nature and its manifestations, to transmit the methods of science (the contents are only the means) to observe things around, to generalize, to do intelligent guessing, to formulate a theory &

model, and at the same time, to hold an element of doubt and thereby to hope to modify

it in terms of future experience and thus to practice a pragmatic outlook.

PO2. The programme intends to nurture the proficiency in functional areas of Physics, which is in line with the international standards, aimed at realizing the goals towards skilled India.

PO3. Keeping the application oriented training in mind; this programme aims to give students the competence in the methods and techniques of theoretical, experimental and computational aspects of Physics so as to achieve an overall understanding of the subject for holistic development. This will cultivate in specific application oriented training leading to their goals of employment.

PO4. The Bachelor's Project (Industrial Training / Survey / Dissertation) is intended to give an essence of research work for excellence in explicit areas. It integrates with specific job requirements / opportunities and provides a foundation for Bachelor (Research) Programmes.

Course Title: Mathematical Physics & Newtonian Mechanics

PROGRAMME SPECIFIC OUTCOMES (PSOs)

This programme aims to give students the competence in the methods and techniques of calculations using Newtonian Mechanics and Thermodynamics. At the end of the course the students are expected to have hands on experience in modeling, implementation and calculation of physical quantities of relevance. An introduction to the field of Circuit Fundamentals and Basic Electronics which deals with the physics and technology of semiconductor devices is practically useful and gives the students an insight in handling electrical and electronic instruments. Experimental physics has the most striking impact on the industry wherever the instruments are used. The industries of electronics, telecommunication and instrumentation will specially recognize this course.

Course Outcomes (COs)

CO1. Recognize the difference between scalars, vectors, pseudo-scalars and pseudo-vectors.

CO2. Understand the physical interpretation of gradient, divergence and curl.

CO3. Comprehend the difference and connection between Cartesian, spherical and cylindrical coordinate systems.

CO4. Know the meaning of 4-vectors, Kronecker delta and Epsilon (Levi Civita) tensors.

CO5. Study the origin of pseudo forces in rotating frame.

CO6. Study the response of the classical systems to external forces and their elastic deformation.

CO7. Understand the dynamics of planetary motion and the working of Global Positioning System (GPS).

CO8. Comprehend the different features of Simple Harmonic Motion (SHM) and wave propagation.

First Semester: Course Title: Mechanical Properties of Matter

Course Outcomes (COs)

Experimental physics has the most striking impact on the industry wherever the instruments are used to study and determine the mechanical properties. Measurement precision and perfection is achieved through Lab Experiments. Online Virtual Lab Experiments give an insight in simulation techniques and provide a basis for modeling.

Course Title: Thermal Physics & Semiconductor Devices

Course Outcomes (COs)

CO1. Recognize the difference between reversible and irreversible processes.

CO2. Understand the physical significance of thermodynamical potentials.

CO3. Comprehend the kinetic model of gases w.r.t. various gas laws.

CO4. Study the implementations and limitations of fundamental radiation laws.

CO5. Utility of AC bridges.

CO6. Recognize the basic components of electronic devices.

CO7. Design simple electronic circuits.

CO8. Understand the applications of various electronic instruments.

Course Title: Thermal Properties of Matter & Electronic Circuits

Course Outcomes (COs)

Experimental physics has the most striking impact on the industry wherever the instruments are used to study and determine the thermal and electronic properties. Measurement precision and perfection is achieved through Lab Experiments. Online Virtual Lab Experiments give an insight in simulation techniques and provide a basis for modeling.

Course Title: Electromagnetic Theory & Modern Optics

POS

This programme aims to introduce the students with Electromagnetic Theory, Modern Optics and Relativistic Mechanics. Electromagnetic Wave Propagation serves as a basis for all communication systems and deals with the physics and technology of semiconductor optoelectronic devices. A deeper insight in Electronics is provided to address the important components in consumer Optoelectronics, IT and Communication devices, and in industrial instrumentation. The need of Optical instruments and Lasers is surely highlighted everywhere and at the end of the course the students are expected to get acquainted with applications of Lasers in technology. Companies and R&D Laboratories working on Electromagnetic properties, Laser Applications, Optoelectronics and Communication Systems are expected to value this course.

Course Outcomes (COs)

- CO1. Better understanding of electrical and magnetic phenomenon in daily life.
- CO2. To troubleshoot simple problems related to electrical devices.
- CO3. Comprehend the powerful applications of ballistic galvanometer.
- CO4. Study the fundamental physics behind reflection and refraction of light (electromagnetic waves).
- CO5. Study the working and applications of Michelson and Fabry-Perot interferometers.
- CO6. Recognize the difference between Fresnel's and Fraunhofer's class of diffraction.
- CO7. Comprehend the use of polarimeters.
- CO8. Study the characteristics and uses of lasers

Course Title: Demonstrative Aspects of Electricity & Magnetism

Course Outcomes (COs)

Experimental physics has the most striking impact on the industry wherever the instruments are used to study and determine the electric and magnetic properties. Measurement precision and perfection is achieved through Lab Experiments. Online Virtual Lab Experiments give an insight in simulation techniques and provide a basis for modeling.

Course Title: Perspectives of Modern Physics & Basic Electronics

Course Outcomes (COs)

- CO1. Recognize the difference between the structure of space & time in Newtonian & Relativistic mechanics.

CO2. Understand the physical significance of consequences of Lorentz transformation equations.

CO3. Comprehend the wave-particle duality.

CO4. Develop an understanding of the foundational aspects of Quantum Mechanics.

CO5. Study the comparison between various biasing techniques.

CO6. Study the classification of amplifiers.

CO7. Comprehend the use of feedback and oscillators.

CO8. Comprehend the theory and working of optical fibers along with its applications.

Course Title: Basic Electronics Instrumentation

Course Outcomes (COs)

Basic Electronics instrumentation has the most striking impact on the industry wherever the components / instruments are used to study and determine the electronic properties. Measurement precision and perfection is achieved through Lab Experiments. Online Virtual Lab Experiments give an insight in simulation techniques and provide a basis for modeling.

Course Title: Classical & Statistical Mechanics

POS

This programme contains very important aspects of modern day course curriculum, namely, Classical, Quantum and Statistical computational tools required in the calculation of physical quantities of relevance in interacting many body problems in physics. It introduces the branches of Solid State Physics and Nuclear Physics that are going to be of utmost importance at both undergraduate and graduate level. Proficiency in this area will attract demand in research and industrial establishments engaged in activities involving applications of these fields. This course amalgamates the comprehensive knowledge of Analog & Digital Principles and Applications. It presents an integrated approach to analog electronic circuitry and digital electronics. Present course will attract immense recognition in R&D sectors and in the entire cutting edge technology based industry

Course Outcomes (COs)

CO1. Understand the concepts of generalized coordinates and D'Alembert's principle.

CO2. Understand the Lagrangian dynamics and the importance of cyclic coordinates.

CO3. Comprehend the difference between Lagrangian and Hamiltonian dynamics.

CO4. Study the important features of central force and its application in Kepler's problem.

CO5. Recognize the difference between macrostate and microstate.

CO6. Comprehend the concept of ensembles.

CO7. Understand the classical and quantum statistical distribution laws.

CO8. Study the applications of statistical distribution laws.

Course Title: Quantum Mechanics & Spectroscopy

Course Outcomes (COs)

CO1. Understand the significance of operator formalism in Quantum mechanics.

CO2. Study the eigen and expectation value methods.

CO3. Understand the basis and interpretation of Uncertainty principle.

CO4. Develop the technique of solving Schrodinger equation for 1D and 3D problems.

CO5. Comprehend the success of Vector atomic model in the theory of Atomic spectra.

CO6. Study the different aspects of spectra of Group I & II elements.

CO7. Study the production and applications of X-rays.

CO8. Develop an understanding of the fundamental aspects of Molecular spectra

Course Title: Solid State & Nuclear Physics

Course Outcomes (COs)

CO1. Understand the crystal geometry w.r.t. symmetry operations.

CO2. Comprehend the power of X-ray diffraction and the concept of reciprocal lattice.

CO3. Study various properties based on crystal bindings.

CO4. Recognize the importance of Free Electron & Band theories in understanding the crystal properties.

CO5. Study the salient features of nuclear forces & radioactive decays.

CO6. Understand the importance of nuclear models & nuclear reactions.

CO7. Comprehend the working and applications of nuclear accelerators and detectors.

CO8. Understand the classification and properties of basic building blocks of nature.

Course Title: Analog & Digital Principles & Applications

Course Outcomes (COs)

CO1. Study the drift and diffusion of charge carriers in a semiconductor.

CO2. Understand the Two-Port model of a transistor.

CO3. Study the working, properties and uses of FETs.

CO4. Comprehend the design and operations of SCRs and UJTs.

CO5. Understand various number systems and binary codes.

CO6. Familiarize with binary arithmetic.

CO7. Study the working and properties of various logic gates.

CO8. Comprehend the design of combinational and sequential circuits

M.Sc. Physics

Paper I: Mathematical Physics (PCT 101)

Course Objectives:

- To understand the important mathematical methods and tools in physics
- To provide basic skills required for the application of mathematical methods in physics
- To develop understanding of mathematical methods for the analysis of theories and concepts in physics
- To develop among students“ essential knowledge about the application of such methods in their respective research fields

Learning Outcomes:

CO1. After completing this course, students will acquire wide knowledge about analytic functions, several theorems about complex functions, singularities, residues, contour integration and their applications in physics and engineering

CO2. After completion of the course, students will be well equipped in the use of several special functions, polynomials and differential equations in different branches of physics and engineering

CO3. Students will learn to make use of Fourier series and transforms for obtaining solution of different physical problems

CO4. After completing the course, students will acquire sufficient level of understanding about probability and statistical distributions and their role in data analysis

CO5. After the completion of the course, students will have significant understanding about tensors and their role in understanding physical concepts.

Paper II: Classical Mechanics (PCT 102)

Course Objectives:

- To study central force motions and scattering in different frames of reference
- To study the mechanics of dynamical systems using Lagrange's equations of motion for both conservative and non-conservative forces
- To understand and apply the variational principle for solving mechanical problems using calculus of variations
- To develop understanding of cyclic coordinates and conservation of corresponding momentum

- To study Hamilton's principle and establish its relation to Lagrangian formulation and apply it to the solution of some standard mechanical problems
- To develop understanding of canonical transformations and Poisson brackets
- To study the Hamilton-Jacobi technique of solving mechanical problems and develop understanding of rigid body dynamics and also of small oscillations.

Learning Outcomes:

CO1. After the successful completion of the present classical mechanics course students will be able to clearly understand the power of Lagrangian and Hamiltonian formulations for solving dynamical problems and to point out the strengths and weakness of each of these formulations

CO2. Students will be able to apply variational principle for obtaining the solution of dynamical problems

A clear understanding will be developed regarding the canonical transformations and Poisson brackets

CO3. Students will achieve sufficient level of knowledge about Hamilton-Jacobi method of solving dynamical problems

CO4. Understanding of Moment of Inertia tensor for rigid bodies and also of small oscillations and normal modes will also be achieved.

Paper III: Quantum Mechanics I (PCT 103)

Course Objectives:

- To study the fundamental quantum mechanical concepts and apply Schroedinger equation to the case of spherically symmetric potentials
- To develop operator formalism in quantum mechanics and study various operators in the matrix form
- To understand the different components of angular momentum operators and their commutation rules and addition of orbital and spin angular momenta
- To study approximation methods in quantum mechanics for solving those quantum mechanical problems which cannot be solved exactly.

Learning outcomes:

After successfully completing this course, students will be able

CO1. ● To understand the role played by the wave function in the description of a quantum system

- CO2. ● To develop understanding of time-independent Schrodinger equation and its solution for spherically symmetric potentials e.g., Hydrogen atom problem leading to eigenvalues and eigenfunctions
- CO3. ● To differentiate between different kinds of operators used in quantum mechanics and the concept of commuting operators representing quantities that can be measured simultaneously
- CO4. ● To develop theory of angular momenta, their commutation rules and the way orbital and spin angular momenta add to produce resultant angular momentum
- CO5. ● To understand various approximation techniques such as time independent perturbation theory, Variational method, and W. K. B. method to find approximate solutions of quantum mechanical problems which are not exactly solvable.

Paper IV: Electronic Devices (PCT 104)

Course Objectives:

- To study various special purpose diodes and their applications in rectification, amplification, and oscillation producing circuits
- To study JFET & MOSFET amplifiers and certain other applications of these devices
- To develop understanding of fundamentals of operational amplifiers (Op-amps)
- To acquire a deep understanding of various applications of Op-amps.

Learning Outcomes:

After successfully completing this course in electronics, students will be able

- CO1. ● To understand clearly the working and applications of LED, Tunnel, Varactor, Solar cells, LCD and Schottky diodes, and SCR etc
- CO2. ● To develop thorough understanding of construction, working principles, and applications of JFET and MOSFET amplifiers and their relative merit and demerit as compared to BJTs
- CO3. ● To have fundamental knowledge about the construction and working of differential amplifiers and its successor operational amplifier along with a comparison between ideal and practical op-amp in terms of its electrical parameters. It will also provide clear understanding of open-loop and closed loop operations of op-amp
- CO4. ● To develop a clear understanding about the versatility of op-amp in terms of its applications.

Paper VI (Minor Elective) Computer Programming- C & MATLAB (PEM 106)

Course Objectives:

- To introduce students with the basics of C programming language
- To acquaint students with how to express various functions, variables, matrices etc in C
- To develop understanding of different kinds of loops and operators
- To Introduce students with MATLAB and its use in mathematical computing.

Learning Outcomes:

After successfully completing this course, students will -

- Acquire sufficient knowledge about C language
- Learn basics of programming in C language
- Be familiar with the computational tool MATLAB
- Learn graphics and programming in MATLAB.

Paper I: Atomic & Molecular Spectroscopy (PCT 201)

Course Objectives:

The primary objective of this course is to allow students to make a study of physics of atoms and molecules in terms of emission and absorption of radiations by them. Specifically, this course is aimed at

- Developing an understanding of fine structure of spectral lines in Hydrogen as obtained due to the consideration of relativistic effects and spin-orbit interaction
- Providing the knowledge about coupling schemes of orbital and spin angular momenta of electrons in the atoms
- Qualitative as well as quantitative discussion on Zeeman, Paschen-Back, Stark, and Back-Goudsmit effects and causes of width of spectral lines
- Qualitative as well as quantitative discussion on Pure rotational, Vibrational-rotational, and Raman spectra of molecules through models of rigid-rotator, non-rigid rotator, harmonic oscillator, anharmonic oscillator through the use of classical and quantum theories
- Studying electronic transitions between energy levels of molecules giving rise to electronic spectra. The discussion will include both coarse as well as fine structure of electronic bands

Learning Outcomes:

On successfully completing this course, the student will be able

- CO1. ● To understand the fine structure of hydrogen spectral lines and its explanation on the basis of spin-orbit interaction
- CO2. ● To understand how orbital and spin angular momentum of an electron in an atom add together to form the total angular momentum of one electron atom or how total angular momenta so obtained add vectorially to provide total angular momentum of the many-electron atoms
- CO3. ● To interpret causes and types of width of spectral lines

CO4. ● Gain significant understanding of rotational, vibrational, Raman, and electronic spectra of molecules.

Paper II: Statistical Mechanics (PCT 202)

Course Objectives:

- To develop fundamental concepts such as macrostates and microstates, quantum states, phase space and thermodynamic probability etc
- To develop theory of ensembles and their role in the description of many particle systems under different set of constant parameters
- To study the importance of partition function and its use in the calculation of several important thermodynamic quantities
- To study interacting systems and application of Bose-Einstein Statistics and Fermi-Dirac statistics to analyse ideal Bose gas and Fermi-Dirac gas
- To study different kinds of fluctuations including density and energy fluctuations
- To learn the theoretical aspect of order-disorder phase transitions, random walk and Brownian motion etc.

Course Outcomes:

The successful completion of this course will make a student able

- CO1. ● To understand the concept of Phase space and to differentiate between macroscopic and microscopic quantities of a statistical system
- CO2. ● To develop a clear understanding of the importance of ensembles in statistical physics. The student will also acquire sufficient knowledge about the application of ensembles to some standard statistical problems
- CO3. ● To differentiate between identical distinguishable and identical indistinguishable particles and between symmetric and antisymmetric wave functions.
- CO4. ● To interpret the thermodynamic behaviour of ideal Bose gas and ideal Fermi gas
- CO5. ● To understand the continuous and discontinuous phase transitions, the property of superfluidity, and the phenomena of diffusion and Brownian motion.

Paper III: Solid State Physics (PCT 203)

Course Objectives:

- To study free electron theory and other concepts related to electrical and thermal conductivity of metals
- To develop an understanding of band theory of solids and effects associated with it
- To make a study of elastic constants and propagation of elastic waves in crystals
- To study magnetic properties of solids

Learning Outcomes: Successful completion of this course-

- CO1. ● Will allow students to acquire knowledge about electrical and thermal conductivity of metals and different theories explaining their variation
- CO2. ● Will provide students significant understanding of band theory of solids, Fermi surfaces in metals & their determination
- CO3. ● Will develop an understanding about elastic constants of crystals and the propagation of elastic waves in crystals particularly in cubic crystals
- CO4. ● Will transfer sufficient knowledge about properties of Paramagnetism, diamagnetism, and ferromagnetism in materials and theories associated with them.

Paper IV: Physics of Nanoscale Materials (PCT 204)**Course Objectives:**

- To learn fundamental concepts in nanoscience and nanotechnology
- To understand the effect of quantum confinement on energy eigenvalues and eigenfunctions of electrons in lower dimensional materials
- To develop an understanding of density of states for bulk, quantum well, quantum wire, and quantum dots
- To study about synthesis of nanomaterials through several physical and chemical methods
- To study about methods and techniques for the determination of particle size and band gap of a material
- To study about characterization techniques such as SEM, TEM, STM, AFM etc
- To develop an understanding of carbon nanotubes (CNTs) and some other allotropes of carbon.

Learning Outcomes:

Successful completion of this course will allow students-

- CO1. ● To have sufficient knowledge about the basics of nanoscience
- CO2. ● To acquire significant understanding of quantum confinement and its effects in quantum wells, wires and dots
- CO3. ● To interpret the meaning of density of states in lower dimensional materials and to learn its quantitative variation with energy and dimension of the crystal
- CO4. ● To acquire knowledge about the synthesis of nanomaterials through physical and chemical methods
- CO5. ● To characterize nanomaterials in terms of particle size, energy band gap, composition, emission and absorption of radiation etc
- CO6. ● To have significant knowledge about Fullerenes, CNTs and graphene etc.

Semester III Paper I: Nuclear Physics- I (PCT 301)

Course Objectives:

- To study basic properties of nuclei
- To study Alpha decay, Beta decay, and Gamma decay of nuclei and also transition rules and other effects associated with these decays
- To study theory of nuclear reactions
- To understand the mechanism of nuclear fission and fusion.

Course Outcomes: After successfully completing this course, students-

- CO1. ● Will acquire knowledge about fundamental properties of nuclei and their variation
- CO2. ● Will be able to understand the mechanism of Alpha decay of nucleus
- CO3. ● Will develop an understanding of Beta decay of nucleus, the neutrino concept, and associated parity violation in this mode of decay
- CO4. ● Will learn how nuclei can decay through the emission of Gamma rays. They will also acquaint themselves with Mossbauer Effect and its applications
- CO5. ● Will understand how conservation laws are involved in nuclear reactions and will also be able to interpret the meaning and importance of Q-value of nuclear reactions.

Paper II: Electromagnetic Theory (PCT 302)

Course Objectives:

- To introduce the basic mathematical concepts related to electromagnetic vector fields.
- To impart knowledge on the concepts of electrostatics, electric potential, energy density and their applications.
- To impart knowledge on the concepts of magnetostatics, magnetic flux density, scalar and vector potential and its applications.
- To impart knowledge on the concepts of Faraday's law, induced emf and Maxwell's equations.
- To impart knowledge on the concepts of Concepts of electromagnetic waves and Transmission lines.

Learning Outcomes:

- CO1. ● Understand the basic mathematical concepts related to electromagnetic vector fields. .
- CO2. ● Apply the principles of electrostatics to the solutions of problems relating to electric field and electric potential, boundary conditions and electric energy density.
- CO3. ● Apply the principles of magnetostatics to the solutions of problems relating to magnetic field and magnetic potential, boundary conditions and magnetic energy density.
- CO4. ● Understand the concepts related to Faraday's law, induced emf and Maxwell's equations.

- CO5. ● Apply Maxwell's equations to solutions of problems relating to transmission lines and uniform plane wave propagation.

Condensed Matter Physics I (PST 303 (B))

Course Objectives:

- To study about crystal types, symmetry elements and X-ray diffraction in crystals
- To make a study of free electron gas, interacting electron gas, diffraction of electrons from surface, and about thermionic emission and associated effects
- To develop an understanding of transport properties of solids and semiconductors, particularly to study about Quantum Hall effect (QHE) and conduction mechanism in semiconductors
- To study about dielectric properties of solids.

Learning Outcomes:

After successfully completing this course, students-

- CO1. ● Will acquire knowledge about symmetry elements in the crystals and the different types of lattices
- CO2. ● Will understand about the tight-binding approximation, Hartree-Fock approximation, and diffraction of electrons from surfaces
- CO3. ● Will be able to understand about very important and research-oriented topics such as QHE, IQHE, and FQHE
- CO4. ● Will learn about dielectric polarization and the properties of ferroelectricity and antiferroelectricity.

Advanced Solid State Physics (PET 304 (A))

Course Objectives:

- To study about various crystal defects and imperfections in solids
- To study about superconducting effects and theories to explain them
- To develop an understanding of NMR and ESR
- To make a study about disorders in alloys and liquid crystals

Learning Outcomes:

After successfully completing this course, students-

- CO1. ● Will understand about various types of defects occurring in crystals and also their effect on conductivity of the solid
- CO2. ● Will acquire knowledge about superconductivity and its associated effects and also certain applications of superconductivity
- CO3. ● Will understand the importance of experimental techniques of NMR and ESR

- CO4. ● Will develop an understanding of the concept of order-disorder in alloys and liquid crystals.

Quantum Mechanics- II (PCT 401)

Course Objectives:

- To study about the time-dependent perturbation theory and other approximation methods in quantum mechanics
- To develop an understanding of quantum theory of scattering for various perturbing potentials
- To study about the method of partial waves in understanding the scattering phenomenon
- To study about identical particles, their wave functions and scattering effects involving such particles
- To develop an understanding of Klein-Gordon and Dirac approaches for solving problems in relativistic quantum mechanics.

Learning Outcomes:

Successful completion of this course will provide students-

- CO1. ● Sufficient knowledge about time-dependent perturbation theory and other approximation methods and their effects on atomic systems
- CO2. ● Thorough understanding of scattering of particles and its analysis through several methods for various scattering potentials
- CO3. ● Significant understanding about identical particles and the phenomena associated with these particles
- CO4. ● A comparative knowledge about two important approaches of solving problems in relativistic quantum mechanics viz. Klein-Gordon and Dirac.

Paper II: NUCLEAR PHYSICS- II (PCT 402)

Course Objectives:

- To study about nuclear two-body problem (deuteron problem) and to study about properties of nuclear forces
- To study various aspects of different nuclear models
- To study about elementary particles and conservation laws associated with them
- To study the Quark hypothesis and other related concepts.

Learning Outcomes:

After successfully completing this course, students-

- CO1. ● Will develop understanding of deuteron system and various properties of nuclear forces

- CO2. ● Will be able to interpret the conclusions arising out of liquid drop model, shell model, and collective model of nucleus
- CO3. ● Will acquire knowledge about four fundamental interactions and elementary particles and conservation laws for them
- CO4. ● Will develop an understanding about the Quark model, different types of quarks and their interactions etc.

Condensed Matter Physics II (PST 403 (B))

Course Outcomes:

- To study imperfections in crystals
- To study optical properties in solids
- To study thin films and surface topography
- To learn the use of SEM, TEM, STEM, AFM for the characterization of materials
- To make study of disorder systems and glasses

Learning Outcomes:

After successfully completing this course, students

- CO1. ● Will learn about various types of imperfections in crystals particularly point, line and planar defects and dislocations
- CO2. ● Will develop an understanding of the optical properties of solids particularly photoconductivity and photoluminescence, electroluminescence. They will also learn about excitons.
- CO3. ● Will learn about the thin film preparation through various methods and also their characterization through electron microscopic methods
- CO4. ● Will develop an understanding of disorder systems and glasses and their properties.

Material Science and Energy Devices (PET 404(C))

Course Objectives:

- To develop an understanding of engineering of materials structure
- To study about advanced engineering materials
- To learn basic concepts involved in photovoltaic energy conversion process
- To acquire skills in materials selection and engineering design for different kinds of solar cells
- To impart knowledge about the fundamentals of hydrogen energy, hydrogen production, storage and transportation
- To study about various fuel cells and materials required for their construction
- To learn fundamental concepts involved in the energy storage in the devices such as supercapacitors and batteries

- To impart in-depth knowledge about important advanced supercapacitors and batteries

Learning Outcomes:

This course is a higher skill development course in advanced energy storage and production devices and may directly provide employment to the students. After successful completion of the course, the students -

- CO1. ● Will be able to interpret materials' properties in terms of their microstructure
- CO2. ● Will acquire fundamental knowledge about solar energy conversion process
- CO3. ● Will understand different aspects associated with hydrogen energy and construction of fuel cells and their applications
- CO4. ● Will acquire knowledge of energy storage in supercapacitors and batteries
- CO5. ● Will understand how the advanced supercapacitors and batteries are constructed
- CO6. ● Will learn about the materials' selection and engineering involved in the solar energy systems, hydrogen energy systems, and energy storage systems.

B.Sc.BOTANY

Programme outcomes (POs):

Transformed curriculum shall develop educated outcome-oriented candidature, fostered with discovery learning, equipped with practice & skills to deal practical problems and versed with recent pedagogical trends in education including e-learning, flipped class and hybrid learning to develop into responsible citizen for nation-building and transforming the country towards the future with their knowledge gained in the field of plant science.

Course Title: Microbiology & Plant Pathology

Course outcomes:

After the completion of the course the students will be able to:

- CO1. Develop understanding about the classification and diversity of different microbes including viruses, Algae, Fungi & Lichens & their economic importance.
- CO2. Develop conceptual skill about identifying microbes, pathogens, biofertilizers & lichens.
- CO3. Gain knowledge about developing commercial enterprise of microbial products.
- CO4. Learn host –pathogen relationship and disease management.
- CO5. Learn Presentation skills (oral & writing) in life sciences by usage of computer & multimedia.
- CO6. Gain Knowledge about uses of microbes in various fields.

CO7. Understand the structure and reproduction of certain selected bacteria algae, fungi and lichens

CO8. Gain Knowledge about the economic values of this lower group of plant community.

Course Title: Techniques in Microbiology & Plant Pathology

Course outcomes:

After the completion of the course the students will be able:

CO1. Understand the instruments, techniques, lab etiquettes and good lab practices for working in a microbiology laboratory.

CO2. Develop skills for identifying microbes and using them for Industrial, Agriculture and Environment purposes.

CO3. Practical skills in the field and laboratory experiments in Microbiology & Pathology.

CO4. learn to identify Algae, Lichens and plant pathogens along with their Symbiotic and Parasitic associations.

CO5. Can initiate his own Plant & Seed Diagnostic Clinic

CO6. Can start own enterprise on microbial products

Course Title: Archegoniates and Plant Architecture

Course outcomes:

After the completion of the course the students will be able to:

CO1. Develop critical understanding on morphology, anatomy and reproduction of Bryophytes, Pteridophytes and Gymnosperms

CO2. Understanding of plant evolution and their transition to land habitat.

CO3. Understand morphology, anatomy, reproduction and developmental changes therein through typological study and create a knowledge base in understanding the basis of plant diversity, economic values & taxonomy of plants

CO4. Understand the details of external and internal structures of flowering plants.

Course Title: Land Plants Architecture

Course outcomes:

CO1. The students will be made aware of the group of plants that have given rise to land habit and the flowering plants. Through field study they will be able to see these plants grow in nature and become familiar with the biodiversity.

CO2. Students would learn to create their small digital reports where they can capture the zoomed in and zoomed out pictures as well as videos in case they are able to find some rare structure or phenomenon related to these plants.

CO3. Develop an understanding by observation and table study of representative members of phylogenetically important groups to learn the process of evolution in a broad sense.

CO4. Understand morphology, anatomy, reproduction and developmental changes therein through typological study and create a knowledge base in understanding plant diversity, economic values & taxonomy of lower group of plants

CO5. Understand the composition, modifications, internal structure & architecture of flowering plants for becoming a Botanist

Course Title: Flowering Plants Identification & Aesthetic Characteristics

Course outcomes:

After the completion of the course the students will be able to:

CO1. To gain an understanding of the history and concepts underlying various approaches to plant taxonomy and classification.

CO2. To learn the major patterns of diversity among plants, and the characters and types of data used to classify plants.

CO3. To compare the different approaches to classification with regard to the analysis of data.

CO4. To become familiar with major taxa and their identifying characteristics, and to develop in depth knowledge of the current taxonomy of a major plant family.

CO5. To discover and use diverse taxonomic resources, reference materials, herbarium collections, publications.

CO6. For the entrepreneur career in plants, one can establish a nursery, Start a landscaping business, Set up a farm Or Run a plantation consultancy firm

Course Title: Plant Identification technology

Course outcomes:

After the completion of the course the students will be able:

- CO1. To learn how plant specimens are collected, documented, and curated for a permanent record.
- CO2. To observe, record, and employ plant morphological variation and the accompanying descriptive terminology.
- CO3. To gain experience with the various tools and means available to identify plants.
- CO4. To develop observational skills and field experience.
- CO5. To identify a taxonomically diverse array of native plants.
- CO6. To recognize common and major plant families.
- CO7. To Understand aesthetic characters of flowering plants by making-landscapes, gardens, bonsai, miniatures
- CO8. Comprehend the concepts of plant taxonomy and classification of Angiosperms.

Course Title: Economic Botany, Ethnomedicine and Phytochemistry

Course outcomes:

After the completion of the course the students will be able to:

- CO1. Understand about the uses of plants –will know one plant-one employment
- CO2. Understand phytochemical analysis related to medicinally important plants and economic products produced by the plants
- CO3. know about the importance of Medicinal plants and its useful parts, economically important plants in our daily life and also about the traditional medicines and herbs, and its relevance in modern times.

Course Title: Commercial Botany & Phytochemical Analysis

Course outcomes: After the completion of the course the students will be able to:

- CO1. Know about the commercial products produced from plants.
- CO2. Gain the knowledge about cultivation practices of some economic crops.
- CO3. Understand about the ethnobotanical details of plants.
- CO4. Learn about the chemistry of plants & herbal preparations
- CO5. Can become a protected cultivator, aromatic oil producer, Pharmacologist or quality analyst in drug company

Course Title: Plant Physiology, Metabolism & Biochemistry

Course outcomes: After the completion of the course the students will be able to:

CO1. Understand the role of Physiological and metabolic processes for plant growth and development.

CO2. Learn the symptoms of Mineral Deficiency in crops and their management.

CO3. Assimilate Knowledge about Biochemical constitution of plant diversity.

CO4. Know the role of plants in development of natural products, nutraceuticals, dietary supplements, antioxidants

Course Title: Molecular Biology & Bioinformatics

Course outcomes: After the completion of the course the students will be able to:

CO1. Understand nucleic acids, organization of DNA in prokaryotes and Eukaryotes, DNA replication mechanism, genetic code and transcription process.

CO2. Know about Processing and modification of RNA and translation process, function and regulation of expression.

CO3. Gain working knowledge of the practical and theoretical concepts of bioinformatics

Course Title: Experiments in physiology, Biochemistry & molecular biology

Course outcomes: After the completion of the course the students will be able to:

CO1. Know and authentic the physiological processes undergoing in plants along with their metabolism

CO2. Identify Mineral deficiencies based on visual symptoms

CO3. Understand and develop skill for conducting molecular experiments for genetic engineering.

Course Title: Project in Botany for Pre-graduation

Course outcomes:

CO1. Project work will supplement field experimental learning and deviations from classroom and laboratory transactions.

CO2. project work will enhance the capability to apply gained knowledge and understanding for selecting, solving and decision-making processes.

CO3. It will promote creativity and the spirit of enquiry in learners.

CO4. They will learn to consult Scientists, libraries, laboratories and herbariums and learn importance of discussions, Botanical & field trips, print and electronic media, internet

etc. along with data documentation, compilation, analysis & representation in form of dissertation writing.

CO5. It will enhance their abilities, enthusiasm, and interest.

Course Title: Cytogenetics, Plant Breeding & Nanotechnology

Course outcomes: After the completion of the course the students will be able:

CO1. Acquire knowledge on cell ultrastructure.

CO2. Understand the structure and chemical composition of chromatin and concept of cell division.

CO3. Interpret the Mendel's principles, acquire knowledge on cytoplasmic inheritance and sex-linked inheritance.

CO4. Understand the concept of 'one gene one enzyme hypothesis' along with the molecular mechanism of mutation

Course Title: Ecology & Environment

Course outcomes:

CO1. acquaint the students with complex interrelationship between organisms and environment;

CO2. make them understand methods for studying vegetation, community patterns and processes, ecosystem functions, and principles of phytogeography.

CO3. This knowledge is critical in evolving strategies for sustainable natural resource management and biodiversity conservation.

Course Title: Lab on Cytogenetics, Conservation & Environment management

Course outcomes: After the completion of the course the students will be able:

CO1. To perform all experiments related to the semester-i.e. Plant tissue cultured plants, conducting breeding on field, conserving and depolluting the environment.

CO2. Can be employed in environment impact assessment companies & start his own venture

Course Title: Project in Botany for Graduation

Course outcomes: After completing this course a student will have:

CO1. Project work will supplement field experimental learning and deviations from classroom and laboratory transactions.

CO2. Project work will enhance the capability to apply gained knowledge and understanding for selecting, solving and decision-making processes

CO3. It will promote creativity and the spirit of enquiry in learners.

CO4. They will learn to consult Scientists, libraries, laboratories and herbariums and learn importance of discussions, Botanical & field trips, print and electronic media, internet etc. along with data documentation, compilation, analysis & representation in form of dissertation writing

CO5. It will enhance their abilities, enthusiasm, and interest.

M.Sc. Botany

Programme outcomes (POs):

This program provides comprehensive knowledge across various domains of plant biology through lectures, interactive sessions, and practical exercises. Students will develop a broad understanding of the fundamental principles and characteristics of plant groups, including viruses, bacteria, fungi, algae, bryophytes, pteridophytes, gymnosperms, and angiosperms, encompassing their metabolism, molecular components, biochemistry, taxonomy, and ecology. Practical sessions are designed to complement theoretical learning, facilitating hands-on exploration of plant structures and floral diversity. Through engagement with natural environments, students will gain an appreciation for the significance of local ecosystems and natural resources.

This course offers in-depth knowledge of Botany, wherein:

- PO1. Students will acquire a comprehensive understanding of plant classification, systematics, evolution, ecology, developmental biology, physiology, biochemistry, plant-microbe and plant-insect interactions, morphology, anatomy, reproduction, genetics, and molecular biology across diverse life forms.
- PO2. This course equips students with expertise in conservation biology, including ex-situ conservation methods, responses to habitat change, genotype characterization, and reproductive biology strategies.
- PO3. Students will gain proficiency in various analytical techniques of plant sciences, exploring the industrial and livelihood applications of plants, and mastering transgenic technologies for both basic and applied research.

- PO4. The curriculum ensures a thorough understanding of plant life forms, encompassing morphology, anatomy, reproduction, genetics, microbiology, molecular biology, recombinant DNA technology, transgenic technology, bioinformatics tools and databases, and statistical analysis of biological data.
- PO5. Practical laboratory skills will be honed, including observation, evaluation, and utilization of modern tools and technology, enhancing students' proficiency in experimental techniques.
- PO6. Introduction to research projects will cultivate research aptitude and a passion for higher education and scientific inquiry among students.
- PO7. The curriculum ensures students develop a strong foundation in both modern and classical aspects of Botany, emphasizing that a deep knowledge of Botany is essential for pursuing various applied sciences, thereby preparing students for successful careers in Botany and allied fields.

SEMESTER: I Paper: Algae, Fungi, Lichens and Bryophytes

Course outcomes :

After the completion of the course the students will be able to:

- CO1. Gain comprehensive knowledge of cell structure, thallus organization, reproduction across various class of algae.
- CO2. Develop critical understanding on algal research methodologies, culturing techniques, and applications.
- CO3. Gain comprehensive knowledge of fungal diversity, recent trends in fungal classification, research methodologies.
- CO4. Understand fascinating journey into the world of lichens, mysterious reproduction methods, and the art of collecting and identifying these unique organisms.
- CO5. Understanding of plant evolution and their transition to land habitat, and enriching their knowledge of Bryophytes in the context of embryophyte evolution.

Paper: Pteridophytes, Gymnosperms and Palaeobotany

Course outcomes:

After the completion of the course the students will be able to:

- CO1. Develop critical understanding on classification, morphology, anatomy, reproduction and appreciation of the economic significance of Pteridophytes and Gymnosperms.
- CO2. Gain a basic understanding of paleobotany, methods of fossil study, and the fossil record of various plant groups.

- CO3. Explore palaeobotanical research in India, geological time scale, and the significance of fossils in understanding plant evolution.
- CO4. Develop a basic understanding of important databases for Algae, Fungi, Bryophytes, and Gymnosperms and explore the origin of angiosperms.

Paper: Plant Systematics and Reproductive Biology

Course outcomes

After the completion of the course the students will be able to:

- CO1. Explore the classification of Angiosperms by Bentham and Hooker, and the APG classification system
- CO2. Develop understanding of plant systematics major taxa and their identifying characteristics and phylogenetic relationships among major angiosperm clades.
- CO3. Develop in-depth knowledge of taxonomy and special features of major plant families such as Monocots and Eudicots
- CO4. Use diverse taxonomic resources, reference materials, herbarium collections, publications.
- CO5. Develop understanding of plant reproductive biology including evolution of stamen and carpel, sporogenesis, fertilization, embryo and endosperm development and seed germination.

Paper: Microbiology

Course outcomes

After the completion of the course the students will be able to:

- CO1. Develop understanding of viruses, including their classification, isolation, purification, replication, transmission, economic importance, as well as knowledge of Cyanobacteria, Viroids, Prions, Archaeobacteria, and Eubacteria.
- CO2. Gain proficiency in agricultural microbiology, learning about important microorganisms and biological nitrogen fixation, the role of mycorrhizae in plant health, strategies for controlling plant diseases,
- CO3. Develop understanding the benefits of PGPR, and techniques for managing weeds and pests in agricultural surroundings.
- CO4. Understand the role of microbes in environmental quality, including their involvement in pesticide and hydrocarbon degradation, breakdown of agricultural residues, bioremediation of soil and water, applications in nanotechnology, development of biosensors, and production of biogas.

CO5. Understand fermentation, fermenter design, growth processes, food spoilage, microbial roles in metal and oil recovery, cell and enzyme immobilization, industrial microbial enzymes, single-cell protein production, and vaccine development.

Paper: Practical Lab 1

Course outcomes:

After the completion of the course the students will be able to:

- CO1. Develop skills for identifying algae, fungi, lichens, and bryophytes, including their cell structure, reproduction, research methodologies, and applications in various fields.
- CO2. Gain proficiency in classification, morphology, anatomy, reproduction, and appreciation of the economic significance of pteridophytes and gymnosperms, alongside a basic understanding of paleobotany and its significance in understanding plant evolution.
- CO3. Explore the classification of angiosperms, major plant taxa, and their identifying characteristics, as well as develop in-depth knowledge of taxonomy and special features of major plant families, utilizing diverse taxonomic resources and publications.
- CO4. Acquire a thorough understanding of microbiology, including viruses, important microorganisms, agricultural microbiology, microbial roles in environmental quality, and industrial microbiology, with a focus on fermentation, fermenter design, growth processes, and biotechnological applications.

SEMESTER: II Paper: Biomolecules and Cell Biology

Course outcomes:

After the completion of the course the students will be able to:

- CO1. Develop a thorough understanding of the classification, structure, and properties of key biomolecules including carbohydrates, lipids, and amino acids, elucidating their significance in plant physiology.
- CO2. Gain insight into protein structure and enzymatic functions, an understanding of enzyme classification, physiochemical properties, kinetics, and regulatory mechanisms.
- CO3. Acquire knowledge of the structure and function of plant cell components such as the cell wall, membrane, nucleosome, chromosomal packaging, nuclear envelope, and nuclear pore complex, along with an understanding of cell division processes including mitosis and meiosis, their regulation, and the cell cycle.
- CO4. Explore protein sorting mechanisms including organelle biogenesis, secretion, targeting, and trafficking within the cell, and between the nucleus and cytoplasm.

Paper: Molecular Biology

Course outcomes

After the completion of the course the students will be able to:

- CO1. Develop a comprehensive understanding of DNA replication, repair, and recombination processes.
- CO2. Gain insight into RNA synthesis and processing, and structure and function of different types of RNA, and RNA transport mechanisms.
- CO3. Acquire knowledge of protein synthesis and processing, translational inhibitors, and post-translational modification of proteins.
- CO4. Explore the mechanisms controlling gene expression at both transcription and translation levels, including regulation in phages, viruses, prokaryotic and eukaryotic genes, and the role of chromatin in gene expression and gene silencing.

Paper: Genetics

Course outcomes

After the completion of the course the students will be able to:

- CO1. Gain understanding of Mendelian genetics principles and their extensions, gene interactions, pleiotropy, phenocopy, linkage, crossing over, sex linkage, and sex-limited/influenced traits, and quantitative inheritance concepts.
- CO2. Explore mutations and mutagenic agents, germinal versus somatic mutations, as well as structural and numerical alterations of chromosomes and their genetic implications, with practical applications in crop improvement.
- CO3. Understand microbial genetics, including methods of genetic transfers such as transformation, conjugation, and transduction, as well as mapping genes by interrupted mating and fine structure analysis of genes.
- CO4. Explore extrachromosomal inheritance, including criteria and examples such as plastid inheritance in *Mirabilis*, Kappa particles in *Paramecium*, coiling in snails, and an overview of mitochondrial and chloroplast genetics, including paternal inheritance and male sterility in plants.

Paper: Plant Anatomy

Course outcomes

After the completion of the course the students will be able to:

- CO1. Understand the classification of plant tissues, including simple and complex tissues, and the cytodifferentiation processes of tracheary elements and sieve elements, along with the structures and functions of pits, plasmodesmata, wall ingrowths, transfer cells, and ergastic substances.
- CO2. Explore the organization of stems, including the structure of the shoot apex based on apical cell theory, histogen theory, and tunica corpus theory, as well as the types of vascular bundles and structures of dicot and monocot stems. Similarly, delve into leaf anatomy, including dicot and monocot leaf structures, and Kranz anatomy. Additionally, study root organization, root apex theories, quiescent center, root cap, and structures of dicot and monocot roots, including the endodermis, exodermis, and origin of lateral roots.
- CO3. Examine the structure, function, and seasonal activity of vascular cambium, as well as secondary growth in roots and stems. Study wood anatomy, including axially and radially oriented elements, types of rays and axial parenchyma, cyclic aspects and reaction wood, sapwood and heartwood, ring and diffuse porous wood, early and late wood, tyloses, and dendrochronology. Understand the development and composition of periderm, rhytidome, and lenticels.
- CO4. Analyze the adaptive and protective systems in plants, including the epidermal tissue system, cuticle, epicuticular waxes, various types of trichomes, stomata classification, anatomical adaptations of xerophytes and hydrophytes, and the secretory system, encompassing hydathodes, cavities, lithocysts, and laticifers.

Paper: Practical Lab 2

Course outcomes

After the completion of the course the students will be able to:

- CO1. Develop a comprehensive understanding of biomolecules such as carbohydrates, lipids, and amino acids, and their significance in plant physiology, enabling students to apply this knowledge practically.
- CO2. Gain insight into the intricate processes of DNA replication, repair, recombination, RNA synthesis, processing, and transport, and protein synthesis and processing, facilitating practical applications in molecular biology research.
- CO3. Acquire practical skills in genetic analysis, including Mendelian genetics, mutation detection, microbial genetics techniques, and extrachromosomal inheritance, fostering proficiency in genetic manipulation and analysis.

CO4. Analyze plant anatomy components and functions, including plant tissues, stem, leaf, root, vascular cambium, wood anatomy, periderm, and adaptive systems, equipping students with practical skills for plant structure analysis and experimentation.

SEMESTER: III Paper: Plant Physiology

Course outcomes

After the completion of the course the students will be able to:

- CO1. Acquire a comprehensive understanding of photosynthesis, respiration, and nitrogen metabolism, elucidating their significance in plant physiology.
- CO2. Explore sensory photobiology, understanding the mechanisms of action of phytochromes, cryptochromes, and phototropins, and their impact on plant physiology.
- CO3. Understand water and solute transport mechanisms, including transpiration and photoassimilate translocation, enhancing understanding of plant hydration and nutrient uptake.
- CO4. Analyze the biosynthesis of secondary metabolites and stress physiology, focusing on plant responses to biotic and abiotic stresses, and their physiological implications.

Paper: Growth and Developmental Biology

Course outcomes

After the completion of the course the students will be able to:

- CO1. Comprehend plant hormone regulation and morphogenesis, exploring shoot and root development mechanisms.
- CO2. Investigate flower development processes and floral identity control mechanisms, enhancing understanding of reproductive biology in plants.
- CO3. Examine gametophyte development and pollen-pistil interaction dynamics, including pollen germination and fertilization processes.
- CO4. Analyze embryogenesis, seed, and fruit development processes, focusing on developmental mechanisms and their practical applications.

Paper: Ecology and Evolution

Course outcomes

After the completion of the course the students will be able to:

- CO1. Gain understanding of environmental components and population ecology principles, exploring species interactions and community dynamics.

- CO2. Explore ecosystem ecology, including ecosystem structure, function, energy flow, and mineral cycling, with a focus on terrestrial and aquatic ecosystems.
- CO3. Examine biogeography concepts, including major terrestrial biomes and botanical zones of India, and population genetics principles.
- CO4. Understand speciation processes, including reproductive isolation, drivers of speciation, and the geological time scale.

Paper: Environmental Issues and Policies

Course outcomes

After the completion of the course the students will be able to:

- CO1. Understand environmental pollution causes and effects, exploring pollution abatement practices and technologies.
- CO2. Investigate global change phenomena, such as climate change and biodiversity loss, and mitigation strategies.
- CO3. Explore biotic invasions, loss of biodiversity, and management strategies, understanding their ecological and economic impacts.
- CO4. Examine the global water and energy crises, along with challenges of urbanization and national environmental policies.
- CO5. Gain insight into the challenges of urbanization and national environmental policies, Climate Change, and Biodiversity Action Plan.

Paper: Practical lab 3

Course outcomes

After the completion of the course the students will be able to:

- CO1. Develop practical skills to conduct experiments related to plant physiology, enabling the application of theoretical knowledge in laboratory settings.
- CO2. Gain hands-on experience in techniques for studying sensory photobiology and water transport in plants, facilitating a deeper understanding of plant responses to environmental factors.
- CO3. Acquire proficiency in experimental methods used in growth and developmental biology, including hormone regulation studies and flower and embryogenesis assays, contributing to advancements in plant reproductive research.
- CO4. Apply ecological concepts to real-world scenarios through fieldwork and data analysis, fostering critical thinking skills and promoting awareness of environmental issues and conservation strategies.

SEMESTER: IV Paper: Analytical Techniques in Plant Science

Course outcomes

After the completion of the course the students will be able to:

- CO1. Develop proficiency in various imaging techniques including light microscopy, fluorescence microscopy, confocal microscopy, and electron microscopy.
- CO2. Gain expertise in cell fractionation methods such as centrifugation and radioisotope techniques, facilitating the isolation and characterization of cellular components and biomolecules for further analysis in plant research.
- CO3. Gain understanding and practical experience in spectrophotometry and chromatography techniques for qualitative and quantitative analysis of plant compounds and biomolecules.
- CO4. Develop proficiency in advanced analytical techniques such as mass spectrometry, X-ray diffraction, X-ray crystallography, and electrophoresis for the characterization of proteins, nucleic acids, and other biomolecules.
- CO5. Explore modern molecular techniques such as PCR, RNA interference, antisense RNA technology, miRNA, and gene silencing for understanding gene expression and regulation in plants.

Paper: Biotechnology and Plant Tissue Culture

Course outcomes

After the completion of the course the students will be able to:

- CO1. Develop a comprehensive understanding of the principles, tools, and techniques involved in genetic engineering, focusing on recombinant DNA technology.
- CO2. Gain proficiency in working with essential enzymes such as restriction enzymes, DNA ligase, polymerase, exonucleases, and endonucleases for DNA manipulation, facilitating genetic modification in plants. Acquire knowledge of gene selection and transfer methods.
- CO3. Gain an introduction to plant tissue culture techniques, encompassing media preparation, sterilization, and culture establishment. Explore the techniques and applications of somatic embryogenesis, plant regeneration from various tissues, and hairy root cultures.
- CO4. Understand the role of tissue culture in plant Improvement. Explore the applications of tissue culture in rapid clonal propagation, production of pathogen-free plants, and the development of synthetic seeds.

- CO5. Explore the development and applications of transgenic plants for crop improvement in various economically important crops such as maize, rice, wheat, cotton, brinjal, and tomato.

Paper: Biophysical Chemistry and Bioenergetics

Course outcomes

After the completion of the course the students will be able to:

- CO1. Understanding of solution concentration units and colligative properties and understand their significance in physiological and biochemical processes in plants.
- CO2. Acquire a comprehensive understanding of acids and bases, including their properties, and behavior in aqueous solutions. Gain knowledge of diprotic and polyprotic acids, as well as the determination of isoelectric points.
- CO3. Explore the concept of bioenergetics, including free energy, standard free energy, and its relationship with equilibrium constants in biochemical reactions. Analyze the Gibbs energy of biological membrane transport.
- CO4. Develop proficiency in kinetics of biochemical reactions, including equilibrium dynamics and protein-ligand binding mechanisms. Explore the mechanisms of denaturation and renaturation kinetics of DNA and proteins, along with the analysis of Cot curves.

Paper: Plant Pathology

Course outcomes

After the completion of the course the students will be able to:

- CO1. Develop a comprehensive understanding of the defense mechanisms and disease management. Gain insights into various methods for managing plant diseases, such as cultural practices, chemical treatments, biological control, breeding for resistant varieties, plant quarantine, and integrated pest management.
- CO2. Explore the physiological and molecular aspects of plant pathology, including alterations in plant metabolism under biotic and abiotic stresses. Gain familiarity with tissue culture techniques, somaclonal variation, somatic hybridization, and elementary genetic engineering.
- CO3. Study various plant diseases caused by fungi, bacteria, viruses, nematodes, and mycoplasma-like organisms, including their symptoms, causal agents, and economic importance.

CO4. Acquire knowledge of plant quarantine principles and phytosanitary issues under international agreements such as WTO, TRIPS, and PRA. Explore topics such as bioassay, compatibility with other agricultural chemicals, resistance mechanisms, and the environmental impact of fungicides/antibiotics.

Paper: Practical Lab 4

Course outcomes

After the completion of the course the students will be able to:

- CO1. Demonstrate proficiency in utilizing various imaging techniques such as light microscopy, fluorescence microscopy, confocal microscopy, and electron microscopy for precise visualization and analysis of plant samples at cellular and subcellular levels.
- CO2. Develop skills in cell fractionation methods like centrifugation and radioisotope techniques to isolate and characterize cellular components and biomolecules essential for further plant research.
- CO3. Acquire practical experience in spectrophotometry and chromatography techniques (e.g., paper chromatography, column chromatography, TLC, GLC, HPLC) for qualitative and quantitative analysis of plant compounds and biomolecules.
- CO4. Gain proficiency in advanced analytical techniques such as mass spectrometry, X-ray diffraction, X-ray crystallography, and electrophoresis (AGE, PAGE, SDS-PAGE) for characterizing proteins, nucleic acids, and other biomolecules.
- CO5. Develop practical skills in plant tissue culture techniques, including media preparation, sterilization, and culture establishment, as well as callus, suspension, and organ culture methods.
- CO6. Demonstrate understanding and practical application of defense mechanisms against plant infections and various methods for managing plant diseases, including cultural practices, chemical treatments, and biological control.

B.Sc.-ZOOLOGY

Programme Objectives (POs)

- PO1. The programme has been designed in such a way so that the students get the flavour of both classical and modern aspects of Zoology/Animal Sciences. It aims to enable the

students to study animal diversity in Indian subcontinent, environmental science and behavioural ecology.

PO2. The modern areas including cell biology and genetics, molecular biology, biochemistry, physiology followed by biostatistics, Evolutionary biology, bioinformatics and genetic engineering have been included to make the study of animals more interesting and relevant to human studies which is the requirement in recent times.

PO3. The lab courses have been designed in such a way that students will be trained to join public or private labs.

Course Title: Cytology, Genetics and Infectious Diseases

Course outcomes: The student at the completion of the course will be able to:

CO1. Understand the structure and function of all the cell organelles. x Know about the chromatin structure and its location.

CO2. To be familiar with the basic principle of life, how a cell divides leading to the growth of an organism and also reproduces to form new organisms.

CO3. How one cell communicates with its neighboring cells?

CO4. Understand the basic principles of genetics and how genes (earlier called factors) are inherited from one generation to another.

CO5. Understand the Mendel's laws and the deviations from conventional patterns of inheritance.

CO6. Comprehend how environment plays an important role by interacting with genetic factors.

CO7. How to detect chromosomal aberrations in humans and study the pattern of inheritance by pedigree analysis in families

Course Title: Cell Biology & Cytogenetics Lab

Course outcomes: At the completion of the course students will learn Hands-on:

CO1. To use simple and compound microscopes.

CO2. To prepare slides and stain them to see the cell organelles.

CO3. To be familiar with the basic principle of life, how a cell divides leading to the growth of an organism and also reproduces to form new organisms.

CO4. The chromosomal aberrations by preparing karyotypes.

CO5. How chromosomal aberrations are inherited in humans by pedigree analysis in families.

CO6. The antigen-antibody reaction.

Course Title: Biochemistry and Physiology

Course outcomes: The student at the completion of the course will learn:

CO1. To develop a deep understanding of structure of biomolecules like proteins, lipids and carbohydrates

CO2. How simple molecules together form complex macromolecules.

CO3. To understand the thermodynamics of enzyme catalyzed reactions.

CO4. Mechanisms of energy production at cellular and molecular levels.

CO5. To understand systems biology and various functional components of an organism.

CO6. To explore the complex network of these functional components.

CO7. To comprehend the regulatory mechanisms for maintenance of function in the body.

Course Title: Physiological, Biochemical & Hematology Lab

Course outcomes: The student at the completion of the course will be able to:

CO1. Understand the structure of biomolecules like proteins, lipids and carbohydrates

CO2. Perform basic hematological laboratory testing,

CO3. Distinguish normal and abnormal hematological laboratory findings to predict the

diagnosis of hematological disorders and diseases.

Course Title: Molecular Biology, Bioinstrumentation & Biotechniques

Course outcomes: The student at the completion of the course will be able to have:

CO1. A detailed and conceptual understanding of molecular processes viz. DNA to trait.

CO2. A clear understanding of the processes of central dogma viz. transcription, translation etc. underlying survival and propagation of life at molecular level.

CO3. Understanding of how genes are ultimately expressed as proteins which are responsible for the structure and function of all organisms.

CO4. Learn how four sequences (3 letter codons) generate the transcripts of life and determine the phenotypes of organisms.

CO5. How genes are regulated differently at different time and place in prokaryotes and eukaryotes.

Course Title: Bioinstrumentation & Molecular Biology Lab

Course outcomes: The student at the completion of the course will be able to

CO1. Understand the basic principles of microscopy, working of different types of microscopes

CO2. Understand the basic techniques of centrifugation and chromatography for studying cells and separation of biomolecules

CO3. Understand the principle of measuring the concentrations of macromolecules in solutions by colorimeter and spectrophotometer and use them in Biochemistry.

CO4. Learn about some of the commonly used advance DNA testing methods.

Course Title: Gene Technology, Immunology and Computational Biology

Course outcomes: The student at the completion of the course will be able to:

CO1. Understand the principles of genetic engineering, how genes can be cloned in bacteria and the various technologies involved in it.

CO2. Know the applications of biotechnology in various fields like agriculture, industry and human health.

CO3. To have an in depth understanding about Immune System & its mechanisms.

CO4. Get introduced to DNA testing and utility of genetic engineering in forensic sciences.

CO5. Get introduced to computers and use of bioinformatics tools.

CO6. Enable students to get employment in pathology/Hospital.

CO7. Take up research in biological sciences.

Course Title: Genetic Engineering and Counselling Lab

Course outcomes: The student at the completion of the course will be able to:

CO1. Understand the principles of genetic engineering with hands-on experiments in mutation detection, testing of infectious diseases like Covid 19.

CO2. Get introduced to DNA testing and utility of genetic engineering in forensic sciences.

CO3. Apply knowledge and awareness of the basic principles and concepts of biology, computer science and mathematics existing software effectively to extract information from large databases and to use this information in computer modeling.

CO4. Use bioinformatics tools to find out evolutionary/phylogenetic relationship of organisms using gene sequences.

CO5. Get employment in Hospitals/Diagnostic and forensic labs/Counsel families with genetic disorders.

CO5. Enable students to take up research in biological sciences.

Course Title: Diversity of Non-Chordates and Economic Zoology

Course outcomes:

The student at the completion of the course will be able to: The student at the completion of the course will be able to:

CO1. demonstrate comprehensive identification abilities of non-chordate diversity

CO2. explain structural and functional diversity of non-chordate

CO3. explain evolutionary relationship amongst non-chordate groups

CO4. Get employment in different applied sectors

CO5. Students can start their own business i.e. self-employments.

CO6. Enable students to take up research in Biological Science

Course Title: Diversity of Chordates and Comparative Anatomy

Course outcomes: The student at the completion of the course will be able to:

CO1. Demonstrate comprehensive identification abilities of chordate diversity

CO2. Explain structural and functional diversity of chordates

CO3. Explain evolutionary relationship amongst chordates

CO4. Take up research in biological sciences.

Course Title: Lab on Virtual Dissection, Anatomy, Economic Zoology and Parasitology

Course outcomes: The student at the completion of the course will be able to:

CO1. demonstrate comprehensive identification abilities of chordate and non- chordates diversity

CO2. explain structural and functional diversity of chordates and non- chordates

CO3. explain evolutionary relationship amongst chordates and non- chordates

CO4.Generate self-employment

CO5.Enable students to take up research in biological sciences.

Course Title: Evolutionary and Developmental Biology

Course outcomes: The student at the completion of the course will be able to:

CO1.Understand that by biological evolution we mean that many of the organisms that inhabit the earth today are different from those that inhabited it in the past.

CO2.Understand that natural selection is one of several processes that can bring about evolution, although it can also promote stability rather than change.

CO3.Understand how the single cell formed at fertilisation forms an embryo and then a full adult organism.

CO4.Integrate genetics, molecular biology, biochemistry, cell biology, anatomy and physiology during embryonic development.

CO5.Understand a variety of interacting processes, which generate an organism's heterogeneous shapes, size, and structural features.

CO6.Understand how a cell behaves in response to an autonomous determinant or an external signal, and the scientific reasoning exhibited in experimental life science.

Course Title: Ecology, Ethology, Environmental Science and Wildlife

Course outcomes: The student at the completion of the course will learn:

CO1.Complexities and interconnectedness of various environmental levels and their functioning.

CO2.Global environmental issues, their causes, consequences and amelioration.

CO3.To understand and identify behaviours in a variety of taxa.

CO4.The proximate and ultimate causes of various behaviours.

CO5.About the molecules, cells, and systems of biological timing systems.

CO6. Conceptualizing how species profitably inhabit in the temporal environment and space out their activities at different times of the day and seasons.

CO7.To interpret the cause and effect of lifestyle disorders contributing to public understanding of biological timing.

CO8.To understand the importance of wildlife conservation.

Course Title: Lab on Ecology, Environmental Science, Behavioral Ecology & wildlife

Course outcomes: The student at the completion of the course will be able to:

- CO1.To understand the basic concepts, importance, status and interaction between organisms and environment.
- CO2.Get employment in forest services, sanctuaries, conservatories etc.
- CO3.Enable students to take up research in wildlife.

M.Sc. ZOOLOGY

Non–Chordata

Student learning outcomes

- CO1. The student at the completion of the course will be able to:
- CO2. Demonstrate comprehensive identification abilities of non-chordate diversity
- CO3. Describe structural and functional diversity of non-chordate
- CO4. Explain evolutionary relationship amongst non-chordate groups

Animal Physiology

Student learning outcomes

The student at the completion of the course will be able to

- CO1. Understand various functional components of an organism body
- CO2. Analyse the complexities and interconnectedness of these functional components
- CO3. Identify the mechanism underlying maintenance of homeostasis of the body
- CO4. Infer the regulatory mechanisms for maintenance of function in the body

ZOOLCC-103: Biochemistry and Cell Biology

Student learning outcomes-

The course will lay down the foundation of biochemistry among students where they will develop a deep understanding of structure of biomolecules like proteins, lipids and carbohydrates and how simple molecules together form complex macromolecules. They will be able to understand the thermodynamics of enzyme catalyzed reactions and mechanisms of energy production at cellular and molecular levels.

ZOOLCC-104: Biodiversity

Student learning outcomes

The student at the end of the course will be able to

- CO1. Appreciate biodiversity, its threats.
- CO2. Identify common biodiversity in their courtyard.
- CO3. Comprehend and communicate details of various Government Bodies & Policies related to biodiversity.

ZOOLCC-201: Biosystematics, Evolutionary Biology and Conservation

Student leaning outcome

- CO1. The student at the completion of the course will be able to understand:
- CO2. Basic concepts of biosystematics, evolutionary biology and biodiversity which
- CO3. will enable the students not only to understand the subjects but also to solve the
- CO4. biological problems related to the environment.
- CO5. Principles of taxonomy for identification, classification and naming the organisms
- CO6. scientifically.
- CO7. Origin and modification of various life forms during various time scales.

ZOOLCC-202: Developmental Biology and Immunology

Student learning outcomes

The student at the completion of the course will be able to understand:

- CO1. A variety of interacting processes, which generate an organism's heterogeneous shapes, size, and structural features, How a cell behaves in response to an autonomous determinant or an external signal, and The scientific reasoning exhibited in experimental life science.
- CO2. An in depth understanding about immune system & it's elaborate mechanisms.
- CO3. Recent trends in immune therapy in case of several diseases like cancer, hepatitis etc

ZOOLCC-203: Quantitative Biology and Bioinstrumentation

Student learning outcomes

The present course will enable the students to:

- CO1. Solve the biological problems during data analysis using various statistical methods

such as uni-variate analysis, bi variate analysis, correlation, regression and various tests of significance.

- CO2. Learn the working of various equipments which will be useful in the final semester for their experimental work.

ZOOLCC-204: Animal Behaviour

Student learning outcomes

After successful completion of this course in animal behaviour the students should be capable of:

- CO1. Understanding and identify behaviors in a variety of taxa
- CO2. Discussing the proximate and ultimate causes of various behaviours
- CO3. Designing and implementing experiments to test hypotheses relating to
- CO4. animal behaviour
- CO5. Understanding about the molecules, cells, and systems of biological timing systems
- CO6. Conceptualizing how species profitably inhabit in the temporal environment and space out their activities at different times of the day and seasons.

ZOOLCC-301: Chordata

Student learning outcomes

The student at the completion of the course will be able to:

- CO1. demonstrate comprehensive identification abilities of chordate diversity
- CO2. explain structural and functional diversity of chordate
- CO3. explain evolutionary relationship amongst chordate

ZOOLCC-302: Environmental Biology, Wildlife and Toxicology

Student learning outcomes

The student at the completion of the course will be able to explain:

- CO1. Complexities and interconnectedness of various environmental levels and their functioning
- CO2. Global environmental issues, their causes, consequences and amelioration
- CO3. Significance and conservation of wild life
- CO4. Xenobiotics, their mode of action and damage caused

ZOOLEL-301A: Principles of Endocrinology

Student learning outcome

The course will enable the students:

- CO1. To develop an understanding of the basic endocrinology
- CO2. To study the endocrine regulatory molecules mediating physiology and behavior
- CO3. To study the neural and endocrine components of physiological function and neuroendocrine regulation
- CO4. To understand the role of hormones in metabolic regulation and maintaining homeostasis
- CO5. To understand the integrative working of signaling system

ZOOLEL-301B: Insect Taxonomy, Morphology and Ecology

Student learning outcomes

Upon successfully completing this course students will be able to;

- CO1. Demonstrate identification skills for all insect orders and some superfamilies
- CO2. Demonstrate an understanding of the evolutionary history of hexapod orders
- CO3. Explain and identify the external morphology of insects
- CO4. Demonstrate understanding of the interactions between the insects and ecosystem.

ZOOLEL-301C: Fish Biology and Genetic Resources

Student learning outcomes

The present course provides the basic concepts of fish biology and genetic resources, which will enable the students to:

- CO1. Utilize the knowledge in fish biology researches,
- CO2. Manage the fish under controlled conditions, and
- CO3. Understand the status of fish biogenetic resources of India

ZOOLEL-301D: General Parasitology

Course learning outcomes

By the end of the semester, students will be able to:

- CO1. Define variety of animal associations,
- CO2. Demonstrate an understanding of the physiology, biochemistry, ecology, evolution,
- CO3. and molecular biology of parasites, and
- CO4. Use the bioinformatics for molecular phylogenetic analysis.

ZOOLCC-302A: Biology of Reproduction

Student learning outcome

The course will enable the students:

- CO1. To study the physiology of male and female reproductive axis and reproductive cycles
- CO2. To develop understanding of endocrinology of pregnancy, parturition and lactation
- CO3. To understand the interrelationship between reproduction and immunity
- CO4. To study the seasonality in reproduction

ZOOLEL-302B: Insect Physiology

Student learning outcomes

At the end of the course the students will be able to develop:

- CO1. An understanding of the various physiological systems of insects
- CO2. An understanding of structural differences in the physiological systems of insects from varied habitats
- CO3. An understanding of the functional differences in insect physiological systems

ZOOLEL-302C: Fish Ecology, Aquaculture and Capture Fisheries

Course learning outcome

The present course will prepare the students for:

- CO1. The self-employment, and
- CO2. The jobs related to the fish and fisheries.

ZOOLEL-302D: Biology of parasites

Course learning outcomes

By the end of the semester, students will be able to:

- CO1. Recognize significant morphological characteristics for identification of each of the major parasite group,
- CO2. Value the diversity of parasites,
- CO3. Describe the basic biology, morphology and life history of selected parasites, and
- CO4. Apply the knowledge to generate novel ideas for the management of diseases.

ZOOLCC-401: Molecular Biology and Genetics

Course Outcome

- CO1. The course offers a detailed and conceptual understanding of molecular processes viz. Replication, transcription, translation etc. underlying survival and propagation of life at molecular level. It will help students to understand how genes are ultimately expressed as proteins which are responsible for the structure and function of all organisms. To learn how four sequences (3 letter codons) generate the transcripts of life and determine the phenotypes of organisms.
- CO2. The student will have awareness about genetic diseases, their types and causes. Also the understanding of molecular techniques will provide improved diagnosis and management of these diseases.
- CO3. The principles of inheritance, linkage and crossing over which lead to variations will be made clear as well as the application thereof in gene mapping

ZOOLEL-401A: Endocrine Disorders and their Diagnostics

Student learning outcome

The present course has been designed to:

- CO1. Provide students the knowledge and understanding of the concepts and theories related to endocrine disorders.
- CO2. Carry out the researches related to the basic and modern aspects of endocrinology

ZOOLEL-401B: Applied Entomology and Pest Management

Student learning outcomes

At the end of the course the students will be able to:

- CO1. identify insect pests
- CO2. understand pest population dynamics
- CO3. understand pest management measures

ZOOLEL-401C: Applied Fish and Fisheries

Course learning outcome

- CO1. The present course has been designed to provide students the knowledge of tools and techniques:
- CO2. To carry out the researches related to the basic and modern aspects of fish and fisheries.

ZOOLEL-401D: IMMUNOPARASITOLOGY

Course learning outcomes

By the end of the course, students should be able to:

- CO1. Examine and identify grossly parasites and their stages and parasitic lesions in different organs,
- CO2. Examine and identify the microscopic morphology of parasites and their larval stages of medical importance in fixed stained smears, and
- CO3. Use different kinds of microscopes and modern equipment used in Parasitology.

ZOOLMT-401: Master Thesis/Dissertation

(Project/ Assignment/ Case report/ Literature review)

Course objectives

It will be a unique opportunity for the students to study intensively a biological question of their interest. They will have to make a choice from the syllabus and then work on it in the guidance of a teacher.

Aims

- Literature searching to research a specific scientific topic.
- Interpretation and analysis of scientific literature.
- Scientific writing to enable production of a comprehensive literature review.
- Allow students to explore in depth a topic that is of interest to them.

Learning outcomes

Students will be able to-

- CO1. Understand in depth a scientific area of interest
- CO2. Critically appraise research papers
- CO3. Develop literature searching and scientific writing skills
- CO4. Develop lay writing skills (abstract)
- CO5. Develop organizational and time management skills
- CO6. Develop oral presentation skills (in tutorials)
- CO7. Develop written and oral communication skills

B.SC.-INDUSTRIAL CHEMISTRY

Program's outcomes:

- PO1. Students will have a firm foundation in the fundamentals and application of current chemical and scientific theories including those in analytical, inorganic, organic and physical chemistry and various industrial processes.
- PO2. Students will be able to design and carry out scientific experiments as well as accurately record and analyze the results of such experiments.
- PO3. Students will be skilled in problem solving, critical thinking and analytical reasoning as applied to scientific problems.
- PO4. Students will be able to explore new areas of research in both chemistry and allied fields of science and technology.
- PO5. Students will become aware of the role of industrial chemistry in our society. They will be able to use this knowledge on account of ethical behavior in issues faced by chemists in industries for example safe handling of chemicals, environmental issues and key issues faced by our society in energy, health and medicine.
- PO6. Students will be able to explain why industrial chemistry is an integral activity for addressing social, economic, and environmental problems.
- PO7. Students will be able to function as a member of an interdisciplinary problem solving team.
- PO8. Chemical industries in India and throughout the entire world are using increasingly sophisticated chemical procedures and instrumentation. Consequently, industrial leaders are becoming more concerned about health hazards and safety factors. These companies need chemists and chemical professionals that are experienced and able to implement new techniques to minimise the industrial pollution.
- PO9. Graduates in Industrial Chemistry may find jobs in various industries like chemical, plastics, pharmaceutical, environmental, paint, food, automobile, petroleum and personal care products.

Course Title: Fundamentals of Industrial Chemistry

Course outcomes:

There is nothing more fundamental to chemistry than the chemical bond. Chemical bonding is the language of logic for chemists. Chemical bonding enables scientists to take the more than 100 elements of the periodic table and combine them in myriad ways to form chemical compounds and materials. Periodic trends, arising from the arrangement of the periodic table, provide chemists with an invaluable tool to quickly predict an element's properties. These trends exist because of the similar atomic structure of the elements within their respective group families or periods, and because of the periodic nature of the elements. Reaction

mechanism gives the fundamental knowledge of carrying out an organic reaction in a step-by-step manner. This course will provide a broad foundation in chemistry that stresses scientific reasoning and analytical problem solving with a molecular perspective. Students will gain an understanding of chemical calculations, molecular atomic structures, periodic properties, chemical bonding, acids-bases, nomenclature of organic compounds, catalysis, fundamental of organic reactions, knowledge of liquid crystals, solid state, Heat, thermodynamics and chemical equilibrium, metallurgical operations, metals and alloys.

Course Title: Basic Analytical Methods

Course outcomes:

Upon successful completion of this lab course students should be able to know about good laboratory practice (GLP), calibration apparatus, preparation of standard solutions, solutions of various concentrations, estimation of components through volumetric analysis, determination of viscosity, surface tension of liquids and simple laboratory techniques.

Course Title: Material Science and Techniques in Chemical Industries

Course outcomes:

Currently, tremendous progress has been made in development of advanced materials for their environmental applications and knowledge has been accumulated of the effects of these advanced materials on and their applications in the environment security, recycling and reuse of raw materials and treatment agents, economic benefits, and potential problems to our society. Upon completion of this theory course students would gain knowledge of various materials, surface chemistry and interfacial phenomena, catalysis, metals and alloys, cement, ceramics and corrosion, polymer, glass, advanced materials and material balance, material balance without chemical reactions, material balance involving chemical reactions

Course Title: Materialistic Analysis

Course outcomes:

Upon completion of this lab course students would gain knowledge of preparing solutions of various concentrations, determination of concentrations, extraction of compounds from solutions, determination of refractive index of materials, molar refractivity and specific reactivity of solutions and chromatographic separations. These techniques and methods are

very useful tools in various chemical industries such as pharmaceuticals, petroleum, food and materials.

Course Title: Process Instrumentation and Industrial Chemical Analysis

Course outcomes:

On successful completion of students will gain the knowledge of important topics of industrial chemistry such as chromatography, thermal instrumentations, pressure measuring devices, liquid level measuring instruments, Industrial analysis, Modern instrumental analysis, spectroscopic methods, Effluent treatment, and waste water management.

Course Title: Industrial Chemical and Instrumental Analysis

Course outcomes:

Students gain knowledge and skill related to this paper are as follows Instrumental methods of analysis, Material testing, Water analysis, Use of transducers for measuring flow control and Flow measuring devices- floats.

Course Title: Process Chemistry

Course outcomes:

Upon completion of this course the students will have the knowledge and skills regarding various chemical process of organic chemistry such as nitration, sulphonation, halogenation, oxidation, hydrogenation, alkylation, ammination, esterification and hydrolysis. These organic chemical processes are important tools to synthesis of important pharmaceuticals or drug molecules and other industrially important organic compounds.

Course Title: Qualitative and Synthetic Methods

Course outcomes:

Students gain knowledge and skill related to this paper are as follows. Utilities in chemical industry, distillation, evaporation and absorption, filtration and extraction, drying, crystallization and polymorphism, Fluid Flow, Heat Transfer.

Course Title: Industrial Chemicals

Course outcomes:

The chemical industry comprises the companies that produce industrial chemicals. Central to the modern world economy, it converts raw materials into more than 70,000 different products. On successful completion of this course students will gain the knowledge and skills related to various industrial gases, petroleum refining process, carbon based chemicals and industrial catalysts, pulp and paper industry, surfactants, soaps, detergents and cosmetics, cane sugar industry, manufacture of heavy organic chemicals, heavy inorganic chemicals, fine chemical

Course Title: Pollution, its Management and Industrial Economics

Course outcomes:

Students gain knowledge and skills related to this paper are as follows. Pollutants, their statutory limits and air pollution, water pollution, pesticide pollution, solid & gaseous wastes, factors involved in project cost estimation, capital formation, methods of determining depreciation, some aspects of marketing, pricing policy, profitability criteria, entrepreneurship, choice of technology and quality control.

Course Title: Industrial chemicals and pollution management

Course outcomes:

Students gain knowledge and skills related to this paper are as follows. Determination of Flash and Fire point, Determination of (i) acid value- gum, and resin, (ii) iodine number linseed oil, castor oil (iii) saponification value - coconut oil, Synthesis of organic compound: Paracetamol, Aspirin, Oils of winter green and Urea formaldehyde resin, Analysis of common raw materials as per the industrial specifications such as phenol, aniline, formaldehyde, hydrogen peroxide, acetone, Gravimetric and volumetric estimation

Course Title: Synthetic Polymer

Course outcomes:

Students gain knowledge and skills related to this paper are as follows. The science of large molecules, types & general classification of polymers, molecular weight and molecular weight distribution, polymer solutions, structure and morphology, synthesis, properties and applications of the following thermosetting polymers, thermoplastics polymers, conducting polymers, light emitting polymers and biodegradable polymers. This course mainly includes study of polymers synthesis, polymer properties, polymer processing, polymer testing, polymer degradation, polymer reaction, composites and applications. The course is career oriented and can provide various opportunities in the field of polymers.

Course Title: Polymerization Techniques and Characterization

Course outcomes:

This course mainly includes the study of polymer synthesis, polymer properties, polymer processing, polymer testing, polymer degradation, polymer reaction, composites and applications. This course is career-oriented and can provide various opportunities in the field of polymers. After successful completion of this paper, students will gain knowledge and skills related to this paper is as follows Rheology and mechanical properties of polymers, degradation of polymers, polymerization techniques, plastic technology, fiber technology, elastomer technology, additives and compounding.

Course Title: Synthesis and Analysis of Polymers

Course outcomes:

Students gain knowledge and skills related to this paper are as follows. Preparation of representative polymers such as bulk polymerization like polystyrene, PMMA Nylon and polysulphide rubber, solution polymerization like phenol formaldehyde, urea formaldehyde, determination of (i) saponification value - polyester (ii) viscosity of PMMA (iii) hydroxyl value of a resin, testing of plastics/rubber, Young's modulus, optical, thermal, mechanical and electrical properties, determination of molecular weights of the polymers by viscosity measurements and Tg value of phosphate glasses.

Course Title: Pharmaceutical and Phytochemicals

Course outcomes:

After successful completion of this course, students will gain the knowledge and skills related to this paper are as follows pharmaceutical industry and pharmacopeias, various types of pharmaceutical excipients, evaluation of crude drugs, surgical dressing, sutures, ligatures, phytochemicals, chemical constitution of plants, various isolation procedures for active ingredients, pharmaceutical quality control and packaging materials

Course Title: Medicinal Chemistry and Toxicology

Course outcomes:

Medicinal chemistry provides pharmacy students with a thorough understanding of drug mechanisms of action, acid-base and physicochemical properties, and absorption, distribution, metabolism, excretion, and toxicity profiles. Students gain knowledge and skills related to this paper is as follows. pharmacology drugs classification, Introduction to medicinal chemistry, drug metabolism, principles of toxicology, Biotransformation processes and Enzymes

Course Title: Experimental Pharmaceutical Chemistry

Course outcomes:

Students gain knowledge and skills related to this paper is as follows. Demonstration of various pharmaceutical packaging materials, quality control tests of some materials aluminium strips, cartons, glass bottles, active ingredient analysis of few types of formulations representing different methods of analysis- acidimetry, alkametry, nonaqueous complexometry, potentiometry, etc., evaluation of crude drugs, microbiological testing.

Course Title: Experimental Pharmaceutical Chemistry

Course outcomes:

Students gain knowledge and skills related to this paper is as follows. Demonstration of various pharmaceutical packaging materials, quality control tests of some materials aluminium strips, cartons, glass bottles, active ingredient analysis of few types of formulations representing different methods of analysis- acidimetry, alkametry, nonaqueous complexometry, potentiometry, etc., evaluation of crude drugs, microbiological testing.

Course Title: General & Halogenated Insecticides

Course outcomes:

Agrochemicals are used to prevent the deterioration of crops from insects and pest infestation and disease. The global agrochemicals market report offers the latest trends, growth factors, industry competitiveness, investment opportunities and detailed profile of the top players for the market during the forecast period. The global agrochemicals market is segmented by product type (fertilizers, pesticides, adjuvants, and plant growth regulators), application (crop-based and non-crop based) and geography. Students gain knowledge and skills related to this paper are as follows. Types of pest and pesticides, Inorganic insecticides, Insecticides of plant origin, Organophosphorus insecticides, Organothio phosphorus insecticides, Carbamate insecticides, Chemical and Biofertilizers, Chlorinated hydrocarbons

Course Title: Fungicides and Herbicides

Course outcomes:

Fungicides, herbicides and insecticides are all pesticides used in plant protection. Herbicides are a broad class of pesticides that are used to remove nuisance plants, such as grasses and weeds that may compromise the growth and yield of desired crops that are in close proximity. After successful completion of this paper, Students gain knowledge and skills related to this paper are as follows Fungicides, organomercuric compounds, dithiocarbamates, miscellaneous fungicides, herbicides, fumigants, rodenticides, nematicides, plant growth regulators, formulation of pesticides.

BA-ENGLISH

Programme Outcomes (POs)

The programme aims to:

- PO1. Develop an appreciation of English language, its connotations and interpret and appreciate the didactic purpose of literature
- PO2. Take cognizance of the historical, social and cultural context of each literary work and thereby make connections between literature and society & appreciate literature's ability to stimulate feeling
- PO3. Sensitize students to the aesthetic, cultural and social aspects of literature
- PO4. Present an extensive view of the cultural and social patterns of the society in specific time and situations in which it flourished by covering all walks of human life- rational, irrational, carnal, and emotional
- PO5. Make the students aware of literature written/translated in English speaking countries like UK/ USA
- PO6. Develop a more complex understanding of the history, literature, narrative techniques, drama techniques, kind of fiction and drama existing in Britain, America and India
- PO7. Augment the understanding of fundamental tenets of classical literature
- PO8. Develop an understanding of the various connotations of the term 'New Literatures' and the difference from other terms like Commonwealth Literature etc.
- PO9. Develop an insight regarding the idea of world literature and the pertinent issues of feminism, racism and diasporic relocations

PO10. Provide job opportunities through 'skill-based' courses

PO11. Instill in students a new zeal and a new vision of life to make them a better citizen

PO12. Recreate a response through creative indulgences like script-writing, dialogue writing, and be able to exploit his/her creative potential through online media like blogging.

PO13. Engage students with various strategies of drafting and revising, style of writing and analytical skills, diagnosing and developing scholarly methodologies, use of language as a means of creative expression, will make them effective thinkers and communicators

PO14. Demonstrate comprehension of and listener response to aural and visual information

PO15. Comprehend and contextualise contemporary films adapted from literature, to describe objectively its importance and usefulness for the society while analysing its plot and characters.

PO16. Comprehend translation as a useful bridge between various linguistic regions

PO17. Assist students in the development of intellectual flexibility, creativity, and cultural literacy so that they may engage in life-long learning

PO18. Acquire basic skills to pursue translation as research and career

PO19. Introduce the learners to the nuances of the changing media scenario in terms of production of media content

PO20. Inculcate in them the skills of reporting, editing and feature writing in print medium to have a career perspective in media and journalism.

PO21. Deepen knowledge in English literature for higher studies

PO22. Help the students to prepare for competitive exams

PO23. Create a possibility to emerge as prospective writers, editors, content developers, teachers

Programme Specific Outcomes (PSOs)

The learners will be able to:

PSO1. Understand the growth of Indian literature in English and appraise the evolution of Indian culture from traditional to modern.

PSO2. Develop an understanding of the basic poetic and prose devices to read, identify and analyse various literary forms of poetry and prose.

PSO3. Understand the nuances of poetic language, structure and composition of idea in Indian English Prose.

PSO4. Develop their critical thinking skills & comprehend life skills through the study of prose/short fiction & develop their own creativity by enhancing their writing skills.

PSO5. Get enhanced/enriched vocabulary to demonstrate a significant modification in comprehensive skills and writing techniques.

PSO6. Be acquainted with the representative poets and writers from 16th century to 20th century

PSO7. Develop an understanding of the philosophy of Romanticism and how it was impacted by the revolutions in Europe.

PSO8. Interpret the meaning of ‘_Victorian Compromise’ and the ‘_Victorian paradox’ and appraise the different aspects of the Age of Reason.

PSO9. Be familiar with the rules and procedures of Practical Criticism.

PSO10. Analyse in detail how a key individual event or idea is introduced, illustrated and elaborated in a text.

PSO11. Develop knowledge of literary, cultural, and historical contexts of 20th & 21st century literature in English.

PSO12. Be acquainted with the basic knowledge of Computer and general processing of various Microsoft applications.

PSO13. Investigate and understand the role of computers in developing students’ performance in English Language through computer assisted learning.

PSO14. Frame official letters like preparing CVs, filing FIRs, RTI and complaints.

PSO15. Create e-mails and navigate web browsers.

PSO16. Get acquainted with the art of online writing.

Course Title: English Prose and Writing Skills

Course Outcomes:

After completing this course, the students will be able to:

CO1. Understand Indian English Writing as a new form of Indian culture and voice in which India converses regularly. They will be able to understand contributions of various authors in the growth of Indian English Writing.

CO2. Understand the formal qualities of a text, intricacies of structure, stylistics and figurative elements found in the text.

CO3. Analyse the difference in the prose techniques of different writers like Addison, Lamb and Bacon.

CO4. Make use of word choices, word order, figurative language and imagery to convey meaning/emotion.

CO5. Identify the writings of classic prose and short story writers like Chekhov, Maupassant and O’ Henry.

- CO6. Understand the prominence of logic and reason in the 18th century British literature.
- CO7. Describe the literary terms related to prose.
- CO8. Get a wide exposure of eminent writers like Kalam, Amartya Sen, Anita Desai, Woolf and M.R. Anand.
- CO9. Understand the social, historical and political backgrounds of the short story writers like Anton Chekhov through the elaborate and allegorical descriptions in the prescribed text.
- CO10. Identify the content, language, style, tone and structure of the essays and short story.
- CO11. Comprehend the culture, author's biography and historical context of the prescribed prose works.
- CO12. Perform basic functions of a word processor, Excel spreadsheet and PowerPoint presentation practically.
- CO12. Do online communication like content writing and blogging.
- CO13. Do official communication by writing official letters/complaint letters.
- CO14. Practically explore their creative genius in creating blogs and personal websites for vocational purposes

Course Title: English Poetry

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Understand the basic terminology and practical elements of poetry
- CO2. Comprehend the meaning of words, phrases and sentences in a given context
- CO3. Analyse the underlying meaning of a poem by using the elements of poetry
- CO4. Identify the representative poets and writers of 16th, 17th, 18th and 19th and 20th century
- CO5. Identify the devices used by the poet, the mood, the atmosphere, the voice, the stanzaic form, rhyme pattern and metre scheme
- CO6. Examine the difference between Shakespearean and Miltonic sonnet forms
- CO7. Comprehend the experimental poetry of Metaphysical age and the characteristics of Neo-classical poetry
- CO8. Reflect on didactic human values as virtually mirrored in Thomas Gray's poem
- CO9. Understand the concept of nature as stated by the romantic poets in literature
- CO10. Appreciate the simplicity and lucidity of expression of poets in romantic literature
- CO11. Understand the literary terms used by the Victorian poets

CO12. Analyse the existing conflict between faith and doubt in Victorian society

CO13. Discuss the significance of the literary period of the text by analysing the effects of the major events of that period

CO14. Understand the difference between reason and imagination, literature and revolution

CO15. Exposed to the trends in 20th century poetry of Eliot, Yeats and Larkin

Programme Specific Outcomes (PSOs)

The learners will be able to:

PSO1. Comprehend and learn to critically and aesthetically analyse works in British & American drama

PSO2. Recognize the elements of drama and analysing and identifying the plot types, character analysis, thematic explanations and identifying the settings and understand the structure of a play and learn the dramatic devices used in writing a play

PSO3. Analyse and evaluate different drama by discussing the significance of the literary age of the particular text and by analysing the effects of major events of that period

PSO4. Understand the social and artistic movements that shaped the British and American drama and theatre

PSO5. Comprehend the dramatic techniques to understand the development of drama in America

PSO6. Understand the process of communicating and interpreting human experiences through literary representation using historical contexts and disciplinary methodologies.

PSO7. Comprehend translation as a useful bridge between various linguistic regions

PSO8. Understand the history and significance of translation, in Indian context

PSO9. Recognize the nature and scope of translation

PSO10. Help the students to recognize the distinct shift from Eurocentric literature to Indian literature in translation

PSO11. Provide students a taste of diverse literary practices emanating from different regions and sections of India.

PSO12. Identify and use some of the tools of technology for translation.

Course Title: British and American Drama

Course Outcomes:

After completing this course, the students will be able to:

CO1. Develop an understanding of various types of drama & related literary terms

CO2.Learn the core elements of structure such as exposition, complication and resolution or denouement

CO3.Trace the origin and growth of drama in England and America

CO4.Comprehend the political, economic, social and intellectual background leading to the rise of drama in England and America

CO5.Analyse and appreciate the representative works of British and American Drama

CO6.Comprehend the general features of Shakespearean plays

CO7.Develop an interest in Shakespearean language, his use of images, supernatural elements, music and the word play

CO8.Demonstrate the ability to contextualize the works of American dramatists, interpret the thematic and stylistic elements of the plays and appreciate their literary worth, social relevance and timeless appeal

CO9.Comprehend the trends in modern drama through the study of poetic drama and problem plays

Course Title: Indian Literature in Translation

Course Outcomes:

After completing this course, the students will be able to:

CO1.Develop a comparative perspective to study the texts

CO2.Understand the history of translation and various forms of translations

CO3.Analyse the translation tools to make use of technology like computer and mobile in the process of translation

CO4.Attain accessibility to regional literary forms

CO5.Contextualize the texts of Jaishankar Prasad, Amrita Pritam, and Tagore in their respective social and cultural milieu

CO6.Develop an insight into the philosophy of Kabir through his verses

CO7.Gain a historical vision of the partition trauma and the contemporary issues of the tribal people through the writings of Bhasham Sahni and Mahasweta Devi

CO8.Develop an insight about Indian familial conflicts and social evils

CO9.Enhance job opportunities by fostering translation skills

CO10.Understand Indian consciousness and review the past through translated texts

Programme Specific Outcomes (PSOs)

The learners will be able to:

- PSO1. Comprehend and analyse how English literature has evolved through centuries establishing a perception of its literary history in chronological order
- PSO2. Develop an appreciation for the western classical literature.
- PSO3. Generate awareness towards the problems of interpreting Indian Culture via the English Language and acquaintance with the work of significant Indian writers of Poetry, Prose, Fiction and Drama
- PSO4. Develop an acquaintance with the works, themes, styles and sensibilities of the writers from Europe, North and South America, Canada, and Africa
- PSO5. Recognise the evolution of certain thematic trends reflected in the narrative and linguistic experimentation of the writers of ‘New Literatures’
- PSO6. Appraise the emergence of female narratives in art and literature
- PSO7. Understand distinctive features of novels, shorter fiction and essays and relate the texts and contexts to real life
- PSO8. Get a holistic idea of the distinctive features of Indian fiction Writing in English
- PSO9. Develop a comprehensive knowledge of the British and Indian fiction through the works of different representative writers of different ages and do a comparative study into classics as well as Popular fiction in contemporary India
- PSO10. Trace the development of Indian writing in English and understand various characteristics of Indian literature in English
- PSO11. Examine and present a review or critical appraisal of adaptations of textual narratives into film so that they may choose an alternative career in dramatics, film - making, review and writing.
- PSO12. Assist the student in the development of core skills in other media like TV, Radio and Internet.

Course Title: Classical Literature & History of English Literature

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Develop an understanding of the historical background of Greek and Roman literature and history
- CO2. Recognise the great works of unparalleled classical writers like Plato, Homer and Sophocles
- CO3. Develop an understanding of the evolution of English Literature, the concept, causes and impact of Renaissance and Reformation

- CO4.Trace the origin and development of English drama through Miracle and Morality plays and the plays of University Wits
- CO5.Develop an acquaintance with major religious, political and social movements from 15th to 20th century and their influence on English literature
- CO6.Comprehend the basic difference and special characteristics of the major literary tendencies of various ages and develop familiarity with major literary works by British writers in the field of Poetry, Drama and Fiction
- CO7.Understand the characteristics of Elizabethan and Metaphysical poetry and special features of Neo-classical age and its literature
- CO8.Identify the reasons of the emergence of prose and novels and the decline of drama in England in the 18th century
- CO9.Comprehend the role of French Revolution in the evolution of romanticism in English literature
- CO10.Interpret the characteristics of Victorian age and the growth of literature in the age
- CO11.Appreciate the special characteristics of the poetry of Pre-Raphaelites and Naughty-Nineties
- CO12.Comprehend the trends in the poetry, drama and fiction of 20th century English literature

Course Title: Fiction

Course Outcomes:

After completing this course, the students will be able to:

- CO1.Develop an understanding of the growth of novel form and its various types
- CO2.Enhance their reading skills and understand how to represent their experience and ideas critically, creatively, and persuasively through the medium of English language
- CO3.Get acquainted with different cultures, myths and social conservation through the reading of selected novels of Britain, America and India
- CO4.Learn human values and behavioural pattern from the prescribed novels and develop an understanding of the human race
- CO5.Exposed to the unflattering portrayal of the contemporary Indian society through popular works of Indian fiction writers in English

Course Title: Indian & New Literatures in English

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Develop an understanding of the Indian freedom struggle, the contemporary political, social and economic scenario and the also the trauma of the partition
- CO2. Develop an understanding of the themes, styles and poetic sensibilities of poets like Toru Dutt, Nissim Ezekiel, Jayant Mahapatra and Keki N. Daruwala
- CO3. Critically analyse the drama as a medium of exploration of existing social issues and prejudices through the work of dramatists like Mahesh Dattani and Asif Currimbhoy
- CO4. Understand the socio-cultural-political conditions of the contemporary India as explored in the fiction of writers like Kamala Markandaya
- CO5. Analyse and evaluate the difference in the theme and background of the works of Indian writers in English and the English writers already studied in the previous years
- CO6. Demonstrate, through discussion and writing, an understanding of significant cultural and societal issues presented in Indian English literature
- CO7. Appraise the values and issues arising from colonialism
- CO8. Familiarize themselves with the similar (yet different) socio-historic conditions reflected in the literature of the various colonies
- CO9. Comprehend how ‘New Literatures’ incorporates very different literary products, each with its own cultural, social and geographical specificity
- CO10. Comprehend and analyse the poetic discourses of poets like Pablo Neruda, Margaret Atwood, Judith Wright, Patrick White and Sujata Bhatt and the variations in their themes, styles and responsiveness
- CO11. Address the identity issues and marginalization through a study of the works of Indira Goswami and Naipaul

Course Title: Media and Journalistic Writing

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Understand different types of journalism and their importance.
- CO2. Comprehend various principles of mass communication.
- CO3. Differentiate between various forms of media & journalistic writing and reporting.
- CO4. Understand the meaning and nature of public speaking.
- CO5. Identify social media norms and online journalism.
- CO6. Write in various journalistic formats effectively.
- CO7. Understand the meaning and nature of public speaking.
- CO8. Edit reports and create engaging advertisements.

M.A. English

Functional English (Minor Elective) (14th – 17th Century)

Course Outcomes:

After the completion of the course, students will be able to:

- CO1. recognize various text types and comprehend them
- CO2. develop an understanding of the various aspects of communicative English
- CO3. comprehend distinct technical concepts relating to English language writing
- CO4. understand functional English and its application in practical life

Paper-1: English Literature

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Develop an understanding of the concept, spread and impact of Renaissance
- CO2. Assess how Renaissance ideas revolutionized the entire Europe
- CO3. Recognize the impact of discovery of new lands and circulation of new ideas across Europe
- CO4. Identify the shift of the worldview towards humanism post Renaissance and Reformation
- CO5. Compare the similarities between the Renaissance and contemporary ideas
- CO6. Estimate the social and cultural impact of the political events of the Restoration
- CO7. Develop an understanding of the beginnings of the modern political system which started in England after Restoration
- CO8. Critically engage with representative mainstream British Literature from the Fourteenth to the Seventeenth century, through selected texts and background readings
- CO9. Discuss the significance of the literary period of the text by analysing the effects of the major events of that period
- CO10. Develop independent critical thinking in their analysis of literary texts
- CO11. Comprehend the culture, author's biography and historical context of the prescribed prose works.
- CO12. Outline main trends in British drama and poetry.
- CO13. Describe the development and the constituents of British drama and poetry.
- CO14. Appreciate the richness and variety of British drama right from Marlow to Congreve.
- CO15. Identify the various forms of poetry from Chaucer to Milton.

Paper-2: English Literature (18th – 20th Century)

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Identify the reasons of the emergence of prose and novels and the decline of drama in England
- CO2. Develop an understanding of the philosophy of Romanticism and how it was impacted by the revolutions in Europe
- CO3. Interpret the meaning of „Victorian Compromise“ and the „Victorian paradox“.
- CO4. Recognize the impact of Industrial Revolution, Darwinism and Colonization etc.
- CO5. Identify the cause of the emergent societal problems like pollution, population explosion, urbanization etc. which strengthened during the era
- CO6. Take cognizance of the historical, social and cultural contexts of each work and thereby make connections between literature and society.
- CO7. Get introduced to the tradition and significance of non – fictional writing in Great Britain in the 18th, 19th and 20th century.
- CO8. Get acquainted with the habit of reasoning and analysis through prose reading.
- CO9. Explore the impact of the World Wars on British literature.
- CO10. Appraise the emergence of female narratives in art and literature.
- CO11. Contextualize the works of modern drama, interpret the thematic and stylistic elements of the plays and appreciate the literary worth, social relevance and timeless appeal of the plays
- CO12. Familiarize with the nuances of romantic sensibility and Victorian ethos and their reflection in fiction of that period

PAPER 3: Background to History of English Literature

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Critically analyze the language, form and perspectives of different genres of literary texts from African and Caribbean literary traditions
- CO2. Demonstrate an understanding of the socio-cultural and political contexts in which the texts have been produced and received
- CO3. Critically engage with the literary texts in the light of colonial and postcolonial histories and contemporary theories that are relevant to the issues raised in the texts
- CO4. Recognize some key texts from various African and Caribbean nations and the ways in which they engage with questions of language, form, colonial histories, multiculturalism, indigeneity, nativism and contemporary postcolonial developments

- CO5. Develop a critical vocabulary for problematizing the notions of margin, center and the literary and cultural canon
- CO6. Perceive through reading representative texts from African and Caribbean nations the respective customs, habits, culture, language, socio-economic and political background of different countries
- CO7. Comprehend the difference of a life lived in a postcolonial era and the life lived in a colonial context.
- CO8. Understand the main currents of development in English Language writing in the Anglophone parts of Africa and Caribbean islands
- CO9. Develop an understanding of a range of postcolonial discourses emerging from African and Caribbean regions
- CO10. Appraise issues arising from colonialism, independence and diasporic migration in these areas.
- CO11. Analyze how race, class, gender, history and identity are presented and problematized in the literary texts of African and Caribbean writers
- CO12. Develop the knowledge of how to contextualize postcolonial writing in terms of its historical and geographical specificities
- CO13. Dismantle the myths of African inferiority, assert African cultures, and sensitize the issues of the apartheid regime in South Africa
- CO14. Use this knowledge to extend scope for research ideas

Paper-4: Indian English Literature

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Gain insight into “Indianness” through representative works
- CO2. Understand contributions of various authors in the growth of Indian English Writing
- CO3. Identify the unique features of Indian English Writing
- CO4. Identify major figures in Indian English Writing
- CO5. Acquaint with the work of significant Indian writers of Poetry, Prose, Fiction and Drama
- CO6. Understand how society and culture have played a significant part in the lives and career of the Indian writers
- CO7. Recognize the cultural milieu of the post and the pre- independence era
- CO8. Identify new research areas in the purview of Indian writings
- CO9. Discover Indian sensibility in the representative works
- CO10. Understand Dalit and Native voices in Indian English literature
- CO11. Provide students a taste of diverse literary practices emerging in India

- CO12. Gain cognizance of the social, economic and political perspectives of the literature produced in India
- CO13. Develop a view of how Indian English Literature has evolved with time
- CO14. Identify, interpret and describe the values and themes that appear in Indian English Literature
- CO15. Imbibe the essence of Indian English Literature

PAPER: 5- (PPT Presentation & Viva Voce)

Paper-1: Literary Criticism and Theories

Course Outcomes:

After the completion of the course, students will be able to:

- CO1. Develop an overview of the critical theories from ancient to modern times
- CO2. Apply the critical theories to literary texts
- CO3. Recognize the relevance of the theories in the social context
- CO4. Mobilize various theoretical parameters in the analysis of literary and cultural texts
- CO5. Acquaint themselves with the dominant trends in literary criticism
- CO6. Understand the theories of principal literary critics and theoreticians
- CO7. Acquire a knowledge of the key concepts and terms used in contemporary literary theory
- CO8. Familiarize the learners with the trends and cross-disciplinary nature of literary theories
- CO9. Analyse literary writings, based on ever evolving traditions of criticism
- CO10. Cultivate an understanding of major critical approaches and apply them to primary literary works
- CO11. Explore the concepts of history, culture, nationalism, gender and race in the context of postcolonial literature and theories
- CO12. Distinguish between different schools of criticism and their impact on literature

Paper-2: Colonial and Post-Colonial Literature

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Recognize issues, themes and debates in writings from the formerly colonized countries through a study of range of postcolonial literature
- CO2. Recognize the difference in colonial and post- colonial sensibilities
- CO3. Examine influence of western culture on non -western societies
- CO4. Develop an understanding of the postcolonial literature in their historical and cultural context

- CO5. Identify key questions, authors and literary forms in colonial and postcolonial literature
- CO6. Situate literary texts in their larger cultural contexts
- CO7. Evaluate arguments related to postcolonial literary texts
- CO8. Analyse post-colonial elements in literary texts to distinguish between different postcolonial perspectives
- CO9. Understand and evaluate the key debates in postcolonial theory
- CO10. Explore the artistic, psychological, and political impact of colonization through a study of range of literary and theoretical texts
- CO11. Question how does a text reveal about the problematics of post-colonial identity
- CO12. Learn how a text reveals about the politics and/or psychology of anti-colonialist resistance
- CO13. Understand complex theoretical terms and concepts that characterize postcolonial studies
- CO14. Comprehend resistance and representation in the discourses reflected in colonial and postcolonial writings

Paper-3 (A): Translation and Folk Literature

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Recognize the importance and benefits of translation
- CO2. Comprehend the nature and scope of translation and the concept of equivalence in translation
- CO3. Develop understanding of different theories of translation
- CO4. Analyse various problems in the process of translation
- CO5. Undertake translation of literary texts with greater conviction
- CO6. Relate folk tales, fairy tales, folk music, folk dance, folk theatre with literature
- CO7. Understand the different ways through which literary narratives are drawn from traditions of the oral mythic folk and the form of life-narrative
- CO8. Comprehend folklore studies from a linguistic and cultural perspective
- CO9. Realize the vibrancy of oral literatures in India and the increasing focus on tribal traditions
- CO10. Understand why ethnic studies makes this an important area of contemporary engagement
- CO11. Experience the transformation of folklores and legends into animated narratives, replication in video games and urban legends constructed via films and media

Paper-3 (B): Literature and Environment

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Develop a conscious and eco-friendly relationship with nature
- CO2. Trace the intertwined relationship between nature and literature since the inception of Literature
- CO3. Learn how nature has served as an inspiration to literary artists since ages
- CO4. Gain sensitivity towards the ecological emergencies that the world faces through literary representations
- CO5. Understand the crucial role of literature in addressing and comprehending environmental issues
- CO6. Interpret key literary and critical terms associated with the concept of eco-criticism and ecological representations in literature
- CO7. Relate the nuances and co-relation between gender and environment through study of literary texts
- CO8. Primarily focus on environmental concerns through the readings of seminal literary texts
- CO9. Understand and grow ecologically sensitive through the close study of documentaries and films on the subject of environment
- CO10. Gauge human existence in the context of ecology
- CO11. Comprehend the interrelation between, life/nature and literature
- CO12. Realize the role of ecology in the survival of humanity

Paper-4: Research Methodology

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Understand the concept of „research“ and the procedures involved in research
- CO2. Gain knowledge on the fundamental aspects of research
- CO3. Recognize the conventions of research papers and learn textual, editorial and bibliographical skills
- CO4. Develop skills of dissertation/Project writing
- CO5. Identify a core research area and specify corresponding research problem
- CO6. Differentiate between various types of research methods such as quantitative and qualitative research
- CO7. Develop an insight into different literary approaches in the field of research
- CO8. Equip themselves with various methods, tools and techniques mandatory to the research process

- CO9. Identify various styles of referencing and citations
- CO10. Develop an awareness towards available primary and secondary resources
- CO11. Develop a consciousness towards intellectual property rights and plagiarism
- CO12. Design a research proposal
- CO13. Review core research methods such as interviews at the same time learn about research ethics

PAPER: 5- (Project & Viva Voce)

Students will be instructed to prepare a project in 3000-4000 words and a viva voce will be scheduled for the same.

Programme Outcomes:

The programme aims to:

- PO1. Sensitize students to the aesthetic, cultural and social aspects of literature
- PO2. Engage students in high-level study of literature and cultivate their abilities in advanced interpretation, innovation, and writing
- PO3. Produce awareness and sensitizing the students to the pertinent issues of culture, society, environment, gender and disability, social relegation and other issues of human dignity
- PO4. Develop an insight regarding the idea of world literature
- PO5. Extend the core and applied knowledge of English Studies across the globe with special emphasis on various genres
- PO6. Generate critical thinking and humanitarian values to formulate creative synthesis of texts, society, and culture
- PO7. Make the student understand and assess various mainstream and subaltern cultures and appreciate them
- PO8. Acquaint the students with different theoretical and practical aspects and components of linguistics and stylistics
- PO9. Familiarize students with the standards equipped for clarifying the specific decisions made by individual and gatherings of people in their utilization of language
- PO10. Develop the ability to analyse and interpret human discourse, thought and expression
- PO11. Sensitize the students towards the voices of the marginalized and the oppressed so that they can empathize with them and work for their cause
- PO12. Gain an access to historical and emergent traditions of literature, culture and thought.
- PO13. Enlighten the students through basic understanding of cultural discourse that, how language mediates through literary texts
- PO14. Examine and critically analyse issues and notions of gender and patterns of gender roles

- PO15. Identify how gendered practices influence and shape knowledge production and human discourses
- PO16. Explore the creative dynamics between writing and performance on the stage, on the screen and in a text
- PO17. Introduce the learners to a wide range of film nuances and theatrical practices around the world
- PO18. Familiarize them with the ways of reading a film text by engaging with the unique nature of the language of cinema as an art form, and its potential for cross-cultural dialogue among civilizations.
- PO19. Develop an understanding of various performing arts as tools of cultural intervention
- PO20. Examine performance as a means of creative expression, a mode of critical inquiry, and an avenue for public engagement

Programme Specific Outcomes:

The learners shall be able to:

- PSO1. Inculcate a rhetorical approach to the literary study of American texts and also the issues of American dream, race, ethnicity, multiculturalism, realism and beliefs about American cultural history.
- PSO2. Develop insights pertinent to the issues of South East Asian countries by studying the literature of SAARC nations
- PSO3. Understand the relation between linguistics and stylistics
- PSO4. Apply the basic concepts in stylistics to literary texts
- PSO5. Familiarize themselves with the fundamental concepts and principles in Discourse analysis and Pragmatics
- PSO6. Identify how identities are constructed through the use of discourse
- PSO7. Demonstrate how the basic concepts in Discourse and Pragmatics are applied in the stylistic analysis of literary texts
- PSO8. Read the primary canonical and apocryphal texts describing various gender-based issues and examine their depiction in literature over the years
- PSO9. Study seminal texts pertaining to issues of gender
- PSO10. Study literary texts that prioritise issues of gender, both in India and the West
- PSO11. Comprehend and contextualise contemporary films adapted from literature
- PSO12. Contextualize and judge contemporary literature or film in along continuum to describe literature or film in terms of major periods, practices, and/or genres
- PSO13. Realise how literature, cinema and theatre acts as a mirror to the past, cultural, political, social, economic and historical

- PSO14. Learn the fundamental concepts, terms and theories in the field of Performance Studies
- PSO15. Comprehend the major issues, methodologies, and paradigms of performance studies
- PSO16. Understand various conventions of theatrical performances

Part:2; Sem:3 PAPER 1: AMERICAN LITERATURE

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Gain a critical understanding of the socio-historical and cultural ethos reflected in American literature from the beginning of the Seventeenth century to the end of the Twentieth century through different literary texts
- CO2. Understand the socio-cultural relevance of various American Authors and texts
- CO3. Acquire critical insights into different genres of American literature through representative samples from the leading authors of the day
- CO4. Understand the American style of writing and ideologies like Transcendentalism, corruption, pride, power and obsession along with spiritualism and Christian values
- CO5. Independently explore other leading authors and texts from the United States and respond critically to the multiple nuances present in them and evaluate their literary value and contemporary relevance
- CO6. Recognize the cosmopolitan liberal spirit of the literature of the new post- depression America.
- CO7. Comprehend the implications and reverberations of the American freedom struggle through the prescribed texts
- CO8. Appreciate the literature that embodied the ascendant American Dream and Destiny in the post second world-war period and also the narrative of the rupture of this grand vision and the attendant disillusionment and loss.
- CO9. Understand the rise of existential, experimental and postmodern forms of writing that constitute the most significant achievement of contemporary American Literature.
- CO10. Appraise the idea of multiculturalism in America
- CO11. Use this knowledge to extend scope for research ideas

Paper-2: Linguistics and ELT

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Extend their knowledge of the origin, development and use of language
- CO2. Discover the relationship between language and culture

- CO3. Develop the art of deducing the spellings from the pronunciation/ sound of the word
- CO4. Use the correct pronunciations of the words
- CO5. Identify the differences in language, dialects and other varieties of languages
- CO6. Have an understanding of uniqueness and functions of human language
- CO7. Acquire in-depth knowledge of the mechanism involved in the production, transmission and reception of speech sounds
- CO8. Develop understanding about the structure of morphological system and morphological process in language
- CO9. Get acquainted with different theoretical aspects of language acquisition / learning
- CO10. Get a theoretical grounding in the field of Sociolinguistics
- CO11. Identify the barriers in the teaching English as the second language
- CO12. Illustrate the various methods of teaching English and recognize the advantages and disadvantages of each
- CO13. Apply appropriate tools and techniques for teaching English in India
- CO14. Evaluate the development of English/ English studies in India
- CO15. Familiarize with the process of generating learning material
- CO16. Understand the fundamental concepts of curriculum design, testing and evaluation
- CO17. Design language courses and test formats
- CO18. Recognize different approaches and methods and able to use various techniques of teaching English Language

PAPER 3: SAARC LITERATURE

Course Outcomes:

After the completion of the course, students will be able to:

- CO1. Develop the understanding of the concept of SAARC
- CO2. Interpret the inter- national ties between SAARC nations
- CO3. Develop an appreciation of the different countries without prejudices
- CO4. Get an understanding of the intrinsic struggles of each nation
- CO5. Respond to texts critically, showing an awareness of how writers use and adapt language, form and structure to create meaning in texts
- CO6. Demonstrate understanding of the socio-cultural and political contexts in which texts have been produced and received
- CO7. Analyze texts in the light of contemporary literary theories that are relevant to the issues raised in the texts
- CO8. Perceive the importance of literatures outside the British canon · understand colonialism in its different manifestations and the postcolonial experience

- CO9. Get familiar with writers of SAARC nations
- CO10. Get basic understanding of cultures and traditions of South Asia such as caste system, arranged marriage, dowry system
- CO11. Explore some geopolitical history of South Asian such as British colonization, partition, creation of Bangladesh, globalization
- CO12. Use this knowledge to extend scope for research ideas

PAPER 4(A): AUSTRALIAN & CANADIAN LITERATURE

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Acquire knowledge of the emergence of Canadian Literature and Australian Literature
- CO2. Demonstrate an awareness of the spread and reach of literatures from Australia and Canada
- CO3. Explain the politics and ideology in canon formation
- CO4. Gain a critical understanding of the socio-historical and cultural ethos reflected in Australian and Canadian literature.
- CO5. Display an awareness of how socio-cultural contexts shape literary experiences
- CO6. Conceptualize the terms like ethnicity, diversity, national culture and multiculturalism
- CO7. Take cognizance of the historical, social and cultural contexts of each work and thereby make connections between literature and society
- CO8. Develop an appreciation of Aboriginal Narratives and Indigenous literature
- CO9. Receive practical knowledge of the identity crisis through the prescribed texts.
- CO10. Appreciate the cross cultural and multicultural aspects
- CO11. Develop an understanding about the ethnic and cultural diversity of Australia and Canada
- CO12. Get an understanding of the intrinsic struggles of Australia and Canada
- CO13. Realize the plight and exploitation of the aboriginal/ indigenous people
- CO14. Appraise different cultures, myths, and histories of Australia and Canada through fiction
- CO15. Use this knowledge to extend scope for research ideas

PAPER: 4(B)- STYLISTICS AND DISCOURSE ANALYSIS

Course Outcomes:

After the completion of the course, students will be able to:

- CO1. Infer the basic concepts of Stylistics and Discourse
- CO2. Attend to both literary and linguistic stylistics
- CO3. Identify specific linguistic features
- CO4. Understand the communicative function of stylistic features in the interpretation of the text
- CO5. Explore the relation between style and literary function
- CO6. Acquire an understanding of the principles of stylistic analysis and theory
- CO7. Learn different aspects of how to analyse the language of texts
- CO8. Develop skills in all aspects of literary stylistic analysis and research
- CO9. Perform the practical criticism of any text
- CO10. Equip themselves with stylistic analytical tools to examine texts
- CO11. Acquire linguistic terminology and skills for the analysis of literary texts
- CO12. Enhance interpretative accuracy
- CO13. Analyse oral or written discourse
- CO14. Comprehend the performative use of language
- CO15. Recognise and associate the stylistic patterns of the texts
- CO16. Understand the function and application of Stylistics in facilitating literary response and in understanding the techniques and features of literary texts
- CO17. Explain the relationship society, culture and context have to discourse

PAPER: 5- (Seminar, Paper Presentation and Viva Voce)

Students will be instructed to prepare a Research Paper in 2500 words and a viva voce will be scheduled for the same.

Part:2; Sem:4 PAPER: 1- GENDER STUDIES

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Understand how a gendered perspective may change one's perception of literature
- CO2. Study the writings of key theorists with special reference to literature and gender
- CO3. Stimulate discussion on issues of cultural constructs of femininity and masculinity
- CO4. Theorize gender in feminism, queer studies or masculinity studies
- CO5. Interpret a text and read social change through the lens of gender
- CO6. Realize how gender norms intersect with norms of caste, race, religion and community to create forms of privilege and oppression
- CO7. Participate in challenging gendered practices that reinforce discrimination

Paper: 2- CULTURAL STUDIES AND MARGINALITY

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Able to formulate individual ideas about cultural forms like photography, films, music, religion, law, painting, architecture etc.
- CO2. Develop an acquaintance with major cultural theorists
- CO3. Develop fluency in the terminology of cultural studies
- CO4. Relate theoretical knowledge with actual day to day life situations
- CO5. Develop an interdisciplinary perspective to understand culture
- CO6. Learn to appreciate literature and writers from various nations and cultures
- CO7. To see critically the rising trends of globalization, capitalism and multi-culturalism
- CO8. Gain an understanding of issues and concerns of persons with disabilities

PAPER: 3- Children's Literature

Course Outcomes:

- CO1. To equip standards to appreciate the concept of children's literature.
- CO2. To communicate the concept and ideology of children's literature.
- CO3. To give knowledge of the difference of children's literature and the literature of grown ups.
- CO4. To make students appreciate the rhyme of children's literature.
- CO5. To know the flexibility and fantasy of children's short stories.
- CO6. To promote an insight into the climate, emotions and geography existing in children's literature.
- CO7. Student will learn the art of appreciating the ethical and magical values of children's literature.
- CO8. To make students understand the intricacy of language, images and symbols scattered in children's literature.

Paper: 4(A) - ADVANCED LITERARY STUDIES IN FILMS, THEATRE AND PERFORMING ARTS

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Analyse, and interpret a range of performances, staged and improvisational, scripted and unscripted
- CO2. Understand performance as event, theory, and method

- CO3. Explore the communicative and artistic dimensions of a variety of written texts
- CO4. Develop ability to write, enact and produce simple plays
- CO5. Gain familiarity with key texts in the field of Performance Studies
- CO6. Develop logical performance skills necessary to fully absorb literature in performance
- CO7. To enable them pursue higher studies and careers in film, theatre and various performing arts.

PAPER: 5- Dissertation & Viva Voce

NOTE: Students will be taught the whole syllabus prescribed in this paper and encouraged to write a DISSERTATION in 5000 words to present before the examiners in viva voce organized by the department with the instructions of the university and internal and external examiners will assess the presentation.

NOTE: Topics of the DISSERTATION will be allocated by the departments

NOTE: Students will be divided into groups and assigned teacher/ supervisor from the departments. Only those teachers who are eligible for teaching PG classes, will be eligible for supervising Dissertation.

Course Outcomes:

After completing this course, the students will be able to:

- CO1. Establish the scope, depth and direction of the research
- CO2. Have a grasp of the research tools in the chosen field of research
- CO3. Write literature review of their proposed thesis
- CO4. Identify the most important and up to date works in the relevant field, read them critically and synthesize the findings
- CO5. Familiarize with the important publications on the topic
- CO6. Identify various styles of referencing and citations

BA-History

Program Outcomes (POs)

PO1. This course provides the basic ideas and concepts of History and Historical development of

Humanity.

PO2. The program has been designed to develop a historical outlook to resolve the daily life struggles in the society and nation.

PO3. Designed to enhance the capacity of students to understand universal and domain-specific values in History.

PO4. This course intends to orient the learner with the Approaches to the broader discipline of History.

PO5. Develop the ability to address the complexities and interface among of self, societal, national and International priorities.

PO6. Promote research, innovation and design (Map and Atlas) development favoring all the disciplines in History.

PO7. This programme develops a scientific and practical approach among the students which helps in their day-to-day life.

PO8. It will help in developing analytical and critical thinking based on the themes and issues of history.

PO9. It will help in understanding of the basic concepts of History and an awareness of the emerging areas of the field.

PO10. Acquisition of in-depth understanding of the applied aspects of History as well as interdisciplinary subjects in everyday life. .

PO11. The programme orients students with traditional historical knowledge along with advanced

contemporary skills like the role of remote sensing, Carbon dating and GIS in the field of history and archaeology.

PO12. Improvement of critical thinking and skills facilitating.

PO13. Inculcate generic and subject-specific skills to succeed in the employment market and standards of life.

B.A. First Year : Diploma in History

Program Specific Outcomes (PSOs)

At the end of program following outcomes are expected from students:

PSO1. Learn about the discipline of History as a holistic field of study covering multiple facets and requirements of human beings in day-to-day living, for example, achievement of appropriate milestones in personal development; awareness, need and use of historical resources; access to adequate knowledge systems for wholesome development; historical fundamentals.

PSO2. May have capabilities to start earning by enhancing their skills in the field of Historical and Traditional knowledge system, Tourism, Archives and Museums.

B.A. Second Year : Diploma in History

Program Specific Outcomes (PSOs)

At the end of the program following outcomes are expected from students:

PSO1. Develop a historical outlook to resolve the day-to-day life struggles in society and nations.

PSO2. Develop sensitivity, resourcefulness, and competence to render service to enhance the development of individuals, families, communities, and the nation at large.

PSO3. Enhance abilities involved in acting as proactive agents of change in promoting the discipline of Social Sciences.

PSO4. Explore and decide upon viable avenues of self-employment and entrepreneurship.

PSO5. Learn more about human and community & relationships.

B.A. Final Year: B.A. in History (Degree)

Program Specific Outcomes (PSOs)

PSO1. Appreciate and benefit from the symbiotic relationship among the core disciplines of History Social History, Economic History, Political History, Cultural History of India and the World.

PSO2. The programme is designed to encourage Ethical and Environmental values for sustainable development in society.

PSO3. The programme is designed to encourage a genre of responsible students with a passion for lifelong learning and entrepreneurship, it also generates multi-skilled leaders with a holistic perspective that cuts across disciplines.

PSO4. Promote research, innovation and design (map and atlas) development favoring all the disciplines in History.

PSO5. Enhance digital literacy and apply them to engage in real-time problem solving and ideation related to all fields of History.

PSO6. After this degree programme students can benefit by getting jobs in various fields like the government sector, working with NGOs, jobs as a journalist, Tourism Manager etc. and also they can feel a sense of entrepreneurship as well.

Ancient and Early Medieval India (Till 1206 A.D.)

Course Outcome-

The present course will be useful in providing historical knowledge to the students. It has been constructed in such a way that a student will not only gain knowledge of ancient civilizations of India, but historical development can be understood easily. Students will be familiar with the political and cultural development of ancient India. The art, culture and philosophy of religion of ancient India have been included in the syllabus. Through this paper, a student will get acquainted with historical facts, acquire knowledge of ancient pride of India and develop a

positive attitude towards history. This approach will motivate the students to contribute towards nation-building by making them aware of the social culture of India. This course will develop the logical ability of students to do a rational analysis of historical events and develop students' research aptitude. The course presented will inspire the ability of knowledge generation in the students.

This section studies the political situation in North India. Students can gain knowledge of how political decentralization arose in North India after death of Harsha and which historical circumstances proved helpful in the origin of Rajputs. It also includes the history of the dynasties of

Kashmir, Punjab and Sindh. This section gives a historical account of new political conditions and conflicts in India after 1000 AD. Students can gain historical knowledge of political and strategic weakness of India through political conflicts. In this paper, a student will get knowledge of the nature of Muslim attacks and the struggle of Rajputs.

History of Medieval India (1206 A.D - 1757 A.D)

Course Outcome—

This paper is designed to develop the understanding of India with the advent of Turks, Timurs, Afghans and subsequently the establishment of Mughal rule in some parts of India. An emphasis has been laid to cover the regions of India not under the domination of Turks and Mughals in India. This paper covers the territorial expansion of various Indian Kings and the impact of Medievalism on Indian society and culture.

History of Modern India (1757 A.D –1857 A.D)

Course Outcome-

This paper is designed to cover the era of Indian history witnesses the transfer of power from Mughals, other provincial important dynasties to East India Company. It covers the study of Indian resistance at various levels and finally culminates in the First War of Independence. This is an important era of Indian History, as it witnesses the rise of indigenous powers like Marathas and Sikh State, along with new regional identities. This paper covers also the colonial land revenue system and Indian Renaissance. The paper covers the history of British educational and agricultural policy with their impact over India.

History of Modern India (1857 A.D – 1950A.D)

Course Outcome-

The course is designed to provide an overview of modern Indian political history and key concepts of the modern constitutional development of the students. The paper covers the history of British educational and agricultural policy with their impact over India. This paper also covers the development of communalism in India and mergers of princely states after independence

Nationalism in India.

Course Outcome-

Acquaintance to Indian National Movement is indispensable for a student to make a sense of Indian Modern History and Nationalism. The course is designed to provide an overview of Indian freedom Struggle and key concepts of the Indian Nationalism to the students, which would evolve them into a conscientious citizen. The paper covers the history of Freedom Movement in a manner that each section, which played a vital role in independence of the country is introduced to the student.

Era of Gandhi and Mass Movement

Course Outcome-

This paper is designed to introduce the student regarding the Gandhian Philosophy ,his tools and techniques which laid a mass movement in India. This paper covers rise of revolutionary movement and Gandhian programs that guided the path of Indian National Movement in twentieth century. It concludes with the vital role of 'Netaji' Subhash Chandra Bose in the National Movement.

History of Modern World (1815A.D- 1945A.D)

Course Outcome-

This paper is designed to introduce the student regarding rapid changes which occurred in Europe. Special emphasis is laid on the positioning of Nationalities and the rise of new order defying the traditional theory of kingship. This is era of new ideologies leading to the First World War to which a student of history must be introduced with. This paper covers the history of Modern World between the two World Wars. This is an era when there is shift from Euro-centric history of world history. These turbulent times witnessed the rise of Totalitarianism as an alternative to democratic and liberal ideal, as Second World War was lesser Imperialistic clash and more a clash of two ideologies. This period also witnesses the formation of International Agencies and above all in the same period Colonist and Imperialist structure crumbled.

M.A. (History)

Sem-I Paper 1: HISTORIOGRAPHY: CONCEPTS, METHODS AND TOOLS- I

Course outcomes

Students will understand the significance of history as a discipline.

- CO1. Examine the interconnections between history and archaeology.
- CO2. Understand the relationship between history and geography, highlighting geographical influences on historical events.
- CO3. Gain insights into the Ancient Indian tradition of historical writing, focusing on histories and biographies.
- CO4. Explore the Graeco-Roman tradition through the works of Megasthenes, Arrian, Strabo, and Ptolemy.
- CO5. Understand the Chinese tradition of historical writing, with a focus on Fa-hien, Hsuan Chwang, and Itsing.
- CO6. Gain insights into the Marxist approach to history, understanding historical events through the lens of economic and class struggles.

Paper 2: THE ANCIENT WORLD

Course outcomes

After the completion of the course the students will be able to:

- CO1. Comprehend the evolution of human societies from hunting and gathering to pastoral nomadism, and the pivotal transition to agriculture marked by the Neolithic Revolution.
- CO2. Analyze the cultural, technological, and socio-economic aspects of Bronze Age civilizations, exploring writing, artistic expression, and reconstructing social structures within these ancient societies.
- CO3. Examine the process of state formation through an introduction to key civilizations such as the Persian Empire, Ancient Greece, and the Roman Empire, gaining insights into their political, social, and cultural developments.
- CO4. Analyze the intricate relationships between religion, state, and society through the lens of the Late Roman World, the Arab World, and China, elucidating their diverse religious, political, and societal dynamics.

Paper 3: INDIAN NATIONAL MOVEMENT

Course outcomes

After the completion of the course the students will be able to:

- CO1. Comprehend the formative phase of nationalism, encompassing the 1857 uprising, the emergence of organized nationalism, the roles of moderates, extremists, and revolutionaries, and the trends leading up to 1919.
- CO2. Grasp the essence of India's mass nationalist movement, covering Gandhian actions, challenges, the Non-cooperation and Civil Disobedience Movements, provincial ministries, the Quit India Movement, Subhash Chandra Bose and the INA, and India's response to constitutional amendments.
- CO3. Gain insight into the diverse voices of a nation through an exploration of revolutionary left-wing movements, tribal and peasant movements, and movements of the depressed classes.
- CO4. Understand the complexities of the partition and independence of India, including the genesis of Pakistan, and examine the ideas of prominent leaders of the national movement.

Paper 4 (B): POLITICAL HISTORY OF MEDIEVAL INDIA, C. 1206 – 1398

Course outcomes

After the completion of the course the students will be able to:

- CO1. Explore the establishment of the Delhi Sultanate, examining sources for its study, the break from the Ghurid Empire under the Mamluk Dynasty (1206 - 90), and the impact of Mongol invasions on the region.
- CO2. Examine the foundation of the Khalji Dynasty, focusing on the Khalji Revolution, the reigns of Jalaluddin Khalji and Alauddin Khalji with particular attention to the expansion of the Sultanate, and the rule of Qutbuddin Mubarak Shah.
- CO3. Explore the establishment of the Tughluq Dynasty, focusing on Ghiyasuddin Tughluq, Mohammad Bin Tughluq, Firoz Shah Tughlaq, and the eventual downfall of the Tughluq rule.
- CO4. Delve into the history of the Deccan region, examining the Yadavas, Kakatiyas, Pandyas, and Hoysalas, along with the conflicts between these four kingdoms.

Sem-II Paper 7: HISTORIOGRAPHY: CONCEPTS, METHODS AND TOOLS- II

Course outcomes

After the completion of the course the students will be able to:

- CO1. Comprehend major theories of history, including cyclical, historical materialism, sociological, comparative, and ecological perspectives.
- CO2. Explore key themes in ancient Indian history, encompassing economic, social (Varna, Jati, Janajati, gender), religious, cultural, environmental, and scientific/technological aspects.
- CO3. Engage in debates within history, scrutinizing the origins of Harappan culture, the original homeland of the Aryans in Vedic culture, and evaluating whether the Kushana or Gupta period represents the Golden Age.
- CO4. Explore Indo-Persian historiography, analyzing its development during the Sultanate period and under the Mughal Empire.

Paper 8: THE MEDIEVAL WORLD

Course outcomes

After the completion of the course the students will be able to:

- CO1. Engage in debates surrounding feudalism, analyze its forms and structures, examine its phases, and evaluate the role of trade in the decline of feudalism.
- CO2. Explore trade and commerce in the medieval world, focusing on oceanic trade routes, the role of business communities, commercial practices, and craft production methods.
- CO3. Explore the transition from the medieval to the modern world, covering advancements in science, literature, religious institutions, and the evolution of society.
- CO4. Gain an overview of the pre-modern world, examining population trends, urbanization, technologies of warfare and communication, and kinship patterns and family structures.

Paper 9B: POLITICAL HISTORY OF MEDIEVAL INDIA, C. 1398 - 1526

Course outcomes

After the completion of the course the students will be able to:

- CO1. Explore the post-Tughlaq era of the Delhi Sultanate, covering the invasion of Timur Lame, the Sayyid Dynasty, and the Lodi Dynasty.

- CO2. Investigate regional kingdoms during the medieval period, including the Jaunpur Sultanate, Bengal Sultanate, Gujarat Sultanate, and Malwa Sultanate.
- CO3. Explore the history of the Vijayanagara Empire, including its early phase, the reign of Krishnadeva Raya, a period of instability, and its decline following the Battle of Talikota in 1565.
- CO4. Examine the history of the Bahmani Sultanate, including its first and second phases, and the Afaqi-Dakhni conflict.

Paper 11A: HISTORY OF ECOLOGY AND ENVIRONMENT: INDIA

Course outcomes

After the completion of the course the students will be able to:

- CO1. Study the interface between nature and humans, the Indian landscape, and ecological sources, along with early societies' resource use, including hunting-gathering and nomadic pastoralism.
- CO2. Explore the origins of agriculture, river valley civilizations, agricultural diffusion, and regional specificities, as well as the appropriation of various environmental forms such as energy, water, forests, and metal and mineral resources.
- CO3. Examine Indian philosophy's perspective on the man-nature relationship and conservation, colonialism's impact on environment understanding, resource management, modern concerns regarding development, biodiversity, and alternatives to environmental resources and patents.

Sem-III Paper 13: HISTORY OF MODERN EUROPE, C. 1789 - 1919

Course outcomes

After the completion of the course the students will be able to:

- CO1. Explore the transformative late 18th and early 19th centuries in Europe, focusing on the French Revolution, Napoleon Bonaparte's reforms and foreign policies, the aftermath of his defeat at the Congress of Vienna.
- CO2. Examine the socio-economic transformation, encompassing the Agrarian Revolution, Industrial Revolution, and the evolution of socialism including Utopian and Marxist perspectives.

- CO3. Explore the formation of nation-states, analyzing the unification processes in Italy and Germany, the Greek War of Independence, and the Crimean War and Russo-Turkish War.
- CO4. Examine the Great War, including World War I and the Paris Peace Conference, alongside the Russian Revolution of 1917.

Paper 14: HISTORY OF THE MODERN WORLD, C. 1920-60

Course outcomes

After the completion of the course the students will be able to:

- CO1. Study the Interwar Period and World War II, covering the League of Nations, fascism in Italy and Nazism in Germany, and the impact of the Second World War.
- CO2. Explore post-war politics, including the Great Depression and New Deal in the U.S.A., oil diplomacy, and Arab nationalism.
- CO3. Analyze the Cold War era, focusing on the role of the UNO in global politics, the dynamics of the Cold War, and the emergence of the Non-Aligned Movement.
- CO4. Examine India's foreign policy post-independence, including the Nehruvian era, India's relations with the US, USSR, and China, and its diplomatic engagements with SAARC countries.

Paper 15 B: POLITICAL HISTORY OF MEDIEVAL INDIA, C. 1526-1658

Course outcomes

After the completion of the course the students will be able to:

- CO1. Understand the Mughal Empire's inception, covering Babur and Humayun's reigns, the Sur interregnum led by Sher Shah and Islam Shah, and key events like Hemchandra Vikramaditya's involvement in the Second Battle of Panipat.
- CO2. Grasp political knowledge of Akbar's reign, including the influence of Bairam Khan and the Petticoat Government, conquests and rebellion suppression, religious policy, Rajput relations, and the Deccan strategy.
- CO3. Understand the reigns of Jahangir and Shah Jahan, including their policies towards regions like Mewar, Bengal, Kangra Hills, the Deccan, and Central Asia, alongside the dynamics of power and diplomacy during their rule, as well as an analysis of the Deccan Sultanates and their interactions with the Mughals.

Paper 16 B: ART AND CULTURE IN MEDIEVAL INDIA, C. 1206-1526

Course outcomes

After the completion of the course the students will be able to:

- CO1. Explore Sultanate period: art, architecture, and religious trends, encompassing architectural evolution, regional painting styles, music, literature, Islam's influence, religious shifts under rulers, and the rise of Sufi silsilas and Bhakti traditions in North India and Bengal.
- CO2. Understand the Vijayanagara art and culture, including the urban planning of Hampi city, the significance of the Virupaksha Temple as the sacred center, palace architecture as the royal center, and royal support for literature in Sanskrit, Kannada, Telugu, and Tamil.
- CO3. Grasp knowledge of religious trends in Deccan and South India, including Maharashtra Dharma's emergence, Virashaivism in Karnataka, assimilation of local cults under Vijayanagara, and Sufism in the Deccan through texts like Chakkinama and Charkhanama.

Sem-IV Paper 19 B: POLITICAL HISTORY OF MEDIEVAL INDIA, C. 1658-1761

Course outcomes

After the completion of the course the students will be able to:

- CO1. Understand the medieval Indian political history, particularly focusing on Aurangzeb's era, including the War of Succession, religious policy changes, various revolts, and contributing factors to the Mughal Empire's decline.
- CO2. Develop understanding of key figures such as Chhatrapati Shivaji, the expansion of Swarajya and its diplomatic relations, the formation of the Maratha Confederacy led by the Peshwas, and the pivotal events surrounding the Third Battle of Panipat along with its far-reaching consequences.
- CO3. Gain insights into the evolution of Punjab before and after Mughal influence, the dynamic relationship between Sikh Gurus and the Mughal Empire, the establishment of an early Sikh State, and the transformation of Sikh identity pre and post the Khalsa period.
- CO4. Develop understanding of key rulers including Bahadur Shah, Jahandar Shah, Farrukhsiyar, and Muhammad Shah, delve into the intricate dynamics of parties and politics at the Mughal Court, particularly the influence of the Sayyid Brothers, and analyze the significant repercussions of Nadir Shah's invasion.

Paper 20 B: POLITY AND ADMINISTRATION IN MEDIEVAL INDIA

Course outcomes

After the completion of the course the students will be able to:

- CO1. Understand the political, administrative, and socio-economic structures of medieval India.
- CO2. Understand the Delhi Sultanate's governance through analysis of textual sources on statecraft, modern historians' perspectives.
- CO3. Comprehend the Deccan region's political landscape, such as administrative structures of Vijayanagara State, and exploration of the Bahmani State and its administrative mechanisms.
- CO4. Understand the Mughal Empire, including debates on its nature, the evolution of sovereignty theory, Akbar's imperial ideology, and an analysis of its administrative structures at central, provincial, and local levels, notably focusing on the Jagirdari and Mansabdari systems.
- CO5. Gain insight into the historiographical debates surrounding 18th-century successor states, and acquire detailed knowledge about Bengal, Hyderabad, and Awadh, including their political dynamics, administrative structures, and cultural developments.

Paper 21 B: SOCIETY AND ECONOMY IN MEDIEVAL INDIA, C. 1526 - 1750

Course outcomes

After the completion of the course the students will be able to:

- CO1. Develop understanding of the socio-economic landscape of medieval India (c. 1526-1750), focusing on the village community structure, rural stratification, caste dynamics, and social hierarchy in both North India and the Deccan region.
- CO2. Understand the economic processes in medieval India (c. 1526-1750), including agrarian relations, land revenue systems, monetary systems, domestic and international trade, and commercial practices.
- CO3. Understand medieval Indian technological advancements and craft production, encompassing agricultural, textile, construction, and military technologies.
- CO4. Understand urbanization during the Mughal era, including the urban landscape, population composition, urban demography with a focus on women, and standards of living in medieval Indian cities.

Paper 22 B: ART AND CULTURE IN MEDIEVAL INDIA, C. 1526 - 1750

Course outcomes

After the completion of the course the students will be able to:

- CO1. Develop understanding of the evolution of medieval Indian architecture, from the inception of Mughal architecture to its development under Akbar, Jahangir, Shah Jahan, and the subsequent phases, including the Sur period.
- CO2. Understand the evolution of medieval Indian painting traditions, encompassing the antecedents in the fifteenth century, the development of the Mughal school under different Mughal rulers, regional painting schools such as Kishangarh and Pahari, and the impact of European influences on Mughal painting.
- CO3. Understand medieval Indian literature and performing arts, including the patronage of Persian and Sanskrit literature, the popularization of Awadhi and Brajbhasha, as well as the development of music, dance, and drama during this period.
- CO4. Understand religious ideas and movements in medieval India, including concepts of sacred kingship and Sulh-i-Kul, the revival of orthodoxy through figures like Sheikh Ahmed Sirhindi and Shah Waliullah, and the growth of Vaishnava Bhakti Sampradayas.

BA-GEOGRAPHY

B.A. (Geography) PROGRAMME SPECIFIC OUTCOMES (PSOs)-

Program Outcome (After 3 Years of Study)

- PSO1. This course provides the basic ideas and concepts of Physical & Human Aspect of Geography.
- PSO2. This course intends to orient the learner with the Approaches to the broader discipline of Geography.
- PSO3. It will help in developing analytical and critical thinking based on the themes and issues of geography.
- PSO4. It eventually prepares the students to understand the development of the subject and delve around issues suited to the needs of the contemporary world.
- PSO5. It will help in exhaustive understanding of the basic concepts of Geography and an awareness of the emerging areas of the field.
- PSO6. Acquisition of in-depth understanding of the applied aspects of Geography as well as interdisciplinary subjects in everyday life.
- PSO7. Improvement of critical thinking and skills facilitating.

PSO8. The application of knowledge gained in the field of Geography in the classroom to the practical solving of societal problems.

PSO9. The programme orients students with traditional geographical knowledge along with advanced contemporary skills like remote sensing and GIS.

Course Title: Physical Geography

Course outcomes: Students will be able to understand

CO1. The Earth geomorphic transition from beginning to present day.

CO2. Plate tectonics and related movements

CO3. Landforms carved by various agents of erosion

CO4. Earth's climate and the factors that influence it

CO5. Oceans system and biogeography of the world

Course Title: Human Geography

Course Learning Outcomes:

On completion of this course, learners will be able to:

CO1. To understand the Concept and Nature, Meaning and Scope of Human Geography

CO2. To understand the natural and Cultural Changes in and around the Human Environments and their interrelationship.

CO3. To understand the Bhartiya Sanskriti Evam Paryavaran Chetna.

Course Title: Thematic, Weather and Geological Maps

Course Learning Outcomes: On completion of this course, learners will be able to:

CO1. Understand the basic idea of Map, Scale and Topographic sheets

Course Title: Environment, Disaster Management and Climate Change

Course outcomes: Students will be able to understand

CO1. The course aim is to give basic understanding of concept Environment, Climate Change and Disaster Management.

CO2. Understanding of the concept of appraisal and conservation of Environment and Natural Resources.

CO3. It will help in developing understanding about various Impacts of Climate Change.

CO4. This course shall introduce the basic concepts related to disaster Management.

CO5. This paper shall help in understanding Global effort in field of disaster management.

Course Title: Statistical Techniques

Course outcomes: Students will be able to understand

CO1. To differentiate between qualitative and quantitative information.

CO2. To understand the nature of various data.

CO3. To understand sampling methods for data collection.

CO4. To present data through graphical and diagrammatic formats.

CO5. To use the concept of probability mainly the normal distribution.

Course Title: Economic Geography

Course Learning Outcomes: On completion of this course, learners will be able to:

CO1. Define Meaning, concepts and approaches of Economic Geography

CO2. Understand the nature of Economic activities, Resource Distribution

CO3. Understand the Effect of globalization on developing countries.

Course Title: Practical: Surveying

Course Learning Outcomes

On completion of this course, learners will be able to:

CO1. Identify the various Survey Operations and Survey Instruments

CO2. To understand the idea of Basic and applied Instrumental surveying

Course Title: Regional Geography

Course outcomes: Students will be able to understand

CO1. To understand the concept of Region and Regional Planning.

CO2. To familiarize the students with Theories and Models for Regional Planning.

CO3. To develop understanding about concept of Development, Sustainable Development and Multi-levelan planning.

Course Title: Basics of Remote Sensing and GIS

Course Learning Outcomes: On completion of this course, learners will be able to:

Understand the Basic idea and application of Remote sensing Techniques and Geographical Information System

Course Title: Project Report-1

Course outcomes: Students will be able to understand

- CO1. In-depth knowledge of research methodology.
- CO2. Learn to prepare Project Report.

Course Title: Geography of India

Course Learning Outcomes: On completion of this course, learners will be able to:

- CO1. Understand the importance of “Ek Bharat Shrestha Bharat”
- CO2. Understand the wider aspects of Geography of India

Course Title: Evolution of Geographical Thought

Course Learning Outcomes: On completion of this course, learners will be able to:

- CO1. Understand the contribution of Indian and other renowned Geographers
- CO2. Understand the Concept of evolution of Geographical Thought.

Course Title: Remote Sensing and GIS

Course Learning Outcomes : On completion of this course, learners will be able to:

- CO1. Understand and Conceptualize Remote Sensing and GIS Technique
- CO2. Understand the use of various image processing Software
- CO2. Basic idea of Geographical Information System

Course Title: Project Report-2

Course outcomes: Students will be able to understand

- CO1. In-depth knowledge and application of RS and GIS technology in research.
- CO2. Learn to prepare Project Report.

M.A. Geography

Programme outcomes (After two years of study):

This course intends to orient students with approaches to broader discipline of geography.

It will help in exhaustive understanding of the basic concepts of geography and awareness of the emerging area of the field. This programme orient students with traditional geographical knowledge along with advance contemporary skills like remote sensing and GIS. At the end of the two-year (four-semester) course, students will have comprehensive knowledge about contemporary issues in geography, both physical and human.

BA-Political Science Programme

Program Outcome (After 3 Years):

After the completion of three year course the student is expected to exhibit a fairly detailed understanding of the basic ideas, concepts, institutions, processes of politics and government at national, regional and international levels. Besides the programme has ability enhancing courses which provide the learner opportunities to explore subjects beyond the discipline of political science. Further he would be able to appreciate and cultivate

PO1. Values, ethics, rights and duties

PO2. Capacity and ability to apply theoretical knowledge in problem solving

PO3. Effective communication skills to negotiate and comprehend different situations

PO4. Interdisciplinary method of critical thinking

PO5. A general understanding about how knowledge of politics and how that can be applied to benefit the management and/or amendment of problems of mankind.

PO6. Capability to articulate ideas in appropriate manner.

PO7. Sensitivity towards diverse contexts, ethnic groups, minorities, marginalized groups and gender issues.

Indian National Movement & Constitution of India

Course Outcome:

Acquaintance of the Inspirations of Indian National Movement & Constitution is indispensable for a student to make a sense of Indian Political System. The course is designed to provide an overview of Indian freedom Struggle and key concepts of the Indian constitution to the student, which would evolve him into a conscientious citizen.

Awareness of Rights & Laws:

Course Outcome:

This paper intends to arm the student with basic digital and legal awareness where by the student can leverage this in the job market. It also intends to make the student aware of his basic legal rights which would help him to stand up and help others.

Political Theory & Concepts

Course Outcome-

Understanding Political theory is integral and indispensable for a comprehensive and critical study of political science. The course is designed to train a student in the foundational issues of political theory, which is relevant for any in depth study and research.

Political Process in India:

Course Outcome:

Study of the functioning of Indian Democratic System is essential for a comprehensive understanding of the Indian Political System. The course is designed to train & acclimatize the student with the Indian Political System in action and explain the working relationship between citizens and state and among various units of the state. The student would be able to appreciate the trajectory of the Indian political system since independence.

Field Work Tradition In Social Sciences :

Course Outcome :

This paper intends to train students in carrying out empirical studies and field work which would help him in research. This would sensitize him to the precautions that is required to carry a empirical study on socially relevant topics.

Western Political Thought:

Course Outcome :

This course introduces the students to the ancient ,medieval and modern political thinking in the West. This would help them understand the manner in which ideas pertaining to ideal state, kingship, duties of the ruler and the ruled, rights, liberty, equality, and justice have evolved over a period of time.

Comparative Government And Politics UK, USA, Switzerland & China

Course Outcome :

Politics is the mirror of the society. This paper will help the student in furthering his understanding of the world around. This would help him to appreciate other systems and make him critically analyze the pros and cons of these systems. Comparison is widely used method of scientific knowledge .This would help the student to find out why a certain system is appropriate and suitable to a given society.

Principles of Public Administration

Course Outcome :

Administration being essential to every organization, this course aims to acquaint a student with fundamentals of public administration to . This would provide him an insight regarding the principles of administration in general and help him to bring out the best from existing set up. This would help him to prepare for administrative examinations too.

Public Policy Formulation & Administration in India

Course Outcome:

It aims to provide interface between public policy and administration in India. The essence of this paper is to appreciate the translation of governing philosophy into programmes and policies. Students will able to understand Political Process as well as Policy formulation process and the difficulties in implementing Programmes and Policies promised in Manifestoes

PROJECT WORK I

Course Outcome:

This paper intends to develop a comprehensive insight in the students so that given an opportunity they can initiate a minor research proposal or attempt a minor dissertation on their area of interest

Indian Political Thought

Course Outcome: This course is to familiarize the students with the larger political and social thinking and ideas in Modern India. Designed in a way to help students engage with various ideological dispensations that came to shape the normative thinking on India.

International Relations & Politics

Course Outcome:

This course seeks to equip students the basic tools for understanding International relations. It also introduces major events and developments that have shaped the contemporary international system. It aims to capture the changing dynamics of the international politics by taking up burning and relevant issues which have potential to alter its contours.

PROJECT WORK (2)

Course Outcome:

This paper intends to develop a comprehensive insight in the students so that given an opportunity they can initiate a minor research proposal or attempt a minor dissertation on their area of interest

MA Political science

Program Specific Outcome

Political science PG course train the students in a number of different critical skills that will help them succeed in almost any career.

- PSO1. Political theory course train them in analytical thinking , an essential skill for almost all attractive careers.
- PSO2. The study helps the students in planning further for appearing for government or administrative services exams like UPSC, UPPSC, NET, Phd, Bed, SSC etc.
- PSO3. It gives broad knowledge on political theory, constitution, foreign policy, international relations, public administrations, comparative politics, political process, international organisations and super powers roles in world politics.
- PSO4. After the completion of the PG in political science students are able to work in various fields like political analysts, academicians, public administrators, political consultants ,political content writers ,political archivists, political correspondents and journalist.

Sem-I Paper -1 Political theory

CO-1- students will understand what power and authority is and how it function in society and politics.

CO-2- analysing what is politics and understanding of basic concept of Liberty, equality, justice and rights.

CO-3- describing the various theories of political science

Paper 2- Indian political thoughts

CO-1-The course contents ancient and modern political thoughts the student will be able to understand their contribution to the discipline and how these ancient ideas Still prove to be relevant in present time.

CO-2- They will also be able to understand Renaissance and reformation in India and roles of social reformers and freedom fighters

Paper -3 - Indian political system: Constitution and institutions part -1

CO-1- students will understand and explain the significance of the Indian constitution.

CO-2- They will analyse the Indian political system the powers and functions of the union state and local government in detail.

CO-3-Student will learn the historical and philosophical aspects of Indian constitution.

Paper-4- Research Methodology

CO-1- Students will be understand and compare hend the basics in research methodology and applying them in research.

CO-2- With the help of this course, students will be able to tack up and implement in research project.

CO-3- The students will develop the skills in qualitative and quantitative analysis and presentation.

Sem-III Paper -1 International relations *part 2

Course outcome

CO-1-student will understand key concepts and concern in international relations

CO-2- students will be able to understand the impact of international events and systems at the regional, National and local levels in at least one major area of the world.

CO-3- students will understand the historic and contemporary role and different effects of human organisation and actions on global system to develop for informed appropriate action to solve complex problem in the world.

Paper 2-Foreign policy of India

CO-1- students will be aware about theoretical and practical concepts about indian foreign policy.

CO-2- student will understand the changing role of India's foreign policy.

CO-3- they will learn that what are the major critical issues with our neighbours and superpowers and how can we solve them.

Paper -3 -Public administrators

CO-1- student will learn basic principals and approaches of public administration.

CO-2- they will be able to understand seeking suitable employment options.

CO-3- they will also learn that how administration works and what are there accountability and responsibility.

Paper-4 Western political thoughts

CO-1- students will understand the limitation of power and authorities.

CO-2- they will learn basic concepts of justice , equality, freedom and rights.

CO-3- students will be able to know the importance of political philosophy in shaping and influencing the state and society at large.

Indian political system: Constitution and institutions part -2

CO1. Students will understand and explain the significance of the Indian constitution. They will analysis the Indian political system the powers and functions of the union state and local government in detail.

CO2. Student will learn the historical and philosophical aspects of Indian constitution.

International Relations *part 2

CO1. Student will understand key concepts and concern in international relations

CO2. students will be able to understand the impact of international events and systems at the regional, National and local levels in world.

CO3. students will understand the historic and contemporary role and different effects of human organization and actions on global system to develop for informed appropriate action to solve complex problem in the world

Comparative politics

CO1. students will be aware about theoretical and practical concepts about comparative politics. student will understand the changing role of various role of democratic and non democratic institution in India and world.

- CO2. they will learn that what are the major critical issues like political development, political modernization and democratic transition etc.

Western political thoughts part -2

- CO1. students will understand the Plato, Aristotle, Locke, Karl Marx ideas in world politics,
- CO2. they will learn basic concepts of justice, equality, freedom and rights. students will be able to know the importance of political philosophy in shaping and influencing the state and society

Western political thoughts part -2

- CO1. students will understand the Gramsci, Hannah Arendt, Rawls and Nozick ideas in world politics,
- CO2. they will learn basic concepts of justice, equality, freedom and rights.
- CO3. students will be able to know the importance of political philosophy in shaping and influencing the state and society

Foreign policies of USA Russia and china

- CO1. students will be aware about theoretical and practical concepts about USA, RUSSIA, AND CHINA foreign policy.
- CO2. Student will understand the changing role of in world politics. they will learn that what are the major critical issues with our neighbours and superpowers and how can we solve them.

BA-Psychology Program

Program Outcome (After 3 Years):

The learning outcomes that a student should be able to exhibit on completion of a degree level program in Psychology are as follows:

- PO1. Comprehension about the discipline, its research methods, related theories and models.
- PO2. Knack to link up theory with individual experiences and varied applied settings.
- PO3. Capacity to practice professional skills in the area of psychological testing, assessment and Counseling.
- PO4. Development of skills in specific areas related to specific specialization (e.g. psych diagnostics, counseling, learning disability, health, community mental health and organizational behavior).

PO5. A general understanding about how knowledge of psychology can be applied to benefit the management and/or amendment of problems of mankind.

PO6. Capability to articulate ideas in appropriate manner, with scientific writing and authentic reporting.

PO7. Sensitivity towards diverse contexts, ethnic groups, minorities, marginalized groups and gender issues

PO8. Development of skills and attributes of empathy, team work, coordination, cooperation, conflict resolution, and congruence.

Course Title: Foundations of Psychology

Course Outcome:

The students will learn about the fundamental processes and core psychological concepts, models, classical theories, varied perspectives, and will be able to apply them in their own and in others lives. It will also give the learner a clear understanding of the concepts like intelligence, motivation, emotion and personality. It will develop critical analytical skills regarding these individualistic traits.

Course Title: Lab Work/ Psychological Testing

Course Outcome:

Students will be imparted a variety of skills to design and conduct psychological experiments ensuring controlled conditions, report writing and interpretations of the report.

Course Title: Basic Methodology and Statistics

Course Outcome:

The learners will be able to comprehend psychological data and can put them on appropriate scaling method. Moreover, they will be getting hold of essentials of psychological testing along with various kinds of tests implemented.

Course Title: Lab Work/ Psychological Testing

Course Outcome:

Students will be conferred an array of skills to carry out experiments in lab settings, design and conduct psychological experiments ensuring controlled conditions, report writing and interpretations of the report.

Course Title: Psychology of Social Behavior

Course Outcome:

By the end of the course, students will be able to summarize general information, through in-class discussion and assignments, pertaining to social psychological theories and an opportunity to apply social psychological theories to their lives. Critically evaluate research to understand and explain distressing human social behavior and relate social psychological concepts and theories to the context of historic and current world, national, and local events.

Course Title: Lab Work and Measurement of Social Behavior

Course Outcome:

Students will be exposed to the mixture of skills such as how to conduct a psychological experiment for understanding social behavior as well as psychological measurements and scientific reporting of the data.

Course Title: Abnormal Psychology

Course Outcome:

The students will be able to understand criteria of abnormality and one's own behavior and behavior of others. By applying the knowledge of assessment, diagnosis, classification system and DSM categories, the learners' will develop the sensitivity towards individual diversity and various approaches to the diagnosis and treatment of psychological disorders. Summarize clinical features of symptoms, etiology and valid and reliable treatment of diagnostic categories of mental health disorders.

Course Title: Screening and Assessment

Course Outcome:

At the end of the course, the students will be imparted a variety of proficiency to conduct the screening and assessment of psychological tools for examining developmental issues and disorders. The practicum of case study will let the students learn and execute an indepth investigation of a single person, group, event or community.

Course Title: Human Development

Course Outcome:

At the end of the course, the student will be able to develop an ability to identify the milestones in diverse domains of human developments across the child, adolescent and adulthood stages, understand the contributions of socio-cultural context toward shaping human development and acquire an ability to decipher key developmental challenges and issues.

Course Title: Positive Psychology

Course Outcome:

By the end of the course, the students will be able to understand the basic principles of positive psychology, the major areas within positive psychology that have received a considerable amount of attention, the use of positive psychology tools and techniques in own and in other's life. It will also ease the understanding of positive aspects of human behavior through the wisdom embedded in Indian scriptures like Vedas, Upanishadas, Shrimad Bhagavad Gita, Buddhist literature and folk tales.

Course Title: Lab Work/Survey/Field Visit

Course Outcome:

After completing this practicum, the student will have an understanding about how to frame research objectives and questions, plan, decide and execute appropriate methods of research, data analysis, interpretation and discussion of the findings.

Course Title: Problem Identification & Research Proposal Writing

Course Outcome:

After completing this practicum, the student will have a comprehensive understanding about carrying out research project, how to frame research objectives and questions, plan, decide and execute appropriate methods of research, and intended data analysis.

Course Title: Community and Health Psychology

Course Outcome:

At the end of the course the student will be able to recognize that individuals relate to their communities and the reciprocal effect of communities on individuals and will be able to understand and resolve community issues, analyze the data, and recommend interventions that

promote community wellness. Moreover, they will be able to use the psychological theories on health-related practices and will be able to examine persons' health history and describe and enact a positive, proactive attitude toward healthy living for oneself and others.

Course Title: Counseling Psychology

Course Outcome:

At the end of the paper, students will be able to understand how to establish rapport and use various approaches in counseling.

Course Title: Survey/Field Visit

Course Outcome:

After completing this practicum, the student will have an understanding about how to frame research objectives and questions, plan, decide and execute appropriate methods of research, data analysis, interpretation and discussion of the findings.

Course Title: Research Project

Course Outcome:

It will help the learner to critically reflect on, review the scientific basis for, and integrate what you have learned and accomplished as a psychology student and will prepare to explore the cultural, social, and ethical impact of psychological application on community and daily life

MA Psychology

PROGRAM OUTCOME

The learning outcomes that a student should be able to exhibit on completing of a master degree program in psychology are as follows:-

- PO1. The learner will be able to comprehend research data and methodology related to systems and theories.
- PO2. The students will learn about the cognitive processes such as intelligence, motivation, emotion and personality. They will also be able to understand and explain distressing human social behaviour and relate social psychological concept and theories to the context of historic and current world, national and local level.
- PO3. The course will enable to understand about the theories and models of Personality in different paradigm such as humanistic, Behaviouristic, existential and psychoanalytical aspects. In this connection students will also be able to understand motivation and emotion processes, models

and theories. More over biological aspects of psychological process, neurones system and neurotransmitters.

- PO4. The students will able to understand and explain models and theories of psychological assessment, pathological behaviour, human development and community processes.
- PO5. The students will enable to understand socio-emotional development in children, stresss and health aspects of human behaviour in connection with mind and body and search for positive aspects of human mind and behaviour, more over therapeutic intervention, it's models and theories.
- PO6. Development of skills and attributes of empathy, team work, co-ordination, co-operation, conflict resolution and congruence.

Sem-I Paper 1- Systems and Theories

course Outcome: The students will learn and understand various psychological frameworks, exploring how different theories explain behavior, and applying these perspectives to real-world scenarios. Students may also develop critical thinking skills, analyze the strengths and limitations of different approaches, and gain a comprehensive understanding of the historical and contemporary foundations of psychological systems.

Paper 2 - Cognitive Psychology

The students will able to understand cognitive aspects of human behavior. The course typically include basic understanding of key concepts such as attention, memory, language, decision-making and problem-solving. Students may also gain skills in critical thinking related to Cognitive Process of human behaviour.

Paper 3 Research Methodology

The students will be able to understand concept of measurement, general problems and sources of errors in Measurement. The students will also be able to comprehend the scientific approach of psychology, learn various research methods, research designs and ethical considerations in conducting research. The goal of this course is to equip learners with the tools needed to contribute meaningfully to academic or professional research.

Paper 4 Social Psychology

This course will enable students to learn and understand how individuals think, feel and behave in social situations. They will learn social processes and research methods in social psychology. The students will also be able to learn application of psychological principles to Real world

social issues and develop critical thinking skills and an appreciation for the impact of social factors on human behaviour.

Paper 5 Practical

This course includes one practical based on all papers in this semester.

At the end of this course Students will be imparted a variety of skills to design and conduct an experimental and non-experimental research in different areas of psychology

Semester-II

Paper -01 Psychology of Personality

Course outcome -The students will be able to understand concepts and nature of personality, traits and type,psychodynamic and psychosocial approaches of personality . Behaviouristic and social learning aspects of personality.Students will also be able to understand practical aspects of personality.

Paper -02, PSY 202 Motivation And Emotion

Course outcome-At the end of the course,the students will be develop An ability to identify the milestone in diverse domains of motivation and emotion across the nature and properties,and also theoretical framework of motivation and emotion.

Paper- 03, PSY 203 Advanced statistics

Course outcome -At the end of the course students will be able to develop an ability to understand the nature and concept of inferential statistics, analysis of group difference, exploring correlations, constructing and testing models of advanced statistics,

Paper -04, PSY 204 Biological Basis of Behaviour

Course outcome-The students will be able to understand nature and concept of Biopsychology,the nervous system -structure and function, sensation and Perception and also models and methods of Biopsychology.

Lab work and testing

Lab work outcome -the students will be exposed to the mixture of skills such as how to conduct psychological testing for understanding social behaviour as well as psychological measurements and scientific reporting of the data

Samester-3 Paper-1 Psychological assessment

At the end of this course student will be able to understand concept of psychological assessment and testing . they will be able to construct a good test and evaluate their psychometric properties they will also be able to administer psychological test in various settings.

Paper 2 Psychopathology

The student will be able to understand criteria of abnormality and one's own behaviour and behaviour of others. By applying the nature and theoretical approaches classification systems- DSM 5 and ICD 2. Anxiety disorder and schizophrenia spectrum disorder summarize the clinical features of symptoms, causes and treatment of diagnostic categories of mental health disorder.

Paper-3 Development psychology

At the end of this course student will be able to understand key theories and concepts in developmental psychology and develop an ability to apply developmental theories to real life situations and identify the milestones in diverse domains of human development across the life span, from infancy to old age. they will also be able to understand the knowledge of the role of genetics environment and culture in shaping development.

Paper 4 Counting psychology

At the end paper student will be able to understand the nature of counselling, job satisfaction, leadership and stress Student will able to establish report and use various approaches and counselling

Paper -5Lab work

At the end of this course students will be able to understand and use different psychological assessments and tests in different areas like clinical and community settings.

Semester 4th Paper 1 Positive psychology

By the end of the course the student will be able to understand the basic principle of the positive psychology it will also ease the understanding the positive aspect of human behaviour through the life satisfaction and happiness ,wisdom, hope and optimism aging education health work.

Paper 2 Psychotherapeutic intervention

by the end of the course the students will be able to understand the principles principles and goals of psychotherapy therapeutic techniques phenomenological and humanistic existential psychotherapy and gestalt therapy.

Paper 3 Stress health

At the end of the course the student will be able to understand the theories of stress. they will be able to use the psychological theories on health -related practices and will be able to examine person's health history.

Paper-4 Socio-emotional development in children

Student will be able to understand and regulate their emotions very well. they will understand the importance of social skill and be able to interact effectively with others they will be able to make their relationship better.

Lab work-paper 5

Student will be exposing the mixture of skills such as how to conduct psychological experiment and test for understanding person's behaviour as well as psychological measurements and scientific reporting of the data.

BA-SOCIOLOGY

PROGRAMME SPECIFIC OUTCOMES (PSOs):

Program Outcome (After 3 Years of Study)

- PO1. This course will introduce students to new concepts of Sociology discipline.
- PO2. These concepts will enhance the conceptual learning and understanding of the basic concepts used in Sociology.
- PO3. This course will contribute in enriching the vocabulary and scientific temperament of the students.
- PO4. The course is designed to incorporate all the key concepts of sociology which would enable the learner to develop keen insights to distinguish between the commonsense knowledge and Sociological knowledge.
- PO5. This course provides comprehensive understanding of Indian society.

Introduction to Basic Concepts of Sociology

Course Outcomes:

This paper will introduce students to new concepts of Sociology discipline. These concepts will enhance the conceptual learning and understanding of the basic concepts used in Sociology. This paper will contribute in enriching the vocabulary and scientific temperament of the students. The course is designed to incorporate all the key concepts of sociology which would enable the learner to develop keen insights to distinguish between the commonsense knowledge and Sociological knowledge.

Society in India: Structure, Organization & Change.

Course Outcomes:

This paper is designed in this manner, so that students are introduced to the concepts related to Indian Society. They are made familiar with the Indian Society, its linkages and continuity with past and present. It also gives insights to analyze contemporary Indian society. This paper provides comprehensive understanding of Indian society.

Writing skill development on topics of Contemporary Sociological Importance

Course Outcomes:

This is the practical paper introduced in the second semester of the certificate course in order to develop writing skills among the students of Sociology. This would enhance and inculcate the analytical skills among the students. The paper is designed to enrich the conceptual vocabulary of the students, such that they are equipped with the writing style in Sociology. This paper is presumably beneficial for the students who are interested in the field of Media, Journalism, Essay writer, Column writer, Psephology, Journalism.

Social Change and Social Movement in India

Course Outcomes:

This paper is designed in a manner, so that students are introduced to the concepts related to Social change and Social Movement. This course will introduce students to the dynamic aspect and dissension tendencies of society. The critical evaluation would enable students to come out with better suggestions, contributing in the cohesion of society.

Social Problems & Issues of Development in India

Course Outcomes:

The syllabus is designed to introduce students to the emerging social problems, the concept and issues of development in Indian Society. The course intends to focus upon the deviant and delinquent behaviour, issue of corruption and other disorganizational and structural problems of Indian Society. The endeavour of the course is to make learners aware about the social problems and developmental issues in the Indian Society.

Project on Sustainable Society

Course Outcomes:

The syllabus designed to introduce students to the emerging social problems and the concept and issues of development in Indian Society. The project work will engage students directly in practical knowledge about the conducting research project. This project work will help learners to know about the issue of sustainability and policies & programmes.

Classical Sociological Thought

Course Outcomes:

The course syllabus is designed to help students to know about the classical contributions of Pioneers of Sociology. The paper will focus upon the history of Sociology and the intellectual traditions originated during the crisis in Europe and the impact it had on the structures of society. The learner will gain theoretical as well as methodological knowledge about the subject.

Research Methodology in Social Sciences

Course Outcomes:

The course of Research Methodology in Social Sciences/Sociology is structured in a way that it makes student to understand and comprehend the research problems, research techniques and nevertheless course intends to develop objective as well as subjective enquiry into the areas of Sociological studies. The main purpose of the course is to develop scientific and humanistic approach towards the research work in the subject.

Practical Application of Research Methodology/Project Work

Course Outcomes:

Research Methodologies comprise important part in the course structure of Sociology, hence the course is designed in such a way that student will learn the basic and useful techniques of research which will be beneficial in exploring the research questions and formulation of Research Design. The student will learn how to construct schedules, questionnaire and applicability of other research methods.

Pioneers of Indian Sociology

Course Outcomes:

The course outline has been delineated in a manner that the student of Sociology is able to gather knowledge about the esteemed Indian Pioneers of Sociology, who largely used indigenous methodology to understand the Indian society and its complexities. The learner will be able to grasp information and knowledge about the approaches and theoretical framework adopted by the Indian Sociologists and simultaneously they will know about the History of Sociology in India and Sociological traditions.

Gender and Society

Course Outcomes:

This course is gender sensitive and is directed towards engaging students to learn and rethink about the gender issues. The course will introduce students to the core gender issue and will equip them to come with suggestions which would be directed towards gender equity.

Field Work/Case Study/ Project Work

Course Outcomes:

The syllabus is designed to introduce students to get themselves engaged in the field work and project work so that they are equipped with the practical knowledge about the field work and research project. This will be an empirical learning for those who aspire to become future Social Scientists.

BA-Philosophy

Programme Outcome (After 3 Years) :

The completion of the 3 years graduation of Religion Philosop programme in Philosophy will enable a student to:

PO1. Understand the broad ideas that are enshrined in the basic thinking of various centres of philosophy

PO2. Critically analyse the hypothesis, theories, techniques and definitions offered by philosophers

PO3. Understand many theories related to Philosophy of Religion, which will be helpful in solving many misconceptions related to Religion.

PO4. Utilize philosophy to understand social realities and problems and to come up with ideal solutions to them

PO5. Identify how deeply Philosophy is connected to other disciplines like Social Science, Political Science and Natural Sciences.

PO6. Understand various issues of Applied Philosophy which are very important and relevant in contemporary world.

PO7. Integrate their physical, mental and spiritual faculties so that the students can become healthier and more integrated members of the society and of the nation by the practice of Yoga.

PO8. Learn tools, techniques and skills regarding the research oriented activities by the study & practice of project work.

Programme Specific Outcome for 1st Year

By studying this course of one year, a student will be able to develop his/her understanding about classical Indian philosophy as well as Plato and Aristotle, the two leading thinkers of western philosophy and modern western philosophy. In this way, after one year of study, he/she would learn about both Indian and Western streams of Philosophy. Moreover, Study & practice of this course will provide a stressless and effortless life, expansion of consciousness, regulation of the nervous system etc.

Course Title: Indian Philosophy

Course outcomes:

By studying this course, a student will learn various treatise on Classical Indian Philosophy and enquiries into the different texts which laid the foundation for Indian Philosophy.

Course Title: Western Philosophy

Course outcomes:

In this course, a student will learn the various thinkers who shaped the form of Western Philosophy.

Course Title: Yoga

Course outcomes:

Study & practice of this course will provide a stressless and effortless life, expansion of consciousness, regulation of the nervous system etc.

Programme Specific Outcome for 2 nd Year:

By studying the course of one year, a student will be able to develop his/her understanding about Ethics (Indian & Western) and Logic. In this way, after one year of study, he/she will be able to understand the moral concepts, principles and logical reasoning of Indian and Western Logic .Moreover, Study & practice of Yoga will provide better stamina, clarity for thoughts, a sense of inner peace, calmness, and stability in the body, Discipline their thoughts and Improved concentration.

Course Title: Ethics (Indian and Western)

Course outcomes:

This course introduces the idea of Ethics and its relevance to society. In this paper a student studies some of the prominent theories related to Indian and Western Ethics.

Course Title: Yoga

Course outcomes:

Study & practice of this course will provide better stamina, clarity for thoughts, a sense of inner peace, calmness, and stability in the body, Discipline your thoughts and Improve concentration.

Programme Specific Outcome for 3rd Year:

By studying this one year course, a student will become aware of Indian and Western Philosophical Problems. He/She will develop an understanding of various epistemological and metaphysical concepts. He/She will understand many theories related to Philosophy of Religion, which will be helpful in solving many misconceptions related to Religion. Student will have a better understanding by studying various Social and Political concepts and theories. The student will learn various issues of Applied Philosophy which are very important in contemporary world. Moreover, study of Yoga will provide improved attention in studies, better stamina and co-ordination for sports and a heightened awareness and balanced attitude for social activity and by the study & practice of project work student would be able to learn tools, techniques and skills regarding the research oriented activities.

Course Title: Problems of Philosophy (Indian and Western)

Course outcomes:

By studying this course, a student will learn various Epistemological and Metaphysical problems and theories related to Indian & Western Philosophy.

Course Title: Applied Philosophy

Course outcomes:

By studying this course, a student will learn various issues of Applied Philosophy which are relevant in contemporary world.

Course Title: Research Project I

Course outcomes:

As the project works play important role in developing the essential attributes of research, by the end of this Course the student would be able to learn tools, techniques and skills regarding the research oriented activities under the continuous guidance of faculty members.

Course Title: Philosophy of Religion

Course outcomes:

By studying this course, a student will learn various philosophies and theories related to religion and their relevance.

Course Title: Socio-Political Philosophy

Course outcomes:

By studying this course, a student will understand Social and Political aspects of Philosophy especially in the context of Indian society.

Course Title: Yoga

Course outcomes:

Study & practice of this course will provide improved concentration powers, better stamina, harmonization and healing of body, mind and soul.

Course Title: Research Project II

Course outcomes:

As the project works play important role in developing the essential attributes of research, by the end of this Course the student would be able to learn tools, techniques and skills regarding the research oriented activities under the continuous guidance of faculty members.

BA-PHYSICAL EDUCATION

Course Title: Elements of Physical Education

Course Outcomes:

The physical education is very wide concept and this subject teaches about introduction and Sociological concept of Physical Education and this also teaches about historical development of physical education in India and other countries. It introduces a general concept of good health and wellness. This program will also help a student to promote healthy way of living and they will also be able to make fitness and health plan.

Course Title: FITNESS & YOGA

Course Outcomes:

Yogas very helpful in prevention of many diseases and students will learn about it. This subject deals with basic knowledge about and Aerobics and Gymnasium classes which will help students to excel in the fitness industry.

Course Title: Sports organization and Management

Course Outcomes:

This course is designed to give real time exposure to students in the area of organising an event/ sports. The students will also learn about store management, purchasing and budget making.

Course Title: Anatomy and Exercise Physiology

Course outcomes:

students can be able to understand human structure and function as well as effects of exercise on various human body systems.

Course Title: Sports Psychology and Recreational Activities

Course Outcomes:

students can be able to understand various aspects of psychology apply to sports person and how to organize sports and recreational activities.

Course Title: Athletic Injuries and Physiotherapy

Course Outcomes:

Students can be able to understand Athletic Injuries and Athletic Care and Rehabilitation.

Course Title: Kinesiology and Biomechanics in Sports

Course Outcomes-

students can be able to understand various aspects of Kinesiology and Biomechanics in Sports and able to apply in sports activities.

Course Title: Research Project

Course Outcomes:

CO1. Learn to Prepare Questionnaire.

CO2. Learn to write research report.

Course Title: Research Methods

Course Outcomes:

Students can be able to understand Research methods in Sports and Physical Education.

Course Title: Physical education for DIVYANG

Course Outcomes:

This subject will help the students to understand the needs of the disabled (DIVYANG) people and make them ready to tackle any situation which comes in front of them while dealing disabled people. This subject can also teach Inclusion in sports for adapted people

Course Title: Research and Sports

Course Outcomes:

Students can be able to understand Research methods in Sports and Physical Education.

Course Title: Research Project

Course outcomes:

It will help the learner to understand the basic problems of school going students related to sports and Physical Education and finding their solution with the help of analyzed data.

BA-Hindi Literature

GENERAL PROGRAMME OUTCOMES

- PO1. विद्यार्थियों को भारतीय ज्ञान परंपरा के अंतर्गत हिन्दी साहित्य एवं भाषा का आधारभूत ज्ञान प्राप्त होगा।
- PO2. साहित्य के मूलभूत स्वरूप, यथा विभिन्न विधाओं, हिन्दी के रोजगारपरक स्वरूप आदि की जानकारी प्राप्त होगी।
- PO3. विश्व की सर्वाधिक वैज्ञानिक भाषा अर्थात हिन्दी में रोजगार कौशल प्राप्त होगा।
- PO4. भाषा, साहित्य तथा संस्कृति की अन्तर्सम्बद्धता के प्रति विद्यार्थियों में समझ विकसित होगी।
- PO5. विद्यार्थियों में राष्ट्रीयता तथा नैतिक चरित्र की भावना का विकास होगा।
- PO6. कंप्यूटर, सिनेमा, अनुवाद आदि के माध्यम से विद्यार्थियों को नए समाज की चुनौतियों का सामना करने में सक्षम बनाने का प्रयास किया जाएगा।

PROGRAMME SPECIFIC OUTCOMES

- PSO1. बी. ए. प्रथम वर्ष प्रथम सेमेस्टर के 'हिन्दी काव्य' प्रश्नपत्र के अंतर्गत भारतीय ज्ञान परंपरा में हिन्दी साहित्य के विभिन्न कालों के प्रतिनिधि कवियों की कविताओं के विषय में जानकारी देना तथा हिन्दी काव्य के इतिहास की संक्षिप्त जानकारी देकर विद्यार्थियों को हिन्दी कविता के विकास क्रम से अवगत कराना।
- PSO2. बी.ए. प्रथम वर्ष द्वितीय सेमेस्टर के 'कार्यालयी हिन्दी और कम्प्यूटर' प्रश्नपत्र के अंतर्गत हिन्दी के विद्यार्थियों को कार्यालय के कार्यों की मूलभूत जानकारी प्रदान करना ताकि वे कार्यालय के समस्त कार्यों को सुगमतापूर्वक कर सकें एवं उन्हें कम्प्यूटर का मूलभूत ज्ञान देकर कम्प्यूटर पर हिन्दी में कार्य करने में सक्षम बनाना ताकि वे समुचित रोजगार प्राप्त कर सकें।
- PSO3. बी.ए. द्वितीय वर्ष तृतीय सेमेस्टर के 'हिन्दी गद्य' प्रश्नपत्र के अंतर्गत विद्यार्थियों को हिन्दी गद्य की सभी विधाओं का सम्यक ज्ञान देना तथा उन्हें हिन्दी के प्रतिनिधि उपन्यासकारों, कथाकारों, नाटककारों, एकांकीकारों, निबंधकारों एवं अन्य गद्य विधाओं के लेखकों के महत्वपूर्ण प्रदेय से परिचित कराना, ताकि विद्यार्थी इन सभी विधाओं से परिचित हो सकें और इस क्षेत्र में करियर बनाने के इच्छुक विद्यार्थी को इस हेतु तैयार करना।

PSO4. बी.ए. द्वितीय वर्ष चतुर्थ सेमेस्टर के 'हिन्दी अनुवाद' प्रश्नपत्र के अंतर्गत विद्यार्थियों को हिन्दी के साथ-साथ अंग्रेजी की प्रारंभिक जानकारी प्रदान करते हुए उन्हें वैश्विक प्रतिस्पर्धात्मक वातावरण के साथ सामंजस्य स्थापित करने में सक्षम बनाना तथा भारतीय संस्कृति और साहित्य के वैश्विक प्रचार प्रसार में सहायक बनाना और इस क्षेत्र में करियर बनाने के इच्छुक विद्यार्थी को इस हेतु तैयार करना।

PSO5. बी.ए. तृतीय वर्ष पंचम सेमेस्टर के प्रथम प्रश्नपत्र 'साहित्यशास्त्र और हिन्दी आलोचना' के अंतर्गत विद्यार्थी को साहित्यशास्त्र एवं आलोचना के अर्थ, महत्व और विषय-क्षेत्र से परिचित कराना तथा उन्हें हिन्दी आलोचना के रूप में भारतीय एवं पाश्चात्य काव्यशास्त्र के आधुनिक विकास के विविध रूपों और दिशाओं का साक्षात्कार कराना |

PSO6. बी.ए. तृतीय वर्ष पंचम सेमेस्टर के द्वितीय प्रश्नपत्र 'हिन्दी का राष्ट्रीय काव्य' के अंतर्गत हिन्दी साहित्य एवं सिनेमा की राष्ट्रीय काव्य चेतना से जुड़े कवियों की रचनाओं के माध्यम से विद्यार्थियों में राष्ट्र के प्रति अनुराग जाग्रत करना और उन्हें भारतीय संस्कृति की विशिष्टता और महानता के विविध पक्षों से अवगत कराना और इस क्षेत्र में करियर बनाने के इच्छुक विद्यार्थी को इस हेतु तैयार करना।

PSO7. बी.ए. तृतीय वर्ष षष्ठ सेमेस्टर के प्रथम प्रश्नपत्र 'भाषा विज्ञान, हिन्दी भाषा तथा देवनागरी लिपि' के अंतर्गत विद्यार्थियों को भाषा के अंगों, हिन्दी भाषा के उद्भव तथा विकास और देवनागरी लिपि के स्वरूप की जानकारी कराना एवं उन्हें हिन्दी की वैज्ञानिक एवं संवैधानिक स्थिति से परिचित कराना।

PSO8. बी.ए. तृतीय वर्ष षष्ठ सेमेस्टर के द्वितीय प्रश्नपत्र 'लोक साहित्य एवं लोक संस्कृति के अंतर्गत विद्यार्थियों को भारतीय संस्कृति में जनश्रुति से निर्मित साहित्य के महत्वपूर्ण योगदान से विद्यार्थियों को परिचित कराना तथा लोक संस्कृति के विकास क्रम से विद्यार्थियों को अवगत कराना।

कार्यालयी हिन्दी और कम्प्यूटर

Course outcomes:

हिन्दी के विद्यार्थियों को कार्यालय के कार्यों की मूलभूत जानकारी प्रदान करना ताकि वह कार्यालय के कार्यों को सुगमतापूर्वक कर सके एवं उन्हें कम्प्यूटर का मूलभूत ज्ञान देना तथा उन्हें कम्प्यूटर पर हिन्दी में कार्य करने में सक्षम बनाना ताकि वे कम्प्यूटर पर कार्य करने में सक्षम होकर रोजगार प्राप्त कर सकें।

हिन्दी गद्य

Course outcomes:

हिन्दी के विद्यार्थियों को हिन्दी गद्य की सभी विधाओं का सम्यक ज्ञान देना तथा उन्हें हिन्दी के प्रतिनिधि उपन्यासकारों, कथाकारों, नाटककारों एवं एकांकीकारों, निबंधकारों एवं अन्य गद्य विधाओं के लेखकों के महत्वपूर्ण प्रदेय से परिचित कराना, ताकि विद्यार्थी इन सभी विधाओं से परिचित हो सकें और इस क्षेत्र में करियर बनाने के इच्छुक विद्यार्थी इस हेतु तैयार हो सकें।

हिन्दी अनुवाद

Course outcomes:

विद्यार्थियों को हिन्दी के साथ साथ अंग्रेजी की प्रारंभिक जानकारी प्रदान करते हुये वैश्विक प्रतिस्पर्धात्मक वातावरण के साथ सामंजस्य स्थापित करने में सक्षम बनाना तथा भारतीय संस्कृति और साहित्य के प्रचार प्रसार में सहायक बनाना।

मौखिकी एवं परियोजना कार्य

Course outcomes:

विद्यार्थियों को हिन्दी के साथ साथ अंग्रेजी की प्रारंभिक जानकारी प्रदान करते हुये वैश्विक प्रतिस्पर्धात्मक वातावरण के साथ सामंजस्य स्थापित करने में सक्षम बनाना तथा भारतीय संस्कृति और साहित्य के प्रचार प्रसार में सहायक बनाना।

साहित्यशास्त्र और हिन्दी आलोचना

Course outcomes:

इस पाठ्यक्रम के अध्ययन से विद्यार्थी साहित्यशास्त्र एवं आलोचना के अर्थ, महत्व और उनके विषय - क्षेत्र से परिचित हो सकेंगे तथा वे हिन्दी आलोचना के रूप में भारतीय - एवं पाश्चात्य काव्यशास्त्र के आधुनिक विकास के विविध रूपों और दिशाओं का साक्षात्कार कर सकेंगे।

हिन्दी का राष्ट्रीय काव्य

Course outcomes:

हिन्दी की राष्ट्रीय काव्य चेतना से जुड़े कवियों की रचनाओं के माध्यम से विद्यार्थियों में राष्ट्र के प्रति अनुराग जाग्रत करना।

COURSE TITTE: भाषा विज्ञान, हिन्दी भाषा तथा देवनागरी लिपि

Course outcomes:

भाषा के अंगों, हिन्दी भाषा के उद्भव तथा विकास और देवनागरी लिपि के स्वरूप की जानकारी प्राप्त होगी। विद्यार्थियों को हिन्दी की वैज्ञानिक एवं वैधानिक स्थिति से परिचित कराना।

COURSE TITTE: लोक साहित्य एवं लोक संस्कृति

Course outcomes:

भारतीय संस्कृति में जनश्रुति से निर्मित साहित्य के महत्वपूर्ण योगदान से विद्यार्थियों को परिचित कराना तथा लोक संस्कृति के विकास से विद्यार्थियों को अवगत कराना।

COURSE TITTE: मौखिकी एवं परियोजना कार्य

Course outcomes:

भारतीय संस्कृति में जनश्रुति से निर्मित साहित्य के महत्वपूर्ण योगदान से विद्यार्थियों को परिचित कराना तथा लोक साहित्य एवं संस्कृति के संकलन, संरक्षण एवं संवर्धन हेतु जागरुक करना।

स्नातकोत्तर हिन्दी

स्नातकोत्तर हिन्दी प्रोग्राम आउटकम्स (P.O.)

अध्ययन के पश्चात विद्यार्थी-

PO1. हिन्दी साहित्य के इतिहास एवं नामकरण तथा विभिन्न कालों की परिस्थितियों से परिचित हो सकेंगे।

PO2. हिन्दी भाषा एवं देवनागरी लिपि की ऐतिहासिक पृष्ठभूमि, विशेषता तथा उपयोगिता से परिचित हो सकेंगे।

PO3-हिन्दी साहित्य के प्रमुख रचनाकारों एवं उनकी रचनाओं का वैशिष्ट्य समझते हुए उनकी प्रासंगिकता निर्धारित कर सकेंगे।

PO4-व्यावसायिक जीवन में अनुवाद एवं भाषा के व्याकरणिक ज्ञान आदि का सार्थक उपयोग कर सकेंगे।

PO5- हिन्दी साहित्य के अध्ययन प्रवृत्तियों को समझते हुए इसकी वर्तमान उपयोगिता प्रासंगिकता को निर्धारित कर सकेंगे

PO6- जीवन में भाषा और साहित्य के महत्त्व को निर्धारित एवं आत्मसात कर सकेंगे।

PO7- द्विवेदीयुगीन कविता में आख्यान के स्वरूप तथा प्रतिनिधि आख्यानमूलक काव्यकृतियों का काव्य वैशिष्ट्य समझ सकेंगे।

PO8- छायावादयुगीन कविता में आख्यान के स्वरूप तथा प्रतिनिधि आख्यानमूलक काव्यकृतियों का काव्य वैशिष्ट्य समझ सकेंगे।

PO9-छायावादोत्तर कविता में आख्यान के स्वरूप तथा प्रमुख प्रतिनिधि आख्यानमूलक काव्यकृतियों का काव्य वैशिष्ट्य समझ सकेंगे।

प्रथम सत्र, प्रथम प्रश्नपत्र, हिन्दी साहित्य का इतिहास

अध्ययन के पश्चात विद्यार्थी---हिन्दी साहित्य के इतिहास-लेखन की परस्परा समझ सकेंगे तथा काल-विभाजन एवं नामकरण का आधार निर्धारित कर पाएँगे।

- C01. हिन्दी साहित्य के इतिहास की विभिन्न तात्कालिक परिस्थितियों को समझते हुए उसके सापेक्ष रचनाओं की प्रवृत्तियां समझ पाएँगे ।
- C02. हिन्दी साहित्य के इतिहास के विभिन्न कालों (आदिकाल, भक्तिकाल, रीति काल, आधुनिक काल) से सम्बंधित प्रमुख साहित्यकारों तथा उनकी प्रतिनिधि रचनाओं की विशेषताएँ समझ सकेंगे।
- C03. हिन्दी साहित्य के इतिहास के विभिन्न कालों की रचनाधाराओं का सामान्य परिचय प्राप्त कर सकेंगे तथा उनकी संवेदनागत प्रवृत्तियां एवं कलात्मक विशेषताएँ समझ सकेंगे।
- C04. विभिन्न कालखण्डों की साहित्यिक विधाओं, विशेषतः आधुनिक काल में उत्पन्न एवं विकसित गद्य साहित्य की उत्पत्ति के कारण एवं उनका महत्व समझ सकेंगे।

स्नातकोत्तर हिन्दी, प्रथम सत्र, द्वितीय प्रश्नपत्र आदिकालीन हिन्दी काव्य

अध्ययन के पश्चात् विद्यार्थी-सिद्ध साहित्य की प्रमुख प्रवृत्तियां, विशेषताएँ तथा सिद्ध कवि सरहपाद का रचनात्मक वैशिष्ट्य समझ सकेंगे।

- C01. नाथ साहित्य की प्रमुख प्रवृत्तियाँ, विशेषताएँ तथा नाथ कवि गोरखनाथ का रचनात्मक वैशिष्ट्य समझ पाएँगे।
- C02. रासो काव्य के प्रमुख रचनाकार चन्द बरदाई का काव्य वैशिष्ट्य समझ पाएँगे ।
- C03. आदिकालीन हिन्दी साहित्य की भक्तिपरक रचना 'पदावली' तथा इसके रचनाकार विद्यापति का काव्य वैशिष्ट्य समझ पाएँगे।
- C04. खड़ी बोली हिन्दी के प्रथम कवि अमीर खुसरो के रचनात्मक वैशिष्ट्य एवं हिन्दी साहित्य में उनके मौलिक अवदान से परिचित हो सकेंगे।

स्नातकोत्तर हिन्दी, प्रथम सत्र, तृतीय प्रश्नपत्र -हिन्दी नाटक एवं एकांकी

अध्ययन के पश्चात् विद्यार्थी-हिन्दी साहित्य में नाटक एवं एकांकी विधा के उद्भव की पृष्ठभूमि तथा इनका विकासात्मक स्वरूप समझ सकेंगे ।

CO1. नाटक एवं एकांकी विधा के प्रमुख तत्वों के विषय में समझ सकेंगे।

CO2. स्वाधीनता आन्दोलन एवं उसके पश्चात के कालखण्ड में नाटक और एकांकी विधा का सामाजिक परिप्रेक्ष्य समझ सकेंगे।

CO3. हिन्दी साहित्य के प्रमुख नाटककारों एवं उनके प्रतिनिधि नाटकों का रचनात्मक वैशिष्ट्य समझ सकेंगे।

CO4. हिन्दी साहित्य के प्रमुख एकांकीकारों एवं उनकी प्रतिनिधि एकांकियों का रचनात्मक वैशिष्ट्य समझ सकेंगे।

स्नातकोत्तर हिन्दी, प्रथम सत्र, चतुर्थ प्रश्नपत्र-हिन्दी भाषा और देवनागरी लिपि

अध्ययन के पश्चात विद्यार्थी- भारोपीय भाषा परिवार के अन्तर्गत संस्कृत से लेकर हिन्दी तक की क्रमिक विकास-यात्रा समझ सकेंगे।

CO1. हिन्दी के भौगोलिक विस्तार के अन्तर्गत आने वाली इसकी प्रमुख उपभाषाओं एवं बोलियों की विशेषताएँ समझ सकेंगे।

CO2. हिन्दी की प्रमुख व्याकरणिक विशेषताएँ तथा इसकी भाषावैज्ञानिक संरचना समझ सकेंगे।

CO3. प्रयोजनमूलक हिन्दी, राजभाषा, राष्ट्रभाषा, संपर्कभाषा, संचारभाषा आदि का स्वरूप और महत्व समझ सकेंगे।

CO4. हिन्दी भाषा की लिपि 'देवनागरी' के इतिहास, विशेषताओं एवं वैज्ञानिक स्वरूप के विषय में जान सकेंगे।

स्नातकोत्तर हिन्दी, द्वितीय सत्र, प्रथम प्रश्नपत्र मध्यकालीन हिन्दी काव्य

अध्ययन के पश्चात विद्यार्थी- हिन्दी साहित्य में भक्ति काव्य की प्रमुख धाराओं का सामान्य परिचय प्राप्त कर सकेंगे।

CO1. ज्ञानमार्गी धारा के प्रतिनिधि कवि कबीर एवं प्रेममार्गी धारा के प्रतिनिधि कवि मलिक मोहम्मद जायसी की प्रमुख रचनाओं का वैशिष्ट्य समझ सकेंगे।

- C02. कृष्णाश्रयी सगुण भक्ति के प्रतिनिधि कवि मीराबाई और सूरदास तथा रामाश्रयी सगुण भक्ति के प्रतिनिधि कवि तुलसीदास का रचनात्मक वैशिष्ट्य समझ सकेंगे।
- C03. रीतिकालीन हिन्दी साहित्य की प्रमुख काव्यधाराओं की सामान्य विशेषताएँ समझ सकेंगे
- C04. महत्वपूर्ण रीतिकालीन कवि, बिहारी, घनानन्द एवं भूषण की प्रतिनिधि कविताओं का रचनात्मक वैशिष्ट्य समझ सकेंगे।

स्नातकोत्तर हिन्दी, द्वितीय सत्र, द्वितीय प्रश्नपत्र हिन्दी कथा साहित्य (उपन्यास एवं कहानी)

अध्ययन के पश्चात् विद्यार्थी - हिन्दी साहित्य में उपन्यास विधा के उद्भव एवं का संक्षिप्त परिचय प्राप्त कर सकेंगे।

- C01. प्रेमचन्द के प्रतिनिधि उपन्यास 'गोदान' के माध्यम से स्वतन्त्रतापूर्व भारतीय समाज के यथार्थ से परिचित हो सकेंगे।
- C02. श्रीलाल शुक्ल के प्रतिनिधि उपन्यास 'राग दरबारी' के माध्यम से स्वतंत्रता के बाद भारतीय समाज के यथार्थ से परिचित हो सकेंगे।
- C03. हिन्दी साहित्य में कहानी विधा के उद्भूत, विकास एवं महत्व का परिचय प्राप्त कर सकेंगे।
- C04. हिन्दी की प्रतिनिधि कहानियों के माध्यम से प्रेमचन्द पूर्व कहानी, प्रेमचन्दयुगीन कहानी तथा प्रेमचन्दोत्तर कहानी में अभिव्यक्त भारतीय समाज के यथार्थ एवं आदर्श से परिचित हो सकेंगे।

स्नातकोत्तर हिन्दी, द्वितीय सत्र, तृतीय प्रश्नपत्र-निबन्ध एवं स्फुट गद्य विधाएँ

अध्ययन के पश्चात् विद्यार्थी- हिन्दी साहित्य की प्रमुख कथेतर गद्य विधाओं का संक्षिप्त परिचय प्राप्त कर सकेंगे।

- CO1. शुक्लपूर्व, शुक्लयुगीन तथा शुक्लोत्तर प्रमुख हिन्दी निबंधकारों के प्रतिनिधि निबंधों का रचनात्मक वैशिष्ट्य एवं उनका युगीन सन्दर्भ समझ सकेंगे।
- CO2. प्रमुख स्वातंत्र्योत्तर हिन्दी निबंधकारों एवं व्यंग्य निबंधकार हरिशंकर परसाई के प्रतिनिधि निबंधों का रचनात्मक वैशिष्ट्य एवं उनका युगीन सन्दर्भ समझ पाएँगे।
- CO3. समकालीन हिन्दी साहित्य की प्रमुख कथेतर गद्य विधा 'आत्मकथा' के अंतर्गत प्रतिनिधि दलित साहित्यकार ओमप्रकाश वाल्मीकि की आत्मकथा 'जूठन' के माध्यम से भारतीय समाज के यथार्थ से परिचित हो सकेंगे।
- CO4. हिन्दी साहित्य की कथेतर गद्य विधा संस्मरण के अंतर्गत महादेवी वर्मा के संस्मरण-ग्रंथ 'पथ के साथी' का रचनात्मक वैशिष्ट्य समझ सकेंगे।

स्नातकोत्तर हिन्दी, द्वितीय सत्र, चतुर्थ प्रश्नपत्र-आधुनिक आख्यानमूलक काव्य

- CO1. आख्यान की अवधारणा तथा हिन्दी साहित्य में आख्यान की परम्परा के विषय में जान सकेंगे।
- CO2. आधुनिक हिन्दी साहित्य की प्रमुख आख्यानमूलक रचनाओं का स्वरूप समझ सकेंगे।

स्नातकोत्तर (हिन्दी) तृतीय सेमेस्टर प्रथम प्रश्न पत्र

अध्ययन के पश्चात विद्यार्थी-

- CO1. आधुनिक हिन्दी कविता की पृष्ठभूमि और विकास का परिचय प्राप्त कर सकेंगे।
- CO2. भारतेंदु युगीन कवियों एवं उनकी रचनाओं तथा प्रवृत्तियों से परिचित हो सकेंगे।
- CO3. द्विवेदी युगीन कवियों, उनके प्रतिनिधि रचनाओं एवं प्रवृत्तियों से परिचित हो सकेंगे।
- CO4. छायावाद युगीन कवियों, उनकी प्रतिनिधि रचनाओं के काव्य वैशिष्ट्य एवं मूल प्रवृत्तियों के विषय में जानकारी प्राप्त कर सकेंगे।

CO5. भारतेंदु युग से छायावाद पर्यंत प्रतिनिधि रचनाओं का विश्लेषण एवं मूल्यांकन कर सकेंगे।

स्नातकोत्तर (हिंदी) तृतीय सेमेस्टर, द्वितीय प्रश्न पत्र

अध्ययन के पश्चात विद्यार्थी

CO1- छायावादोत्तर हिंदी कविता की महत्वपूर्ण काव्य धाराओं (प्रगतिवाद, प्रयोगवाद, नई कविता, अकविता, समकालीन कविता आदि) की पृष्ठभूमि और अवधारणा समझ सकेंगे।

CO2- प्रमुख छायावादोत्तर हिंदी कवियों की प्रतिनिधि कविताओं के माध्यम से प्रगतिवादी हिंदी कविता का काव्य वैशिष्ट्य समझ सकेंगे।

CO3- प्रगतिवाद प्रयोगवाद नई कविता कविता एवं समकालीन कविता में तुलनात्मक अंतर कर सकेंगे।

CO4- प्रगतिवाद, प्रयोगवाद, नई कविता, अकविता, समकालीन कविता के क्रमिक उद्भव और विकास के क्रम को पहचान सकेंगे।

CO5- विभिन्न छायावादोत्तर हिंदी काव्य आंदोलनों के साहित्यिक अवदान का मूल्यांकन कर सकेंगे।

स्नातकोत्तर हिंदी (तृतीय सेमेस्टर) तृतीय प्रश्न पत्र

अध्ययन के पश्चात विद्यार्थी-

CO1- भारतीय काव्यशास्त्र की पृष्ठभूमि का परिचय प्राप्त कर सकेंगे।

CO2- भारतीय काव्यशास्त्र के विभिन्न सिद्धांतों को समझ सकेंगे।

CO3- पश्चात काव्यशास्त्र के विभिन्न सिद्धांतों को समझ सकेंगे।

CO4- समालोचना के उद्भव, विकास एवं वर्तमान स्वरूप को समझ सकेंगे।

CO5- भारतीय काव्यशास्त्र, पाश्चात्य काव्यशास्त्र एवं समालोचना के विभिन्न सिद्धांतों के हिंदी में उपयोग एवं महत्व से परिचित हो सकेंगे।

स्नातकोत्तर(हिंदी) तृतीय सेमेस्टर, चतुर्थ प्रश्न पत्र

अध्ययन के पश्चात विद्यार्थी-

- CO1- अनुवाद की सामाजिक सांस्कृतिक पृष्ठभूमि एवं भूमिका से परिचित हो सकेंगे।
- CO2- अनुवाद के विभिन्न सैद्धांतिक आयाम एवं उनकी अवधारणाओं से परिचित हो सकेंगे ।
- CO3-अनुवाद की प्रक्रिया, प्रकार, क्षेत्र एवं समस्याओं से परिचित हो सकेंगे।
- CO4- अनुवाद एवं तत्काल भाषांतरण के अर्थ, स्वरूप एवं प्रक्रिया से परिचित हो सकेंगे ।
- CO5-साहित्यिक अनुवाद, कार्यालय अनुवाद, मीडिया अनुवाद, वाणिज्यिक अनुवाद आदि से परिचित हो सकेंगे।

स्नातकोत्तर (हिंदी)तृतीय सेमेस्टर पंचम प्रश्न पत्र-परियोजना कार्य एवं साक्षात्कार

अध्ययन के पश्चात विद्यार्थी

- CO1- चयनित साहित्यकार का रचनात्मक वैशिष्ट्य समझ सकेंगे।
- CO2- साहित्यिक कृति का संवेदनात्मक एवं शिल्पगत वैशिष्ट्य समझ सकेंगे।
- CO3- चयनित साहित्यकार अथवा साहित्यिक कृति का विश्लेषणात्मक अध्ययन करके उसका मूल्यांकन प्रस्तुत कर सकेंगे।
- CO4- चयनित साहित्यकार अथवा साहित्यिक कृति की प्रासंगिकता निर्धारित कर सकेंगे।
- CO5-- चयनित विषय पर अध्ययन सामग्री का संकलन एवं उसका व्यवस्थित अध्ययन तथा मौखिक प्रस्तुति कर सकेंगे।
- CO6- शोध पूर्व अध्ययन का निर्धारित आधारभूत प्रारूप समझ सकेंगे ।

स्नातकोत्तर हिंदी चतुर्थ सेमेस्टर प्रथम प्रश्न पत्र-अस्मिता मूलक विमर्श

अध्ययन के पश्चात विद्यार्थी

- CO1- अस्मिता की अवधारणा, पृष्ठभूमि और सिद्धांत समझ सकेंगे।
- CO2- वैश्विक एवं भारतीय दृष्टि से अस्मिता की अवधारणा और उसका महत्व समझ सकेंगे।

CO3- स्त्री अस्मिता के संदर्भ में जेंडर की अवधारणा तथा भाषा एवं साहित्य से इसका संबंध समझ सकेंगे।

CO4- दलित अस्मिता के संदर्भ में प्रमुख दलित चिंतकों की दृष्टि में दलित चिंतन एवं साहित्य की अवधारणा समझ सकेंगे।

CO5- हाशिए की विभिन्न अस्मिताओं की अवधारणा एवं उनका स्वरूप समझ सकेंगे।

स्नातकोत्तर (हिंदी) चतुर्थ सेमेस्टर, द्वितीय प्रश्न पत्र-भारतीय साहित्य

अध्ययन के पश्चात विद्यार्थी-

CO1- भारतीयता की अवधारणा एवं भारतीयता का समाजशास्त्र समझ सकेंगे।

CO 2- ज्ञान की परंपरा में भारतीय भाषाओं के साहित्य का स्वरूप समझ सकेंगे।

CO 3- भारतीय साहित्य में अभिव्यक्त भारतीय मूल्यों को समझ सकेंगे।

CO4- भारतीय भाषाओं के प्रमुख कवियों के प्रतिनिधि काव्य कृतियों का काव्य वैशिष्ट्य समझ सकेंगे।

CO5- भारतीय भाषाओं के प्रमुख लेखकों की प्रतिनिधि गद्य कृतियों का भाषिक एवं संवेदनात्मक वशिस्थ्य समझ सकेंगे।

एम.ए.हिंदी चतुर्थ सेमेस्टर तृतीय प्रश्न पत्र-आधुनिक काव्य प्रगीत व मुक्तक परंपरा

अध्ययन के पश्चात विद्यार्थी

CO1 हिंदी साहित्य में विभिन्न काव्य रूपों का स्वरूप और उनकी पृष्ठभूमि समझ सकेंगे

CO2 हिंदी साहित्य में प्रगीत एवं मुक्तक काव्य की अवधारणा तथा परंपरा समझ सकेंगे

CO3 छायावाद युगीन प्रगट एवं मुक्तक का परंपरा के प्रमुख कवियों की काव्य वैशिष्ट्य समझ सकेंगे।

CO4 छायावादोत्तर प्रगीत एवं मुक्तक काव्य परंपरा के प्रमुख कवियों का काव्य वैशिष्ट्य समझ सकेंगे

CO5 छायावाद उत्तर काव्य के अंतर्गत हिंदी गज़ल का स्वरूप और का विशिष्ट समझ सकेंगे ।

एम. ए.हिंदी चतुर्थ सेमेस्टर चतुर्थ प्रश्न पत्र-कबीर

CO1.1 मध्यकालीन भक्ति आंदोलन में कबीर का महत्व समझ सकेंगे

CO2.2 कबीर का जीवन वृत्त एवं उनकी रचनाओं का प्रमाणिक पाठ निर्धारित कर पाएंगे

CO3.3 कबीर की दार्शनिक, धार्मिक और भक्ति पारक विचारधारा समझ सकेंगे

CO4.4 कबीर की सामाजिक दृष्टि और और उनकी लोकधर्मी परंपरा समझ सकेंगे

CO5.5 कबीर की रचनाओं का संवेदनात्मक एवं शिल्पगत वैशिष्ट्य समझ सकेंगे

स्नातकोत्तर (हिंदी) चतुर्थ सेमेस्टर पंचम प्रश्न पत्र-परियोजना कार्य एवं साक्षात्कार

अध्ययन के पश्चात विद्यार्थी

CO1- चयनित साहित्यकार का रचनात्मक वैशिष्ट्य समझ सकेंगे।

CO2- साहित्यिक कृति का संवेदनात्मक एवं शिल्पगत वैशिष्ट्य समझ सकेंगे।

CO3- चयनित साहित्यकार अथवा साहित्यिक कृति का विश्लेषणात्मक अध्ययन करके उसका मूल्यांकन प्रस्तुत कर सकेंगे।

CO4- चयनित साहित्यकार अथवा साहित्यिक कृति की प्रासंगिकता निर्धारित कर सकेंगे।

CO5-- चयनित विषय पर अध्ययन सामग्री का संकलन एवं उसका व्यवस्थित अध्ययन तथा मौखिक प्रस्तुति कर सकेंगे।

CO6- शोध पूर्व अध्ययन का निर्धारित आधारभूत प्रारूप समझ सकेंगे ।

BA-Economics

The Course is designed for the students pursuing graduation with Economics in regular mode. The programme aims to inculcate economic thinking among the students in economic decision making by comprehending economic theory. It aims to develop analytical view point in the students about the economic behaviour of people. The objective is to nurture among student a view point of a socially responsible and ethical aware citizen. The under graduate programme

will have 10 courses in 6 Semesters in 3 years. In the Fifth and the Sixth Semester 01 paper is given as optional. In the Fifth Semester it is proposed to have Dissertation/Project keeping in the spirit of the New Education Policy 2020 to introduce research at the graduation level. The structure of syllabus is based on the template of UGC proposed for the CBCS for undergraduates in Economic (Regular).

Programme Specific Outcomes(PSOs)-

Student after completing graduation will be able to learn

PSO 1: The behavioural patterns of different economic agents, advance theoretical issues

and their applications.

PSO 2: Understand the basic concept of microeconomics.

PSO 3: Understanding basic concepts of Macroeconomics.

PSO 4: Acquaint with some basic statistical methods to be applied in economics.

PSO 5: Acquaint with some basic mathematical methods to be applied in economics.

PSO 6: Acquaint with some basic theoretical concept of public finance.

PSO 7: Acquaint with the measurement of development with the help of theories along with the conceptual issues of poverty and inequalities with Indian perspectives.

PSO 8: Delineate the fiscal policies designed for developed and developing economics.

PSO 9: Facilitate the historical developments in the economic thoughts propounded by different schools. To familiarise students with the contribution of Indian Economic Thinkers and the relevance of their contribution.

PSO 10: Learn the basic concept of monetary analysis and financial marketing in Indian financial markets.

PSO 11: Learn the development issues of Indian economy.

PSO 12: Acquaint with some basic concept of environmental economics along with the solution of the environmental problems.

PSO 13: Learn the real and monetary sides of International economics.

PSO 14: Familiarise and acquaint with the characteristics of the economy of Uttar Pradesh.

PSO 15: To familiarize the students about issues of ethics in economic thinking and practice.

Title: Principle of Micro Economics

Course Outcome:

- CO1. The students are familiarized with basic concepts of microeconomics such as laws of demand and supply and elasticity etc so that he/she can comprehend them & familiarize with day today happenings.
- CO2. The students learn and understand the concepts of consumer behaviour like cardinal utility and ordinal utility analysis.
- CO3. The students learn and understand application of Indifference curve analysis in deriving demand curves, price effect, income effect and substitution effect.
- CO4. The students learn and understand the Theory of production- iso-quants, laws of returns to scale, law of variable proportion.
- CO5. The students learn, understand and compare between the Traditional and modern theory of cost.
- CO6. Demonstrate an understanding, usage and application of basic economic principles.
- CO7. Describe and apply the methods for analyzing consumer behavior through demand and supply, elasticity and marginal utility.
- CO8. To analyze the behavioral patterns of different economic agents regarding profit, price, cost etc.
- CO9. The decision-making process in different market situations such as perfect competition, monopolistic competition, monopoly and oligopoly markets.
- CO10. To deal with the advance theoretical issues and their practical applications of distribution theories.
- CO11. General equilibrium, economic efficiency and market failure.

Course Title: Macro Economics

Course Learning Outcomes

- CO1. Students are able to explain national income, comprehend calculation methods of national income, and concepts related to national income.
- CO2. Students are able to comprehend classical theory of employment and the Keynesian approach.
- CO3. Students are able to comprehend the concept of multiplier and it's working.
- CO4. Students are able to understand the relationship between inflation and employment.
- CO5. Students are able to relate factors determining national income such as consumption, saving and investment.

CO5. Students are able to analyze different phases of trade cycle, demonstrate various trade cycle theories, understand the impact of cyclical fluctuation on the growth of business, and lay policies to control trade cycle.

Course Title: History of Economic Thought:

Course outcomes:

- CO1. To learn and discuss, at an advanced undergraduate level, how the economic thought has evolved over time.
- CO2. Introducing students to the critical comparison of the contributions of the main schools of economics.
- CO3. To introduce & highlight before the students about Indian Economic Thinkers and their valuable contribution in the field of Economics.
- CO3. The classical, the marginalize revolution and its application to the theories of general and partial equilibrium, the current macroeconomic debate between the neo-classical and the Keynesian school.

Course Title: Money, Banking and Public Finance

Course outcomes:

- CO1. Understand simple concepts related with monetary economics and banking theory.
- CO2. Correlate and apply to current events & key models and concepts of monetary economics and banking theory.
- CO3. Appreciate the potential importance of monetary phenomenon in the economy.
- CO4. Understand the sources of finance both public and private
- CO5. Demonstrate the role of government to correct market failures and possible advantage of public financing.
- CO6. Understand the possible burden, benefits and distribution of various types of taxes among various classes of people, know the general trend and impact on general welfare and arouse them to suggest good and bad tax system.

Course Title: Economic Growth and Development

Course outcomes:

- CO1. Students should be able to comprehend the concept and meaning of economic growth and economic development.

CO2. Students should be able to distinguish between economic growth and economic development.

CO3. Students should be able to comprehend the issues and challenges in economic growth and development.

CO4. Students should be able to comprehend and explain the concept of poverty and human development & the related concepts.

CO5. Students should be familiar with the approaches to development.

CO6. Students should be able to understand and explain the factors and variable of economic development.

CO7. Students are able to understand how international factors facilitate and impede economic development.

Course Title: Environmental Economics

Course outcomes:

CO1. Students should be familiar with the basic concepts of ecology environment and economy.

CO2. Students to understand the solution to environmental problems- the command and control approach, market based methods, tax tradable pollution permit, etc, carbon trading

CO3. Students should be familiar with the concept of Sustainable development, environmental impact assessment CO 5: Global and local environmental concerns.

CO4. Students should be comprehend the Local Issues of Economic Bearing related to environment & development.

CO5. Students should realize the importance and influence of environment on the economy including the quality of manpower.

CO6. Students should realize the importance to make cleaner environment so as to achieve harmonious development.

CO7. Students should comprehend that environmental problem is not the problem of a single country or region but Page 11 of 22 a global problem/issue.

CO8. Demonstrate an awareness of economic growth problems, issues in globalisation, and provide grounding in major growth strategies and development.

Course Title: International Economics

Course outcomes:

CO1. Students should be able to understand and explain the concept, need, significance and scope of international economics.

CO2. Students should be familiar with the approaches of international trade.

CO3. Students should be familiar with and are able to explain the economic integration at the global level and the formation of groups.

CO4. Students are familiar with the international organizations and their objectives. Students should be able to analyse the importance and relevance of these international organizations

Course Title: Elementary Statistics based Project

Course Outcome:

CO1. Students to be familiar with the concepts in Statistics.

CO2. The concepts comprehended by the students shall be put to use in practice. Page 14 of 22

CO3. The students become familiar with the practical aspects of preparing a questionnaire/interview schedule and putting them in usage.

CO4. The information/data collected by the students should be analyzed with the help of Statistical Tools taught so as to derive inferences.

CO5. The students shall experience the practical aspect of the theory of statistics being taught in the class room environment.

CO6. The students are able to use statistical tools vis-à-vis given real life situation.

CO7. Practical work to be based on the topics covered in the contents given be

Course Title: Indian Economy & Economy of Uttar Pradesh:

Course Outcome :

CO1. Students should be able familiar with the basic characteristics of Indian economy,

CO2. Students should be able familiar with the it's potential on natural resources of Indian economy and the economy of Uttar Pradesh.

CO3. Students are able to understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development.

CO4. Students are able to develop an understanding about Uttar Pradesh , its demographic feature, natural resources and factors that cn stimulate its economic growth and development.

CO5. Students should be familiar with the rural development of Uttar Pradesh over the period of time.

CO6. Students should be familiar with the industrial development in India and in Uttar Pradesh.

Course Title: Agriculture Economics:

Course Outcome :

CO1. Students should be able to comprehend and explain the approaches to economic development with respect to dualistic development.

CO2. Students should be able to understand and explain the basics of agriculture economics.

CO3. Students should be familiar with labour issues in agriculture sector.

CO4. Students should be able to explain the significance of agriculture in the economic growth and economic development of an economy and in case of Indian Economy.

CO5. Students should be familiar with the institutional initiatives to strengthen the rural and agricultural development to achieve self sufficiency.

CO6. Students should be able to comprehend the role of credit in the development of agriculture in a country like India and the significance of institutional mechanism in this regard.

Course Title: Elementary Mathematics:

Course Outcome:

CO1. Students should be familiar with the basis concepts of mathematics and their application in economics.

CO2. Students are able to comprehend & explain the concepts of straight lines slope etc of mathematics and its application in economics.

CO3. Students should be able to understand basics of differential & its application in economics.

CO4. Students should be able to understand and work with matrices and determine if a given square matrix is invertible.

CO5. Learn about and work with vector spaces and subspaces.

CO6. Students are able to understand and work with the concepts of linear programming & graphic methods.

Course Title: Project/Dissertation:

Course outcomes:

CO1. The objective of introducing Dissertation/Project at the graduation level is to familiarise, acquaint and experience the local issues of economic implication or focused on economic wellbeing and behaviour of consumers/citizens.

CO2. It aims at enabling the students to use and apply the learned economic principles vis-a-vis local economic issues.

CO3. To enable them to learn preparation of questionnaire/interview schedule.

CO4. The Template/Format of the Dissertation/Project shall be developed by the respective Department.

CO5. The idea behind this is to develop economic thinking in the students through direct experience to real life.

M.A. Economics

SEMESTER I MICROECONOMICS – I

Objectives:

This paper analyses the economic behaviour of individuals, firms and markets. It is mainly concerned with the objective of equipping the students with the various aspects of consumer behaviour and demand analysis, production theory and behaviour costs, the theory of traditional markets and equilibrium of firms in modern markets.

MACROECONOMICS – I

Objectives:

The objective of this paper is to familiarize the students with the basic concepts, theories and approaches to understand the behaviour of macroeconomic aggregates and policies.

ECONOMICS OF GROWTH & DEVELOPMENT

Objectives:

This paper aims to introduce the students to know and understand the theoretical concepts of economic growth and development.

QUANTITATIVE METHODS

Objective:

The main objective of this paper is to train students to use the techniques of mathematical and statistical analysis which are applied to analyse economic problems.

RURAL DEVELOPMENT

Objectives:

The Programme designed to reveal the students about the rural life, the problem prevailing in rural area and their solutions. India is a land of villages; rural economy is the backbone of Indian economy. The rural development programme makes students to understand the socio-economic conditions of rural folk.

ECONOMICS OF INFRASTRUCTURE

Objectives:

The infrastructural facilities play a very important role in the socio-economic development of the country. Lack of adequate infrastructure has been held as a major obstacle to growth. The contents of this paper expose the students wholly to issues involved in development of infrastructure in developing countries like India. It is necessary to know costing and price of infrastructure services for students of economics. The Present course is theoretical showing economic aspects of development and investment in infrastructure.

SEMESTER II MICRECONOMICS – II

Objectives:

The objective of this paper is to make the students aware of the micro and macro theories of distribution, welfare economics, general equilibrium in closed and open economy system and analysis of economic behaviour under uncertainty.

MACRECONOMICS – II

Objectives:

The objective of this paper is to familiarize the students with the basic concepts, theories and approaches to understand the behaviour of macroeconomic aggregates and policies.

RESEARCH METHODOLOGY

Objectives:

The purpose of this paper is to familiarise students with the full research process. The major objective is to make the principles and procedures of research clear to the students and to prepare them to create a research proposal.

HISTORY OF ECONOMIC THOUGHT

Objectives:

To learn and discuss at an advanced post graduate level, how the economic thoughts has evolved over time. Comparative and critical study of economic main schools. To introduce the Indian Economic Thinkers and their contribution in economic policies of the country.

INTERNATIONAL REGIONAL ECONOMIC COOPERATION

Objectives:

The best way to study the level of economic development over a period of time is to analyse economic growth. It is natural therefore to find the analysis of regional economic growth to be the most popular field in the regional economics. Hence the main purpose of this course for the post graduate students of economics. It is of significance to understand functioning of regional economics and cooperation as well as regional development at the international level.

ECONOMICS OF EDUCATION & HEALTH

Objectives:

The application of microeconomic ideas to the fields of education and health is known as economics of education and health. Education and health are the two main factors that influence the conversion of a population into human capital. This paper offers an overview of the fundamental ideas behind these theories, which can be used to advance the nation's health and education systems.

SEMESTER III PUBLIC ECONOMICS

Objectives:

The main objective of this paper is to provide an understanding of concepts and theories of public Economics and to impart to students a thorough understanding of significance and implications of governments' activities for growth in a modern economy.

INDIAN ECONOMIC POLICY

Objectives:

The objective of this paper is to sharpen the analytical faculty of the student by highlighting an integrated approach to the functioning aspects of the Indian Economy. The emphasis of the paper is on the overall social, political and economic environment influencing policy decisions.

AGRICULTURE ECONOMICS

Objectives:

To provide detailed understanding regarding the issues in agricultural economics to those intending to specialize in this area. To familiarize students with policy issues that is relevant to agricultural economics and enables them to analyse these issues.

ADVANCED STATISTICS

Objectives:

This course will familiarize students with statistical theory and its application as foundations for data analysis.

INDIA'S FOREIGN TRADE

Objectives:

Nature and trends of India's foreign trade has been playing an important role in influencing the direction and pace of economic development in the country. Hence, it becomes imperative that students of Economics must be aware of the concept, features, composition, direction and volume of India's Foreign Trade. This knowledge would help them in analyzing the problems and possible solutions concerned with India's Foreign Trade.

INDUSTRIAL ECONOMICS & ENTREPRENEURSHIP

Objectives:

In the changing world scenario with globalisation and liberalisation more and more attention is being given to Industry and Entrepreneurship. The main aim of this course is to provide

knowledge to the students on the basic issues such as industrial and entrepreneurship development of India.

NATURAL RESOURCE ECONOMICS

Objectives:

The overall objective of this course is to provide students with conceptual insight, problem-solving skills, and general knowledge needed to better analyze and solve natural resource and environmental issue.

GENDER ECONOMICS

Objectives:

This course is motivated to familiarize students with the key theoretical concepts, approaches and views related to the role of women in the achievement of development.

SEMESTER IV FINANCIAL INSTITUTIONS & MARKETS

Objectives:

Keeping in mind the positive and significant role of financial institutions and markets in the process of growth and development, it becomes essential that the students of economics should be well aware of the theory and practice of different financial institutions and markets to understand and analyse the interconnections between the monetary forces and real forces, their developmental role and limitations in shaping and influencing the monetary and related policies both at the national and international levels.

INTERNATIONAL ECONOMICS

Objectives:

The course provides a deep understanding about the broad principles and theories which tend to govern the free flow of trade in goods, services and capital – both short term and long term – at the global level. Besides, preparing the students about the relevance and limitations of these principles, the contents of the paper spread over different modules, lay stress on the theory and nature of the subject which, in term, will greatly help them to examine the impact of the trade policies followed both at the national and international levels.

DEMOGRAPHY

Objectives:

The main objective of this paper is to make the students aware of the importance of population in economic development and the growth of population in a country.

ECONOMETRICS

Objectives:

The econometric theory helps in understanding applied economic relationships and provide meaningful and robust solutions to economic problems. It equips students with basic theory of Econometrics and relevant application of the methods. However, the course assumes that students have basic understanding of mathematical and statistical methods used in Economics.

LABOUR ECONOMICS

Objectives:

The main objective of this paper is to provide knowledge to the students of P.G. class the theoretical aspects well as empirical issues relating to the labour market, employment situation, Indian labour problems, wage policy, labour reforms and their role in economic development.

ENVIRONMENTAL ECONOMICS

Objectives:

Environment is a major issue in today's times. This paper helps to understand the nexus between environment and economic development.

विषय- संस्कृत (स्नातक स्तर)

Programme Outcomes (POs)

- PO1. विद्यार्थियों को लेखन, वाचन एवं अध्ययन की दृष्टि से भाषागत दक्षता प्राप्त होगी ।
- PO2. सहज एवं स्वाभाविक रूप से भाषागत पारंगता प्राप्त कर उनमें प्रभावशाली अभिव्यक्ति की क्षमता उत्पन्न होगी ।
- PO3. आत्मविश्वास से युक्त एवं नेतृत्व क्षमता के धारक होंगे ।
- PO5. नैतिक एवं चारित्रिक दृष्टि से मूल्यवान व्यक्तित्वधारी होकर भारतीयता के बोध के साथ वैश्विक नागरिक के रूप में भावी चुनौतियों का सामना करने में सक्षम होंगे ॥

Programme Specific Outcomes (PSOs)

- PSO1. सर्वाधिक वैज्ञानिक भाषा के रूप में संस्कृत भाषा के प्राचीन महत्व एवं उसकी वर्तमान प्रासंगिकता को जानने-समझने योग्य होंगे ।

- PSO2. संस्कृत साहित्य की विभिन्न विधाओं (गद्य, पद्य, नाटक, व्याकरण इत्यादि) से सुपरिचित होकर संस्कृत मर्मज्ञ बन सकेंगे।
- PSO3. संस्कृत व्याकरण के विभिन्न अंगों के ज्ञान द्वारा भाषा के शुद्ध अध्ययन, लेखन एवं उच्चारण माध्यम से अभिव्यक्ति कौशल का विकास होगा।
- PSO4. आयुर्वेद, वास्तुशास्त्र, ज्योतिष, नित्यनैमित्तिक कर्मकांड इत्यादि के माध्यम से जीविकोपार्जन के योग्य बनेंगे।
- PSO5. वैदिक एवं लौकिक संस्कृत साहित्य की समृद्धता एवं तद्भिहित नैतिकता व आध्यात्मिकता को अनुभूत कर भारतीय संस्कृति के महत्व को वैश्विक स्तर तक पहुंचाने में सक्षम होंगे।
- PSO6. धर्म-दर्शन, आचार-व्यवहार, नीति शास्त्र एवं भारतीय संस्कृति के मूल तत्वों को जानकर उत्तम चरित्रवान मानव एवं कुशल नागरिक बनेंगे।
- PSO7. समसामयिक समस्याओं के समाधान के रूप में संस्कृत साहित्य में निबद्ध सर्वांगीणता के प्रति शोधपरक दृष्टि का विकास होगा।

प्रश्न पत्र शीर्षक - संस्कृत पद्य साहित्य एवं व्याकरण

Course outcomes: अधिगम उपलब्धि-

विद्यार्थी संस्कृत साहित्य का सामान्य परिचय प्राप्त कर काव्य के विभिन्न भेदों से परिचित हो सकेंगे।

- CO1. वह संस्कृत पद्य साहित्य की सुगीतात्मकता का सौंदर्यबोध कर सकेंगे। उनमें काव्य में प्रयुक्त रस, छंद, अलंकारों को समझने की क्षमता विकसित होगी।
- CO2. पद्य में निहित सूक्तियों एवं सुभाषित वाक्यों के माध्यम से उनके नैतिक एवं चारित्रिक उन्नयन होगा। विद्यार्थियों के शब्दकोश में वृद्धि होने के साथ-साथ वह संस्कृत श्लोकों के शुद्ध और सस्वर उच्चारण के कौशल में निपुण बनेंगे।
- CO3. संस्कृत व्याकरण का सामान्य ज्ञान प्राप्त कर उसकी वैज्ञानिकता से सुपरिचित हो सकेंगे।
- CO4. संस्कृत वर्णों के शुद्ध उच्चारण कौशल का विकास होगा।
- CO5. स्वर एवं व्यंजन के मूल भेद को समझ कर पृथक अर्थावगमन की क्षमता उत्पन्न होगी। स्वर, व्यंजन एवं विसर्ग संधि का विशिष्ट ज्ञान एवं उनके अनुप्रयोग का कौशल विकसित होगा।

प्रश्न पत्र शीर्षक - संस्कृत गद्य साहित्य, अनुवाद एवं संगणक अनुप्रयोग

Course outcomes: अधिगम उपलब्धि-

- CO1. विद्यार्थी संस्कृत गद्य साहित्य का सामान्य ज्ञान प्राप्त कर, गद्य काव्य के भेदों सुपरिचित हो सकेंगे। संबंधित साहित्य के माध्यम से उनका नैतिक एवं चारित्रिक उत्कर्ष होगा।
- CO2. राष्ट्रभक्ति की भावना प्रबल होगी तथा उत्तम नागरिक बनेंगे।
- CO3. अनुवाद कौशल में वृद्धि होगी।
- CO4. संस्कृत गद्य के धाराप्रवाह एवं शुद्ध वाचन का कौशल विकसित होगा।
- CO5. विद्यार्थी संगणक का सामान्य ज्ञान प्राप्त कर, अधिगम क्षमता में वृद्धि हेतु इसका उपयोग कर सकने में सक्षम होंगे। E-content एवं डिजिटल लाइब्रेरी का उपभोग कर पाने में समर्थ होंगे।

- CO6. संस्कृत भाषा और साहित्य के नित-नूतन अन्वेषण को खोज पाने तथा उससे स्व-ज्ञान कोष में वृद्धि कर पाने योग्य होंगे ।
- CO7. संगणक के प्रयोग के माध्यम से संस्कृत ज्ञान के प्रचार प्रसार एवं आदान-प्रदान करने में कुशल बनेंगे।
- CO8. पारंपरिक एवं वैश्विक ज्ञान में सामंजस्य बनाकर ज्ञान की अभिवृद्धि करने एवं जीविकोपार्जन के नए मार्ग खोजने का कौशल विकसित होगा।

प्रश्न पत्र शीर्षक - संस्कृत नाटक एवं व्याकरण

Course outcomes: अधिगम उपलब्धि-

- CO1. संस्कृत नाट्य साहित्य को सामान्य रूप से समझ सकने में सक्षम होंगे ।
- CO2. नाटक की पारिभाषिक शब्दावली से सुपरिचित होंगे ।
- CO3. नाटक में प्रयुक्त रस, छंद एवं अलंकारों का सम्यक बोध कर सकेंगे ।
- CO4. संवाद एवं अभिनय कौशल में पारंगत होंगे । नवीन पदों के ज्ञान द्वारा उनके शब्दकोश में वृद्धि होगी ।
- CO5. भारतीय सांस्कृतिक तत्वों एवं मूल्यों को आत्मसात कर, भारतीयता के गर्व बोध से युक्त उत्तम नागरिक बनेंगे ।
- CO6. व्याकरण परक शब्दों की सिद्धि प्रक्रिया से परिचित हो सकेंगे ।
- CO7. व्याकरण शास्त्र के ज्ञान के माध्यम से शुद्ध वाक्य विन्यास कौशल का विकास हो सकेगा ।

प्रश्न पत्र शीर्षक - काव्यशास्त्र एवं संस्कृत लेखन कौशल

Course outcomes: अधिगम उपलब्धि-

- CO1. विद्यार्थी काव्यशास्त्र के उद्भव और विकास से सुपरिचित होकर काव्य शास्त्रीय तत्वों को समझने में सक्षम होंगे ।
- CO2. छंद भेद एवं उनके नियमों को समझने में समर्थ होंगे ।
- CO3. संस्कृत अलंकारों के ज्ञान के माध्यम से काव्य के सौंदर्य का बोध कर सकेंगे ।
- CO4. कल्पनाशीलता एवं रचनात्मक क्षमता का विकास होगा ।
- CO5. शब्द ज्ञानकोष में वृद्धि होगी ।
- CO6. व्याकरण शास्त्र के ज्ञान के माध्यम से शुद्ध वाक्य विन्यास कौशल का विकास हो सकेगा ।
- CO7. विद्यार्थियों में निबंध एवं अनुच्छेद लेखन क्षमता का विकास होगा ।
- CO8. संस्कृत पत्र लेखन कौशल में वृद्धि होगी ।
- CO9. अपठित अंश के माध्यम से विषय वस्तु अवबोध एवं अभिव्यक्ति का कौशल विकसित होगा ।

प्रश्न पत्र शीर्षक- प्रथम प्रश्न पत्र- वैदिक वाङ्मय एवं भारतीय दर्शन

Course outcomes: अधिगम उपलब्धि-

- CO1. वैदिक वाङ्मय एवं संस्कृति का ज्ञान प्राप्त कर सकेंगे ।

- CO2. वैदिक एवं औपनिषदिक संस्कृति के प्रति गौरव बोध होगा ।
- CO3. वेदोक्त संदेशों एवं मूल्यों के माध्यम से आचरण का उदात्तीकरण होगा ।
- CO4. उपनिषद् का सामान्य परिचय एवं निहित उपदेशों का अवबोध होगा । औपनिषदिक कर्म संयम भक्ति एवं त्यागमूलक संस्कृति से परिचित होंगे ।
- CO5. वैदिक एवं औपनिषदिक संस्कृति के प्रति गौरव बोध होगा वैदिक सूक्तों के माध्यम से विद्यार्थियों को तत्कालीन आध्यात्मिक
- CO6. सामाजिक एवं राष्ट्रीय परिदृश्य का निदर्शन होगा ।
- CO7. भारतीय दार्शनिक तत्वों का सामान्य ज्ञान प्राप्त होगा।
- CO8. दार्शनिक तत्वों में अनुस्यूत गूढार्थ बोध होगा।
- CO9. दार्शनिक तत्वों के प्रति विश्लेषणात्मक एवं तार्किक क्षमता का विकास होगा ।
- CO10. दर्शन में विद्यमान नैतिक एवं कल्याणपरक तथ्यों से आत्मोत्कर्ष की अभिप्रेरणा प्राप्त होगी।
- CO11. भारतीय दर्शन में निहित उद्देश्यों एवं ज्ञान को आचरण में समाहित करने हेतु अभिप्रेरित होंगे ।
- CO12. गीता ज्ञान रहस्य द्वारा सृष्टि कल्याणार्थ भाव विकसित होंगे।

प्रश्न पत्र शीर्षक - द्वितीय प्रश्न पत्र व्याकरण एवं भाषा विज्ञान

Course outcomes: अधिगम उपलब्धि-

- CO1. भाषा विज्ञान के उद्भव एवं विकास का सामान्य ज्ञान प्राप्त होगा।
- CO2. संस्कृत भाषा एवं व्याकरण की वैज्ञानिकता का अवबोध होगा।
- CO3. भाषा एवं भाषा विज्ञान की उपयोगिता एवं महत्व से सुपरिचित होंगे।
- CO4. ध्वनि के प्रारंभिक एवं वर्तमान स्वरूप एवं ध्वनि परिवर्तन के कारणों के प्रति विश्लेषणात्मक दृष्टि विकसित होगी।
- CO5. पदों की सिद्धि प्रक्रिया के माध्यम से शब्द निर्माण की वैज्ञानिकता से परिचित होंगे।
- CO6. संस्कृत भाषा के शुद्ध उच्चारण एवं लेखन का कौशल विकसित होगा।

प्रश्न पत्र शीर्षक - प्रथम प्रश्न पत्र आधुनिक संस्कृत साहित्य

Course outcomes: अधिगम उपलब्धि-

- CO1. आधुनिक संस्कृत कवियों से सुपरिचित होंगे।
- CO2. नवीन बिम्बविधानों एवं नवीन विषयों का ज्ञान प्राप्त होगा।
- CO3. आधुनिक संस्कृत-साहित्य के बाल-साहित्य से परिचित होते हुए संस्कृत-शिक्षण की सरलतम विधि के प्रति उन्मुख होंगे।
- CO4. आधुनिक संस्कृत-साहित्य में विद्यमान नैतिक एवं कल्याणपरक तथ्यों से आत्मोत्कर्ष की अभिप्रेरणा प्राप्त होगी।
- CO5. आधुनिक संस्कृत-साहित्य में निहित उद्देश्यों एवं ज्ञान को आचरण में समाहित करने हेतु अभिप्रेरित होंगे।

प्रश्न पत्र शीर्षक- द्वितीय प्रश्न पत्र- क (वैकल्पिक) - योग एवं प्राकृतिक चिकित्सा

Course outcomes: अधिगम उपलब्धि-

- CO1. भारतीय योग शास्त्र के प्राचीन एवं वैज्ञानिक ज्ञान से लाभान्वित होंगे।
- CO2. योग शास्त्र के मूलभूत सिद्धांतों को जानकर योग की महत्ता से परिचित होंगे।
- CO3. योग के वास्तविक स्वरूप के अवबोध द्वारा योग को जीवन में समाहित करने हेतु प्रेरित होंगे।
- CO4. योग के आसनों के सैद्धांतिक एवं व्यवहारिक दोनों पक्षों को समान रूप से सीख सकेंगे।
- CO5. योग एवं प्राकृतिक चिकित्सा के अनुप्रयोग द्वारा स्वस्थ समाज का निर्माण कर सकने में समर्थ होंगे।

प्रश्न पत्र शीर्षक - द्वितीय प्रश्न पत्र-ख (वैकल्पिक) आयुर्वेद एवं स्वास्थ्य विज्ञान

Course outcomes: अधिगम उपलब्धि-

- CO1. भारतीय प्राच्य ज्ञान की अद्भुत देन आयुर्वेद का सामान्य ज्ञान प्राप्त करेंगे।
- CO2. मानव स्वास्थ्य एवं रोग निवारण हेतु आयुर्वेद के मूलभूत सिद्धांतों से सुपरिचित होंगे।
- CO3. वर्तमान समय में आयुर्वेद की आवश्यकता एवं महत्व से अवगत होते हुए मानव कल्याणार्थ अनुप्रयोग हेतु प्रेरित होंगे।
- CO4. अष्टांग आयुर्वेद के ज्ञान द्वारा स्वस्थ जीवनशैली अपनाने हेतु अग्रसर होंगे।

प्रश्न पत्र शीर्षक- द्वितीय प्रश्न पत्र-ग (वैकल्पिक)- भारतीय वास्तुशास्त्र

Course outcomes: अधिगम उपलब्धि-

- CO1. भारतीय वास्तु शास्त्र का सामान्य परिचय प्राप्त कर सकेंगे।
- CO2. भारतीय प्राचीन ज्ञान धरोहर को जानने समझने की जिज्ञासा उत्पन्न होगी।
- CO3. वास्तु शास्त्र के महत्व एवं वर्तमान उपयोगिता से परिचित होंगे।
- CO4. वास्तुशास्त्र के मूलभूत सिद्धांतों के ज्ञान द्वारा उनके अनुप्रयोग का कौशल विकसित होगा।

प्रश्न पत्र शीर्षक- द्वितीय प्रश्न पत्र-घ (वैकल्पिक)- ज्योतिष शास्त्र के मूलभूत सिद्धांत

Course outcomes: अधिगम उपलब्धि-

- CO1. भारतीय प्राच्य ज्ञान के प्रति अभिरुचि उत्पन्न होगी।
- CO2. भारतीय ज्योतिष शास्त्र का सामान्य ज्ञान प्राप्त कर सकेंगे।
- CO3. ज्योतिष के विभिन्न सिद्धांतों के ज्ञान के माध्यम से विश्लेषण क्षमता जागृत होगी।
- CO4. पंचांग अवलोकन एवं निर्माण कौशल का विकास होगा।

प्रश्न पत्र शीर्षक- द्वितीय प्रश्न पत्र-ड (वैकल्पिक) नित्य नैमित्तिक - अनुष्ठान

Course outcomes: अधिगम उपलब्धि-

- CO1. विद्यार्थी भारतीय पारंपरिक कर्मकांड एवं सांस्कृतिक मूल्यों से परिचित होंगे।
- CO2. नित्य नैमित्तिक अनुष्ठान विधि को जानकर जीवन को नियमबद्ध एवं आचरणशील बनाने में समर्थ होंगे।
- CO3. भारतीय कर्मकांड के प्रामाणिक शास्त्रीय रूप से परिचित होकर उसकी व्यवहारिक उपयोगिता जानने योग्य बनेंगे।
- CO4. सामान्य अनुष्ठान संपन्न कराने योग्य कुशल और पौरोहित्य कर्म विशारद बनेंगे।
- CO5. आत्मनिर्भर भारत की संकल्पना को साकार करने में सक्षम एवं आत्मनिर्भर बनेंगे।

Course Outcomes (Urdu)

B.A. 1st Year (Semester First).

- B.A.(Urdu) CO1:** To Familiarize with Urdu language and Knowledge of language.
- B.A.(Urdu) CO2:** To provide knowledge of different sources and origine of Indian languages so that the unity of languages can be found.
- B.A.(Urdu) CO3:** To Familiarize with the different theories of the birth of Urdu language.
- B.A. (Urdu) CO4:** To familiarize with the relationship of Urdu language with different Indian languages and their origin and usage.
- B.A.(Urdu) CO5:** To enlighten about the Urdu poets and literature promoted in different schools and canters.
- B.A.(Urdu) CO6:** To familiarize with the literature that developed under the influence of major literary movements and trends.
- B.A.(Urdu) CO7:** To Introduce Important Urdu poetry and prose genres.
- B.A.(Urdu) CO8:** To provide basic knowledge of Urdu rules and grammar.
- B.A.(Urdu) CO9:** To acquaint with knowledge and innovation.
- B.A.(Urdu) CO10:** To familiarize with the rules and regulations of Urdu letter writing, essay writing and application writing.

B.A. 1st Year (Semester Second).

- B.A.(Urdu) CO1:** To provide knowledge about the importance and usefulness of Urdu language in the present era.
- B.A(Urdu) CO2:** To Introduce the benefits of learning compute through the medium of Urdu language.
- B.A(Urdu) CO3:** To Impart basic computer knowledge.

B.A(Urdu) CO4: To Introduce practical experience and learning method of computer through Urdu.

B.A(Urdu) CO5:To provide basic computer knowledge In Urdu language so that employment opportunities can be obtained.

B.A(Urdu) CO6:To familiarize with various and useful websites of Urdu through computer.

B.A(Urdu) CO7:To impart computer skills by imparting basic knowledge.

B.A(Urdu) CO8:To Introduce the modern benefits of computers.

B.A. 2nd Year (Semester Third).

B.A(Urdu) CO1: To Journalism and Translation is an art and students should be introduced to this art in view of contemporary requirements.

B.A(Urdu) CO2: Translation acts as a bridge between two languages. Though translation we get to know the knowledge and literary treasures of other languages. Therefore, students have to be guided in this field.

B.A(Urdu) CO3: What is the art of translation? What is its definition? Students should be exposed to this.

B.A(Urdu) CO4:Be informed about the basics of journalism and translation as well as its types and rules and regulation.

B.A(Urdu) CO5:Students are introduced to contemporary language through translation. They have to develop the ability to write and speak in other languages.

B.A(Urdu) CO6:What is the usefulness of journalism and translation In any language? What are its objectives? Therefore, the possibilities and objectives of this field have to be enlightened.

B.A(Urdu) CO7:Especially providing practical experience and lessons In English to Urdu, Urdu to English, and similarly Hindi to Urdu, Urdu to Hindi translation. So that they can use it in practical life.

B.A(Urdu) CO8: The utility of journalism and translation has been established throughout the ages and is also an important source of employment. Therefore, it is intended to train and guide students from this point of view.

B.A. 2nd Year (Semester Four).

B.A(Urdu) CO1:Short Story: Meaning and its introduction.

B.A.(Urdu) CO2:To acquaint the students with the Eastern and Western tradition of fiction writing.

B.A.(Urdu) CO3:To acquaint with the life and literary services of important Urdu fiction writers.

B.A.(Urdu) CO4:To acquaint with the literacy of the fiction included in this curriculum the method of its analysis and critical study and to encourage the presentation of a model of practical criticism.

B.A.(Urdu) CO5:To Introduce the meaning connotation and types of drama with different components.

B.A.(Urdu) CO6:To acquaint with the tradition of drama in India apart from the western tradition.

B.A.(Urdu) CO7:To Introduce the tradition of drama in Urdu.

B.A.(Urdu) CO8:A study of important Urdu dramatists along with their lives.

B.A.(Urdu) CO9:To acquaint with the themes of the dramas included in this syllabus, their technical merits and demerits and also to develop the skills of analysis and criticism.

B.A. 3rd Year (Semester 5th Paper I).

B.A.(Urdu) CO1:To introduce the gender status of Ghazal.

B.A.(Urdu) CO2:To familiarize the Persian tradition of Ghazal.

B.A.(Urdu) CO3:To familiarize with the tradition of Urdu Ghazal.

B.A.(Urdu) CO4:To bring to light the universal popularity of Ghazal.

B.A.(Urdu) CO5:Ghazal has played an important role in creating harmony and unity and consensus among the people in India's freedom struggle , so make students aware of the historical role of Ghazal by exposing them to their realities.

B.A.(Urdu) CO6:To Inform about the ancient history of Urdu poetry with Urdu Ghazal.

B.A.(Urdu) CO7:To make familiar with the gender difference of Ghazal and poem.

B.A.(Urdu) CO8:To enlighten the tradition of Urdu poetry.

B.A.(Urdu) CO9:To acquaint the students with the poetry of different periods and poets of different places and the theme and artistic and intellectual qualities of their poems.

B.A.(Urdu) CO10:Urdu poetry has played an important role in the freedom struggle with public awareness. Apart from this, It has also played a significant role in promoting national unity. Through this paper, students will be aware of the historical role of the poem and their roots of national unity will be strong and they will be able and they will be able to play their role in the development of the country.

B.A. 3rd Year (Semester 5th Paper II).

B.A.(Urdu) CO1:Classical genres of Urdu will be studied.

B.A.(Urdu) CO2:Qaseedah is the oldest form of Arabic poetry. Students are to be thoroughly familiar with the genre of poetry.

B.A.(Urdu) CO3: Apart from the art and structure of qasida, to familiarize with its tradition in Arabic-Persian and especially in Urdu.

B.A.(Urdu) CO4: Mursiua is also the oldest form of speech in Urdu. To provide knowledge of this genre to children.

B.A.(Urdu) CO5: To introduce the art of mourning and its evolution from era to era.

B.A.(Urdu) CO6: To bring light the personality and speech of the important Urdu elegiac writers and to point out its moral value and the Indian elements present in it.

B.A.(Urdu) CO7: Masnavi is also popular genre of Urdu speech to introduce students to it.

B.A.(Urdu) CO8: To highlight the gender and artistic importance of Masnavi and to introduce its tradition in Urdu.

B.A.(Urdu) CO9: To acquaint the students with the life of the important authors of Urdu Masnavi and the virtues of their life and their words and the moral and social aspects hidden In them so that they can understand the Indian power of the past through Urdu Masnavi.

B.A. 3rd Year (Semester 6th Paper I)

B.A.(Urdu) CO1: To expose the students to the gender status of the novel.

B.A.(Urdu) CO2: Comparison with other genres of fiction.

B.A.(Urdu) CO3: To familiarize with the tradition of the novel.

B.A.(Urdu) CO4: The Urdu novel has wrapped up the Indian civilization and culture very beautifully, so the purpose of this paper is to expose the students to this civilization and culture.

B.A.(Urdu) CO5: Urdu novel has also played an important role in our freedom movement. Therefore, it is necessary to familiarize the students with this character of the novel.

B.A.(Urdu) CO6: The novel contains all the facts of our life, therefore, through the novel, students should develop the skills of life science so that they can be useful to the society.

B.A. 3rd Year (Semester 6th Paper II)

B.A.(Urdu) CO1: Indian civilization is the oldest civilization in the world. To expose students to Indian civilization and culture.

B.A.(Urdu) CO2: To introduce students to the living elements of Indian civilization and culture in Urdu language.

B.A.(Urdu) CO3: To inform about the hidden Indian civilization and culture In Urdu poetry.

B.A.(Urdu) CO4: To inform about the current elements of Indian civilization and culture in Urdu prose especially stories, anecdote, stories and novels.

B.A. 3rd Year (Semester 6th Paper II Optional)

B.A.(Urdu) CO1:To provide students with complete awareness about Mirza Ghalib.

B.A.(Urdu) CO2:To enlighten the position and status of Mirza Ghalib.

B.A.(Urdu) CO3:To familiarize with the prose of Mirza Ghalib, especially the epistle.

B.A.(Urdu) CO4:Recapturing India's Civilization with Reference to Mirza Ghalib's Literature.

M.A. First Year First Sem. (Ist paper)

M.A.(Urdu) CO1:The development of Urdu in the Deccan took place in different period: Bahmani period, Qutub Shahi period, Adil Shahi period, so the students should be introducing them to different periods.

M.A.(Urdu) CO2:To expose students to the evolution of Urdu poetry and Urdu prose In Noth India.

M.A.(Urdu) CO3:To enlighten the students about the distinctions of Ghazal singing In Dabistane Delhi and Dabistane Lucknow.

M.A.(Urdu) CO4:To Introduce important movements and their services.

M.A.(Urdu) CO5:Delhi College and Fort William College have played an important role in the development of Urdu In India, thus exposing the students to their literary services.

M.A.(Urdu) CO6:Different movements came in to being in different eras like Aligarh Movement, Progressive Movement, Circle of Arbabe Zouk and Urdu literature, Modernism, Post Modernism and Urdu background of these movements and their over all services.

M.A. Ist Year Ist Sem.(IInd paper)

M.A.(Urdu) CO1:To enlighten the students about the meaning of ghazal and the significance of determining its rhythm, rhyme and radif.

M.A.(Urdu) CO2: To enlighten the students with the art of ghazal, distinctive elements, brevity and metaphorical style.

M.A.(Urdu) CO3: Themes of Ghazal: To introduce students to the journey from the concept of love and mysticism to thematic diversity.

M.A.(Urdu) CO4: To introduce the students to the ghazals of Quli Qutb Shah, Wali Daccani and Siraj Aurangabadi while exposing the students to the early efforts of Urdu Ghazal.

M.A.(Urdu) CO5: To expose students to the poetry of Deccani poets.

M.A.(Urdu) CO6: To acquaint the students with the background of the Deccan, Iranian and Indian culture on North Indian ghazal poetry.

M.A.(Urdu) CO7: To acquaint the students with the beginning and evolution of Urdu Ghazal in North India.

M.A.(Urdu) CO8: To acquaint the students with the poetics of classical ghazal, the common elements of ghazal poetry of Delhi and Lucknow and the definition of poetry.

M.A.(Urdu) CO9: To introduce students to the architect of modern ghazal, the poetics of modern ghazal.

M.A. Ist Year Ist Sem. (IIIrd paper)

M.A.(Urdu) CO1: To acquaint students with the definition of fiction and its art.

M.A.(Urdu) CO2: To acquaint students with the origin and evolution of fiction.

M.A.(Urdu) CO3: To acquaint the students with the progressive trend in Urdu fiction.

M.A. Ist Year Ist Sem. (4th paper)

M.A.(Urdu) CO1: To acquaint the students with the art of biography and its beginning and evolution.

M.A.(Urdu) CO2: To introduce important biographers of Urdu and their biographies.

M.A.(Urdu) CO3: To acquaint students with the art of autobiography and its beginnings and evolution.

M.A.(Urdu) CO4: To acquaint the students with the tradition of autobiography in Urdu.

M.A.(Urdu) CO5: To expose the students to important autobiographies of Urdu.

M.A.(Urdu) CO6: To acquaint the students with writing in Urdu and its beginning and evolution.

M.A.(Urdu) CO7: To expose the students to important Urdu essayists and their subjects.

M.A.(Urdu) CO8: To acquaint the students with the art of calligraphy and its beginnings and evolution and to familiarize the students with the important calligraphy writers and their calligraphy.

M.A. Ist Year IInd Seme. (Ist paper)

M.A.(Urdu) CO1: To acquaint the students with the art of Urdu epistle writing and its beginning and evolution, and to acquaint the students with the life and services of important Urdu epistle writers.

M.A.(Urdu) CO2: To acquaint the students with the important Urdu sketchers and their sketching while exposing the students to the art of Urdu sketching and its beginning and evolution.

M.A.(Urdu) CO3: To introduce the students to the important Urdu travel writers and their travelogues by exposing the students to the art of Urdu travelogue and its evolution.

M.A.(Urdu) CO4: To acquaint the students with the art of Urdu reportage and its beginning and evolution, and to acquaint the students with the important Urdu reportage writers and their reports.

M.A. Ist Year IInd Sem. (IInd paper)

M.A.(Urdu) CO1: To introducing students to the art of Urdu novel and its beginning, evolution and compositional elements, to acquaint the students with its gender characteristics.

M.A.(Urdu) CO2: To acquaint the students with the life and services of important Urdu novelists.

M.A.(Urdu) CO3: To expose the students to the first novelist of Urdu.

M.A. Ist Year IInd Sem. (III paper)

M.A.(Urdu) CO1: To introduce students to the art of Masnavi and its meaning.

M.A.(Urdu) CO2: To explain the poetry of Musnawi, the literary significance of Musnawi.

M.A.(Urdu) CO3: To acquaint the students with the types of Masnawi.

M.A. Ist Year IInd Sem. (4th paper)

M.A.(Urdu) CO1: To enlighten the students about Ghalib's era, Ghalib's biography, Ghalib's contemporaries, Ghalib's prose, Ghalib's poetry and their individual characteristics.

M.A. IInd Year IIIrd Sem. (Ist paper)

M.A.(Urdu) CO1: To acquaint the students with the history of Urdu language and provide its linguistic information.

M.A.(Urdu) CO2: To acquaint the students with different theories about the origin of Urdu.

M.A.(Urdu) CO3: To acquaint the students with the origin and evolution of Urdu in the Deccan so that the students can understand the development of Urdu in detail.

M.A.(Urdu) CO4: There are various dynasties in the Deccan and many poets and writers have passed through them, so the poets who passed through these kingdoms and whose literary services have contributed immensely to the promotion and publication of Urdu should be enlightened to the students.

M.A. IInd Year IIIrd Sem. (IIInd paper)

M.A.(Urdu) CO1: To make students aware of the beginning and end of a poem in Urdu.

M.A.(Urdu) CO2: To acquaint the students with the gender identity of the poem introduced by the important poets of Urdu and their poetry.

M.A.(Urdu) CO3: To acquaint the students with the life and services of dramatists included in the syllabus while enlightening the students about the art of drama, types of drama and the beginning and evolution of drama.

M.A. IInd Year IIIrd Sem. (IIIrd paper)

M.A.(Urdu) CO1: To acquaint students with the art of storytelling and its tradition.

M.A.(Urdu) CO2: There are many supernatural elements in the stories, the reader of which is somewhere in a moment and somewhere in a moment, therefore, through these stories, students should be introduced to the environment and atmosphere, civilization and society, civilization and culture of different countries.

M.A.(Urdu) CO3: To acquaint the students with important Urdu narrators and their narrators.

M.A. IInd Year IIIrd Sem. (4th paper)

M.A.(Urdu) CO1: To acquaint the students with Naat Goi in Urdu and its tradition and evolution.

M.A.(Urdu) CO2: To familiarize with the important orators of Urdu and their orators.

M.A.(Urdu) CO3: To acquaint the students with the art of qasida and its beginning and evolution and important qasida poets and their qasida poets.

M.A. IInd Year 4th Sem. (I paper Elective Paper)

M.A.(Urdu) CO1: To acquaint the students with the definition of criticism, its importance and necessity.

M.A.(Urdu) CO2: To introduce the critical importance of mentions.

M.A.(Urdu) CO3: To acquaint students with the Eastern concept of criticism, Western concept of criticism.

M.A.(Urdu) CO4: To acquaint students with various schools of criticism and their major critics.

M.A.(Urdu) CO5: To acquaint the students with the meaning of research and its importance and necessity and its tradition.

M.A.(Urdu) CO6: To acquaint the students with the relationship between research and criticism and different types of research and its principles, research methods and important critics of Urdu.

M.A. IInd Year 4th Sem. (II nd paper)

M.A.(Urdu) CO1: To acquaint the students with the art, meaning, types and compositional components of the dirge.

M.A.(Urdu) CO2: Ethical and social background of Urdu elegy, evolution of elegy and important Urdu elegy writers and their elegies.

M.A. IInd Year 4th Sem. (III paper)

M.A.(Urdu) CO1: To acquaint the students with the art of calligraphy, its origin and evolution, and the important writers of poetry and their poetry.

M.A.(Urdu) CO2: To acquaint the students with the art of rubai, its origin and evolution and its gender characteristics, the important rubai poets of Urdu and their rubai.

M.A.(Urdu) CO3: To acquaint the students with the art, origin and evolution, artistic characteristics, social and cultural background of the city of Chaos.

M.A.(Urdu) CO4: To acquaint the students with the art of embroidery, its origin and evolution and its tradition, the technical characteristics of embroidery.

M.A.(Urdu) CO5: To introduce students to Rekhti art, history, importance and Rekhti poets.

M.A.(Urdu) CO6: To enlighten the students about the art, origin and evolution of Bara Masa and Geet and their gender characteristics.

M.A.(Urdu) CO7: To acquaint the students with the art of poem, sonnet, haiku, troyale, Mahiya and its origin and evolution.

M.A.(Urdu) CO8: To introduce students to the definition of rhetoric.

M.A.(Urdu) CO9: To acquaint the students with the science of expression, knowledge of science, art of words, art of meaning.

M.A.(Urdu) CO10: To enlighten the students about the meaning and purpose of Tanisiyat.

M.A.(Urdu) CO11: To acquaint the students with the different theories of spirituality and its types.

M.A.(Urdu) CO12: To familiarize with the meaning and significance of Tanisyati literature in Urdu and its origin and evolution.

M.A. IInd Year 4th Sem. (4th paper)

M.A.(Urdu) CO1: To acquaint the students with the definition, importance and usefulness of delivery in Urdu, compositional components, types and its evolution from era to era.

M.A.(Urdu) CO2: To acquaint the students with the definition and history of journalism.

M.A.(Urdu) CO3: To acquaint the students with the art of Journalism, Journalism, Columnism and Journalism and review of important Urdu newspapers.

M.A.(Urdu) CO4: Advertising and newspaper interviews, journalistic features and exposure to Urdu electronic media.

M.A.(Urdu) CO5: To acquaint students with the origins of radio and the distinctions of video, the importance and usefulness of television.

M.A.(Urdu) CO6: To acquaint students with different periods of Hindi: Aadi Kaal (Veer Gatha Kaal), Bhagati Kaal, Riti Kaal and their literary efforts.

M.A.(Urdu) CO7: To acquaint students with important authors of modern Hindi literature.

M.A.(Urdu) CO8: To acquaint the students with the important poets of modern Hindi literature and their poetic works.

Programme Outcomes

B.A PO1: History of Urdu short stories and knowledge about the first novelist And also the introduction of Urdu (Nazim) and the poets.

B.A PO2: History of Urdu literature and introduction to some different fields Also learning poetry, criticism and grammar and translation.

B.A PO3:To inform the students about the points of journalism and translation

Programme Outcome

MAPO1: Knowledge about various kind of Urdu Poetry, Ghazal, Naat, Qasida, Marsia, Nazm, Masnavi and their poets, Urdu Fiction and fiction writers and the techniques.

MAPO2:Knowledge about History of Urdu literature, critic and school of thoughts. Learning of essay writing.

Programme specific outcomes (Urdu)

B.A. (Urdu) PSO1: Knowledge about whole text of Urdu literature, language and their writers techniques.

M.A. (Urdu) PSO1: Knowledge about History, critic and training of writing of essays in Urdu.

BA (PERSIAN)

Programme Outcomes

The Programme aims to:

- PO1. Prepare students for both academia and employability.
- PO2. Equip the students with translation and interpretation skills with a purpose to train them for discharging duties as language experts in both public and private sectors.
- PO3. Provide a focused, outcome-based education with an agenda to structure the teaching-learning experiences in a more student-centric manner.
- PO4. Offer all three major components of Persian: Language, Literature and Culture
- PO5. Impart values related to well-being, emotional stability, critical thinking, social justice and also skills for employability.
- PO6. Enable effective participation of young people in knowledge production and participation in the knowledge economy, improving national competitiveness in a globalized world

- PO7. Equipping young people with skills relevant for global and national standards and enhancing the opportunities or social mobility.
- PO8. Equip the students with the linguistic, language and literary skills for meeting the growing demand of this discipline and promoting skill based education.
- PO9. Facilitate self-discovery in the students and ensure their enthusiastic and effective participation in responding to the needs and challenges of society.
- PO10. For imparting language skills especially, there are units for imparting education in functional language through language teaching modes, like practical classes in language labs and holding spoken language symposiums and interpretation sessions.
- PO11. Persian language and literature has one of the richest collections of the works produced on humanism and Sufism etc. So, along with academic excellence, present course is thus designed to inculcate a student with the sense of human values for the benefit of the society and the nation
- PO12. Considering that a large number of land records in India are still in Persian language, the course in Persian has been specifically designed to train a student to decipher classical Persian texts

Programme Specific Outcomes(PSOs)

After Completion of B.A. First Year (Certificate in Persian) the students will be able to :

- PSO1. Know the alphabets of the language and structure formation of word and sentences.
- PSO2. show knowledge and understanding of a varied range of Persian vocabulary
- PSO3. To enable students to learn the basics of Persian language specially grammar in order to be able to write and speak simple sentences
- PSO4. understand texts in modern written Persian of medium length on everyday and some specialised topics
- PSO5. To give students a solid proficiency in Persian language classical and modern and equip them to exercise the four language skills of writing, reading, listening and speaking
- PSO6. To communicate information, ideas and arguments cogently and coherently both oral and written application of linguistic and literary concepts and methods of inquiry
- PSO7. To inculcate human values in students through simple prose and Poetry text selections and their comprehension .
- PSO8. To equip students with language skills as to seek jobs in public/ private sector
- PSO9. To enable students to identify the commonalities between the words of Indian origin and Persian origin to establish the linguistic linkages between the two nations from time immemorial

Programme Specific Outcomes(PSOs)

After Completion of B.A. Second Year (Diploma in Persian) the students will be able to :

- PSO1. get acquainted with the Classics of Persian Prose and poetry writings of all times.
- PSO2. comprehend the trends of Persian Prose and Poetry writings through the passage of Iranian Literary History
- PSO3. Acquire specific factual knowledge about Classical Iranian history and politics, religion and society, arts, and literature.
- PSO4. demonstrate a rounded knowledge and critical understanding of the major genres and themes of classical Persian Literature (both prose and poetry)
- PSO5. develop an understanding of literary language, structures and imagery as embodied in selected texts by leading poets
- PSO6. Through the selection of text from Classical prose and poetry to inculcate in students the importance of morality and human values, and self-determination so that they become responsible citizens.
- PSO7. Acquisition of the critical language to articulate the ways in which language, literature and thought are interrelated

Thus after completion of two years of study in Persian at undergraduate level the students shall be able to attain skills both in language and literature that is required for going further into higher studies. The courses of First Year are based on language skills while the courses of second year have a focus on Literature. Even Selection of text has been made keeping in mind the overall exposure to create attributes of a responsible citizen in students pursuing this course

Programme Specific Outcomes(PSOs)

After Completion of B.A. Third Year (Bachelor in Persian) the students will be able to demonstrate :

- PSO1. Range of skills in reading and translating Persian literary texts
- PSO2. Familiarity with and critical understanding of a number of texts and genres of Indo-Persian literature and Modern Persian Literature
- PSO3. understanding of factors leading to Constitutional Revolution of Iran and its impact on Persian Literature comprehend the trends of Persian Prose and Poetry writings in Indian subcontinent
- PSO4. understand the difference between classical and Modern Persian Literature and to acquire knowledge about Modern Persian Language and Literature

- PSO5. Persian has been official language of India for almost eight centuries and treasures a number of historical and cultural heritages in form of books, manuscripts and records. Students will be exposed to Persian writings in Indian subcontinent in order to identify and study the history, polity, society and culture through the prism of original sources.
- PSO6. An advanced understanding of the role of classical Persian poetry in the development of Persianate mystical writing and its contribution to other literary cultures of Iran, Indian Subcontinent and Central Asia.
- PSO7. show knowledge and understanding of a varied range of Persian vocabulary
- PSO8. show knowledge and use of a wide range of Persian idiomatic structures and expressions in a given context in order to be able to do simultaneous translation and interpretation enable students to be able to acquire skills required for getting jobs in public/ private sectors in both academia and corporate areas.

Undergraduate Commerce (B.Com.)

Programme Outcomes

The career options for students pursuing B.Com. Programme is vast and candidates will always have interesting profiles to work at if they play to their strengths. While many B.Com. Graduates may choose the much tried and tested path of CA, CS, CMA and other related fields of study, one has ample opportunity to choose an out-of-the-box career option, as one in travel and hospitality, media and telecommunications depending on the path and degree one chooses.

Programme Specific Outcomes

Earning a graduate degree of commerce (B.Com.) is evidence of persistence, determination, intellectual prowess, and the ability to handle challenging environments all of which are sought-after qualities for individuals filling manager and director positions. An employee who has demonstrated success in a long-term situation that requires stamina, discipline, leadership, and the ability to work well with others is going to be in line for growth opportunities within his or her organization. B.Com. graduate after completion of course can choose to work in job profile option available to them depending on their caliber and interest area such as Accountant, Auditor, Consultant, Company Secretary, Business Analyst, Finance Officer, Sales Analyst, Junior Analyst, Tax Accountant, Stock Broker, Economist, and Business Development Trainee and so on to explore.

Course Title: Business Organization

Course outcomes:

After completing this course a student will have:

- CO1. Ability to understand the concept of Business Organisation along with the basic laws and norms of Business Organisation.
- CO2. Ability to understand the terminologies associated with the field of Business Organisation along with their relevance.
- CO3. Ability to identify the appropriate types and functioning of Business Organisation for solving different problems.
- CO4. Ability to apply basic Business Organisation principles to solve business and industry related problems.
- CO5. Ability to understand the concept of Sole Proprietorship, Partnership and Joint Stock Company etc.

Course Title: Business Statistics

Course outcomes:

The purpose of this paper is to inculcate and analytical ability among the students.

Course Title: Business Communication

Course outcomes:

To acquire skills in reading, writing, comprehension and communication, and also to use electronic media for business communication.

Course Title: Introduction to Computer Application

Course outcomes:

The objective of this course is to provide basic knowledge of computer, DBMS, data base language and word processing.

Course Title: Business Management

Course outcomes:

After completing this course a student will have:

CO1. Ability to understand the concept of Business Management along with the basic

laws and norms of Business Management.

CO2. Ability to understand the terminologies associated with the field of Business Management and control along with their relevance.

CO3. Ability to identify the appropriate method and techniques of Business Management

for solving different problems.

CO4. Ability to apply basic Business Management principles to solve business and industry related problems.

Course Title: Financial Accounting

Course outcomes:

The objective of this paper is to help students to acquire conceptual knowledge of fundamentals of accounting and to impart skills for recording various kinds of business transactions.

Course Title: Computerised Accounting (Practical)

Course outcomes:

The purpose of this paper is provide to knowledge of accounting with computer.

Course Title: Essentials of E-commerce

Course outcomes:

This course is to familiarize the student with the basics of ecommerce and to comprehend its potential.

Course Title: Business Economics

Course outcomes:

Business Economics objective this course is meant to acquaint the students with the principles of Business Economics as are applicable in business.

Course Title: Company Law

Course outcomes:

The objective of this course is to provide basic knowledge of the provisions of the Companies Act 2013 along with relevant cases.

Course Title: Cost Accounting

Course outcomes:

This course exposes the students to the basic concepts and the tools used in cost accounting.

Course Title: Business Regulatory Framework

Course outcomes:

The objective of this course is to provide a brief idea about the framework of Indian Contract Act,1872 and Sale of Goods Act,1930.

Course Title: Inventory Management

Course outcomes:

After completing this course a student will have:

- CO1. Ability to understand the concept of Inventory Management along with the basic laws and axioms of Inventory Management.
- CO2. Ability to understand the terminologies associated with the field of Inventory management and control along with their relevance.
- CO3. Ability to identify the appropriate method and techniques of Inventory management for solving different problems.
- CO4. Ability to apply basic Inventory management principles to solve business and industry related problems.
- CO5. Ability to understand the concept of Working Capital Management, Demand Analysis and Obsolescence.

Course Title: Income Tax Law and Accounts

Course outcomes:

It enables the students to know the basics of Income Tax Act and its implications.

Course Title: Fundamentals of Marketing

Course outcomes:

The objective of this course is to provide basic knowledge of concepts, principles, tools and techniques of marketing.

Course Title: Digital Marketing (Practical)

Course Outcomes:

After completing this course a student will have:

CO1. Ability to understand the concept of Digital Marketing along with the basic forms and norms of Digital Marketing.

CO2. Ability to understand the terminologies associated with the field of Digital Marketing and control along with their relevance.

CO3. Ability to identify the appropriate method and techniques of Digital Marketing for solving different problems.

CO4. Ability to apply basic Digital Marketing principles to solve business and industry related issues and problems.

CO5. Ability to understand the concept of Budgetary Control, Cash Flow Statement, Fund Flow Statement, Break Even Analysis etc.

Course Title: Fundamentals of Entrepreneurship

Course outcomes:

After completing this course a student will have:

CO1. Ability to understand the concept of Entrepreneurship along with the basic laws and practices of Entrepreneurship.

CO2. Ability to understand the terminologies associated with the field of Entrepreneurship along with their relevance.

CO3. Ability to identify the appropriate functions and qualities of Entrepreneur for solving different problems.

CO4. Ability to apply basic Entrepreneurship principles to solve business and industry related problems.

CO5. Ability to understand the concept of Life Small Business, Raising of Funds and EDP.

Course Title: Tourism and Travel Management

Course outcomes:

The objective of this course is to understand the fundamental concept of Tourism and to familiarize with the significance and emerging trends in tourism.

Course Title: Corporate Accounting

Course outcomes:

This course enables the student to develop awareness about corporate accounting in conformity with the provisions of company act.

Course Title: Goods and Services Tax

Course outcomes:

To provide students with the working knowledge of principles and provisions of GST to understand the relevance of GST in the present Indian tax in scenario and its contribution for economic development.

Course Title: Business Finance

Course outcomes:

This course is to help students understand the conceptual framework of Business Finance.

Course Title: Principles and Practices of Insurance

Course outcomes:

After completing this course a student will have:

CO1. Ability to understand the concept of Insurance along with the basic laws and practices of Insurance.

CO2. Ability to understand the terminologies associated with the field of Insurance and control along with their relevance.

CO3. Ability to identify the appropriate method and types of Insurance for solving different problems.

CO4. Ability to apply basic Insurance principles to solve business and industry related problems.

CO5. Ability to understand the concept of Life, Marine and Fire Insurance.

Course Title: Monetary Theory and Banking in India

Course outcomes:

The course expose the students to the working for money and financial system prevailing in India.

Course Title: Accounting for Mangers

Course outcomes:

After completing this course a student will have:

CO1. Ability to understand the concept of Managerial Accounting along with the basic forms and norms of Managerial Accounting.

CO2. Ability to understand the terminologies associated with the field of Managerial Accounting and control along with their relevance.

CO3. Ability to identify the appropriate method and techniques of Managerial Accounting for solving different problems.

CO4. Ability to apply basic Managerial Accounting principles to solve business and industry related issues and problems.

CO5. Ability to understand the concept of Budgetary Control, Cash Flow Statement, Fund Flow Statement, Break Even Analysis etc.

Course Title: Auditing

Course outcomes:

This course aims at imparting knowledge about the principles and methods of auditing and their application.

Course Title: Financial Market Operations

Course outcomes:

After completing this course a student will have:

CO1. Ability to understand the concept of Financial Market along with the basic forms and norms of Financial Market.

CO2. Ability to understand the terminologies associated with the field of Financial Market and control along with their relevance.

CO3. Ability to identify the appropriate method and techniques of Financial Market for solving different problems.

CO4. Ability to apply basic Financial Market principles to solve business and industry related problems.

CO5. Ability to understand the concept of Primary and Secondary Market, Stock Exchange, SEBI etc.

Course Title: Human Resource Management

Course outcomes:

The paper aims to develop in the students a proper understanding about human resource management.

Course Title: Business Ethics and Corporate Governance

Course outcomes:

This course seeks to provide knowledge about the concepts, tools, techniques, and relevance of Business Ethics and Corporate Governance in the present changing scenario.

M.Com. Post Graduate

Programme Course Outcomes

POS-1 Academic excellence: - Enhancing the knowledge so as to enable the learners to carry out research and pursue academic or professional careers

POS-2 Professional excellence: - Developing effective communication skills and ability to work in teams by strengthening group dynamics

POS-3 Research and practical knowledge: - Using research knowledge and attitude acquired in the course of study for solving socially relevant problems

POS-4 Social consciousness: - Understanding the role and applicability of knowledge acquired in the context of society, environment and sustainable development

POS-5 Competency skills: - Developing problem analyses skills and knowledge and applying the same in the real-life situations

POS -6 Holistic development: - Fostering ability to engage in lifelong learning demonstrating empathetic social concern contributing to the development of nation by making sure of awareness gain on various issues

M.Com 1st Sem Paper— 1. Business Research Methodology

CO1. Students will gain a grasp of the fundamental principles and concepts underlying business research, enabling them to comprehend and apply research methodologies in a business context.

CO2. Learners will develop the skills necessary to collect, organise, and analyse data relevant to business research. It will equip students with the ability to draw meaningful conclusions from raw information.

CO3. By the end of the course, students should be proficient in designing effective and well-structured research projects.

CO4. The course aims to enhance students' communication skills, enabling them to articulate research findings in a clear and concise manner.

Paper— 2. Statistical Methods

CO1. Students will develop the ability to interpret and analyse data using statistical methods, helping them draw meaningful insights and make informed decisions.

CO2. Learners will gain proficiency in formulating and testing hypotheses, enabling them to assess the significance of research findings.

CO3. The course aims to equip students with practical skills in using statistical software tools, enabling them to efficiently process and analyse data.

CO4. Students will be able to apply various statistical techniques to solve practical problems in managerial and business decision-making.

Paper—3. Managerial Economics

CO1. Students will develop the ability to apply economic principles to managerial decision-making, enabling them to analyse and assess the economic implications of various choices in business scenarios.

CO2. Learners will gain insights into market structures, demand and supply dynamics, and pricing strategies, allowing them to make informed decisions.

CO3. The course aims to equip students with the skills to conduct cost-benefit analyses, helping them evaluate the financial implications of business decisions and optimise resource allocation.

CO4 Students will learn how to integrate economic concepts into strategic planning, enabling them to develop effective business strategies that consider economic factors and enhance overall organisational performance.

Paper—4. Advance Management Accounting

CO1. Students will develop advanced skills in managing and controlling costs strategically, allowing them to contribute effectively to organisational decision-making.

CO2. Learners will be proficient in designing and implementing performance measurement systems, enabling them to evaluate the effectiveness of business units.

CO3. The course aims to equip students with the ability to create comprehensive budgets and forecasts, enabling them to plan and allocate resources efficiently in a dynamic business environment.

CO4. Students will gain insights into strategic financial planning, including capital budgeting, risk analysis, and long-term financial decision-making.

M.Com 2nd Sem Paper—1. Management Concept and Organisation Behaviour

CO1. Students will develop an understanding of various leadership styles and motivational techniques, allowing them to effectively lead teams and enhance organisational performance.

CO2. Learners will gain insights into organisational culture and its impact on behaviour, helping them navigate and shape the cultural dynamics within an organisation for better collaboration and productivity.

CO3. The course aims to equip students with skills in resolving conflicts and effective negotiation, fostering a positive work environment and enabling them to handle interpersonal issues in a professional manner.

CO4. Students will acquire knowledge of human resource management principles, enabling them to understand the dynamics of organisational behaviour, employee relations, and talent management for effective organisational functioning.

Paper—2 Advance Financial Accounting

CO1. Students will gain proficiency in dealing with complex financial reporting issues, including consolidation of financial statements and accounting for mergers and acquisitions.

CO 2. Learners will understand and apply International Financial Reporting Standards (IFRS) and Generally Accepted Accounting Principles (GAAP) to ensure accurate and compliant financial reporting.

CO3. The course aims to equip students with the skills to analyse and interpret financial statements, facilitating a deeper understanding of an organisation's financial health and aiding strategic decision-making.

CO4. Students will develop the ability to identify and manage financial risks, including exposure to foreign exchange and interest rate risks.

Paper—3 International Business

CO1. Students will develop the ability to navigate and manage cultural differences in international business settings, fostering effective communication and collaboration across diverse global environments.

CO2. Learners will gain insights into various market entry strategies, enabling them to make informed decisions when expanding businesses internationally, considering factors such as market analysis and entry modes.

CO3. The course aims to equip students with knowledge of international trade policies, treaties, and investment regulations, helping them navigate the complexities of global business environments.

CO4. Students will understand the intricacies of global supply chains, including logistics, procurement, and distribution, preparing them to optimise supply chain operations in an international business context.

Paper—4 Supply Chain Management and Logistic Management

CO1. Students will acquire skills to design and optimise supply chain processes, ensuring efficient and cost-effective movement of goods and services from suppliers to consumers.

CO2. Learners will understand the principles of logistics planning and execution, including inventory management, transportation, and warehousing, facilitating smooth and timely product flows through the supply chain.

CO3. The course aims to equip students with the ability to identify and manage risks in the supply chain, ensuring continuity and resilience in the face of disruptions such as natural disasters, geopolitical events, or economic downturns.

CO4. Students will gain awareness of sustainable and ethical practices in supply chain management, enabling them to contribute to environmentally and socially responsible supply chain operations.

M.Com 3rd Sem Paper—1 Advance Financial Management

CO1. Students will develop advanced skills in crafting financial strategies, allowing them to make sound financial decisions that align with organisational goals and enhance long-term financial performance.

CO2. Learners will acquire the ability to identify, assess, and manage financial risks effectively, ensuring the organisation is equipped to navigate uncertainties and optimise its risk-return profile.

CO3. The course aims to equip students with proficiency in capital budgeting techniques, enabling them to evaluate investment opportunities and allocate resources wisely for maximum returns.

CO4. Students will gain insights into the use of financial derivatives, allowing them to manage and hedge against market risks, enhancing the organisation's financial resilience.

Paper—2 Strategic Management

CO1. Students will develop the ability to formulate and implement strategic plans, aligning the organisation's resources and capabilities with its external environment for sustainable competitive advantage.

CO2. Learners will be proficient in analysing the competitive landscape, industry trends, and internal organisational factors to make informed strategic decisions and respond effectively to market dynamics.

CO3. The course aims to equip students with skills in managing organisational change, facilitating smooth transitions and ensuring adaptability to evolving business environments.

CO4. Students will gain awareness of corporate governance principles, promoting ethical decision-making, accountability, and transparency in organisational practices

Paper—3 Advertising and Sales Management

CO1. Students will develop the ability to design and implement effective advertising campaigns, considering target audiences, media selection, and creative messaging to enhance brand visibility.

CO2. Learners will acquire skills in leading and managing sales teams, fostering motivation, and implementing effective sales strategies to achieve organisational sales targets.

CO3. The course aims to equip students with the capability to conduct market research, enabling them to gather insights into consumer behaviour and market trends to inform advertising and sales strategies.

CO4. Students will understand the importance of integrated marketing communications, ensuring consistency and synergy across various communication channels to build a cohesive brand image.

Paper—4 International Marketing Management

CO1. Students will gain insights into various strategies for entering and expanding into international markets, considering factors such as cultural differences, regulatory environments, and market analysis.

CO2. Learners will develop the ability to adapt marketing strategies to diverse cultural contexts, fostering effective communication and resonance with global consumers.

CO3. The course aims to equip students with skills in conducting market research on a global scale, providing valuable insights for successful international marketing campaigns.

CO4. Students will understand the complexities of managing global brands, ensuring consistent brand positioning and messaging across diverse international markets for sustained success.

M.Com 4th Sem Paper—1 International Marketing Management

CO1. Students will learn how to navigate and thrive in international markets, understanding the complexities of cross-border trade, cultural nuances, and global marketing strategies.

CO2. Learners will develop the ability to adapt marketing strategies to diverse cultural settings, ensuring that products and campaigns resonate effectively with consumers worldwide.

CO3. The course aims to equip students with knowledge of various strategies for entering and expanding into international markets, fostering a comprehensive understanding of global business environments.

CO4. Students will grasp the intricacies of managing brands on a global scale, ensuring consistent brand positioning and messaging across diverse international markets.

Paper—2 Corporate Taxation and Planning

CO1. Students will gain proficiency in understanding and adhering to corporate tax regulations, ensuring organisations comply with tax laws while optimising their tax liabilities.

CO2. Learners will develop skills in strategic tax planning, enabling them to make informed decisions to minimise tax burdens, enhance financial efficiency, and contribute to overall corporate strategy.

CO3. The course aims to equip students with the ability to analyse the impact of taxation on business decisions, fostering a comprehensive understanding of the financial implications of tax policies.

CO4. Students will understand the complexities of international taxation, including transfer pricing and tax implications of cross-border transactions, preparing them to navigate global tax environments.

Paper—3 Operational Research

CO1. Students will develop strong problem-solving skills, applying mathematical and analytical techniques to optimise business processes and make informed operational decisions.

CO2. Learners will be proficient in decision analysis, using quantitative methods to evaluate alternatives and make strategic decisions that enhance organisational efficiency.

CO3. The course aims to equip students with knowledge of optimisation techniques, enabling them to maximise resource utilisation, minimise costs, and improve overall operational performance.

CO4. Students will gain skills in modelling and simulating business scenarios, allowing them to test different strategies and predict outcomes to inform decision-making.

Paper—4 Consumer Behaviour

CO1. Students will grasp the psychological and social factors influencing consumer behaviour, allowing them to understand and predict consumer motivations in various market contexts.

CO2. Learners will be proficient in market segmentation, enabling them to identify and target specific consumer groups with tailored marketing strategies based on their unique behaviour and preferences.

CO3. The course aims to equip students with the ability to analyse and cultivate brand loyalty, understanding how consumer behaviour influences brand choices and long-term relationships.

CO4. Students will learn to develop effective marketing strategies by applying consumer behaviour insights, ensuring that products and campaigns resonate with target audiences and drive successful outcomes

Paper—5 Marketing Research

CO1. Students will develop skills in designing effective marketing research studies, ensuring that research methods align with the objectives and provide valuable insights for decision-making.

CO2. Learners will be proficient in collecting and analyzing marketing data, using both quantitative and qualitative methods to derive meaningful insights into consumer preferences and market trends.

CO3. The course aims to equip students with the ability to identify and interpret market trends, enabling organisations to stay ahead of the competition and adapt their strategies accordingly.

CO4. Students will understand how marketing research contributes to strategic decision-making, providing essential information to guide product development, advertising campaigns, and overall business strategy.