	Pool Course Offered by the Department/ Programme	Name of Course	CourseID	Credits			Theory Marks			Practical Marks			Total Marks	
				T	P	Total	E	I	Total	E	I	Total	total marks	
SKILL ENHANCEMENT COURSES														
1.	Master of Science (Computer Science)	Programming in Python	241/CS/SE201	2	0	**2**	35	15	50	0	0	0	**50**	
2.	Master of Computer Applications	Problem Solving using python programming	241/MCA/SE201	1	1	**2**	20	5	25	20	5	25	**50**	
3.	Master of Business Administration	Production and Operations Management	241/MBA/SE201	1	1	**2**	20	5	25	20	5	25	**50**	
4.	Master of Business Administration (BUSINESS ANALYTICS)	Production and Operations Management	241/MBA/SE201	1	1	**2**	20	5	25	20	5	25	**50**	
5.	Master of Commerce	Entrepreneurial skills and Business Plan Development	241/COM/SE201	2	-	**2**	35	15	50	0	0	0	**50**	
6.	Master of Commerce	Leadership and Management Skills	241/COM/SE202	2	-	**2**	35	15	50	0	0	0	**50**	
7.	Master of Arts (English)	Creative Writing and Fundamentals	241/ENG/SE201	1	1	**2**	20	5	25	20	5	25	**50**	
8.	M.A. (Journalism & Mass Communication)	Photoshop and Illustrator	241/JMC/SE201	0	2	**2**	0	0	0	35	15	50	**50**	
9.	M.A. HINDI	हिन्दी भाषा का रचनात्मक स्वरूप	241/HIN/SE201	1	1	**2**	20	5	25	20	5	25	**50**	
10.	M.A. Public Policy, Administration and Governance	Effective Leadership	241/PPAG/SE201	2	0	**2**	35	15	50	0	0	0	**50**	
11.	M.A. Political Science and International Relations	Effective Leadership	241/MPSIR/SE201	2	0	**2**	35	15	50	0	0	0	**50**	

12.	M.A. Political Science	Effective Leadership	241/MPSIR/ SE201	2	0	**2**	35	15	50	0	0	0	**50**	
13.	M.A. Applied Economics	Data Analysis with Statistical Softwares-I	241/AE/SE201	0	2	**2**	-	-	-	35	15	50	**##**	
14.	Master of Science (Mathematics)	Computational Techniques using MATLAB	241/MAT/SE201	1	1	**2**	20	5	25	20	5	25	**50**	
15.	Master of Science (Botany)	Genomics	241/BOT/SE201	2	0	**2**	50	0	50	0	0	0	**50**	
16.	Master of Science (Environmental Science)	Basics of Remote Sensing and GIS	241/EVS/SE201	2	0	**2**	50	0	50	0	0	0	**50**	
17.	M.A. MUSIC	Harmonium Practical Aptitude	241/MUS/SE201		2	**2**				35	15	50	**50**	
18.	M.A. Psychology	Counselling Skills and Techniques	241/PSY/SE201	1	1	**2**	20	5	25	20	5	25	**50**	
19.	M.Sc. Psychology	Counselling Skills and Techniques	241/MPSY/SE201	1	1	**2**	20	5	25	20	5	25	**50**	
20.	M.Sc Social Work	Counselling in Social Work	241/MSW/SE201	2	0	**2**	35	15	50	0	0	0	**50**	
21.	M.A. History	Basics of Archaeology	241/HIS/SE201	2	0	**2**	35	15	50	0	0	0	**50**	
22.	M.A. Geography	Reading and Interpretation of Maps (Theory and Practical)	241/GEO/SE201	1	1	**2**	20	5	25	20	5	25	**50**	
23.	M.A. Sociology	Basics of Social Research	241/SOC/SE201	2	0	**2**	35	15	50	0	0	0	**50**	
24.	Master of Science (Zoology)	Economic Zoology	241/ZOO/SE201	2	0	**2**	50	0	50	0	0	0	**50**	
25.	M A SANSKRIT	Introduction to Jyotish Shastra	241/SKT/SE202	1	1	**2**	20	5	25	20	5	25	**50**	
26.	PG URDU	Script Nigaari	241/URD/SE201	2		**2**	20	5	50	20	5		**50**	
27.	Masters of Public Health	Computer Application	241/MPH/SE201	2		**2**	35	15	50				**50**	
28.	MA Education	e-Content Development-I	241/MEDU/SE201	1	1	**2**	20	5	25	20	5	25	**50**	
29.	MA Education	Educational Guidance and Counselling- I	241/MEDU/SE202	1	1	**2**	20	5	25	20	5	25	**50**	

30.	M.Sc. (Chemistry)	Analytical Chemistry	241/CHE/SE201	2		**2**	35	15	50				**50**	
31.	M.A. (Economics)	Introduction to research methodology	241/ECO/SE201	1	1	**2**	25	10	35	10	5	15	**50**	
32.	M.A. (Economics)	Digital Economics	241/ECO/SE202	1	1	**2**	25	10	35	10	5	15	**50**	
33.	Master of Science (Neurosciences)	Personality and Skill Development	241/NEU/SE201	2	0	**2**	35	15	50	0	0	0	**50**	
34.	MA Education	Communication Skills-I	241/MEDU/SE203											
35.	M.Sc. Physics	Radiation Physics	241/PHY/SE201											

241/CS/SE201

PROGRAMMING IN PYTHON

Semester	2			
Course code	SEC-01			
Category	Skill Enhancement Course			
Course title	Programming in Python			
Course ID				
Scheme and Credits	L	T	P	Credits
	1	0	2	2
Theory Internal	5 marks			
Theory External	20 marks			
Practical Internal	5 marks			
Practical External	20 marks			
Total	50 marks			
Duration of Exam	2 hrs			

Note:*The examiner will set nine questions in total. Question one will have seven parts from all units and the marks of first question will be of 20% of total marks of Question Paper and the remaining eight questions to be set by taking two questions from each unit and the marks of each question from Question no.2 to 9 will be of 20% of total marks of Question paper. The students have to attempt five questions in total, the first being compulsory and selecting one from each unit.*

COURSEOUTCOMES:

At the end of this course, students will demonstrate the ability to

CO1: Understand Python syntax and semantics and be fluent in the use ofPython flow control and Functions

CO2: Develop, run and manipulate Python programs using Core datastructures like Lists, Dictionaries, and use of Strings Handling methods.

CO3: Develop, run and manipulate Python programs using File Operationsand searching pattern using regular expressions.

CO4: Interpret the concepts of object-oriented programming using Python

CO5: Determine the need for scraping websites and working with CSV, JSON and other file formats.

UNIT - I

Basic Introduction: Origin, Need of Python Programming, Features, program structure, identifiers, reserved words, escape sequences, IDLE-Python Interpreter

Python Programming Introduction: Variables and assignment statements, data types, **Operators**: Assignment, Unary, Binary, Arithmetic, Relational, Logical, Bitwise Operator and membership operator

UNIT - II

Control Structures: if-conditional statements, if –else condition, if-elif-else condition, nested if-elif-else condition, Iteration (for Loop and while loop), Nested Loops, break and continue statement.

Strings: Slicing, Membership, Built in functions (count, find, capitalize, title, lower, upper and swap case, replace, join, isspace (), isdigit(), split(), startswith(), endswith()).

UNIT – III

Mutable and Immutable objects: List: creating, initializing, accessing, slicing, and traversing List. List operations: length, concatenation, repetition, in, not in, max, min, sum, all, any. List methods: append, extend, count, remove, index, pop, insert, sort, reverse.

Tuples: creating tuples, Tuple operations: length, concatenation, repetition, membership,

UNIT - IV

Concept of Functions: Functions: Defining, Calling and Types of Functions, Arguments and Return Values, Formal vs. Actual Arguments, Scope and Lifetime, Keyword Arguments, Default Arguments, Recursion.

Modules: importing Modules, Math and Random Module, creating your own modules, and concept of Packages

BOOKS:

1. Programming in Python 3: A Complete Introduction to the Python Language (2nd Edition), Mark Summerfield.
2. Python Programming: A Modular Approach by Taneja Sheetal, Kumar Naveen, Eleventh Impression, Pearson India Education Services Pvt. Ltd.
3. Agile tools for real world data: Python for Data Analysis by Wes McKinney, O'Reilly
4. Let Us Python 2nd Ed: Python Is Future, Embrace It Fast (Second Edition): Yashvant Kanetkar.
5. Programming Python, 4th Edition by Mark Lutz Released December 2010 Publisher(s): O'Reilly Media, Inc.
6. Python: The Complete Reference by Martin Brown.

Course code	SEC-1			
Category	Skill Enhancement Course			
Course title	**Problem solving and python programming**			
Course ID				
Scheme and Credits	L	T	P	Credits
	1	-	2	2
Theory Internal	05			
Theory External	20			
Practical Internal	05			
Practical External	20			
Total	50			
Duration of Exam	2 hrs			

***Note**: The examiner will set nine questions in total. Question one will be compulsory. Question one will have seven parts of 2 marks each from all units, and the remaining eight questions of 14 marks each to be set by taking two questions from each unit. The students have to attempt five questions in total, the first being compulsory and selecting one from each unit.*

Course Outcomes:

CO1: Develop algorithmic solutions to simple computational problems.

CO2: Develop and execute simple Python programs.

CO3: Write simple Python programs using conditionals and looping for solving problems.

CO4: Decompose a Python program into functions.

CO5: Represent compound data using Python lists, tuples, dictionaries etc.

UNIT I

Fundamentals of Computing – Identification of Computational Problems -Algorithms, building blocks of algorithms (statements, state, control flow, functions), notation (pseudo code, flow chart, programming language), algorithmic problem solving, simple strategies for developing algorithms (iteration, recursion).

UNIT II

Python interpreter and interactive mode, debugging; values and types: int, float, boolean, string, and list; variables, expressions, statements, tuple assignment, precedence of operators, comments.

Conditionals: Boolean values and operators, conditional (if), alternative (if-else), chained conditional (if-elif-else).

UNIT III

Iteration: state, while, for, break, continue, pass; Fruitful functions: return values, parameters, local and global scope, function composition, recursion; Strings: string slices, immutability, string functions andmethods, string module; Lists as arrays.

UNIT IV

Lists: list operations, list slices, list methods, list loop, mutability, aliasing, cloning lists, list parameters; Tuples: tuple assignment, tuple as return value; Dictionaries: operations and methods;advanced list processing – list comprehension.

Textbooks & Reference Books:

1. Paul Deitel and Harvey Deitel, "Python for Programrs", Pearson Education, 1st Edition, 2021.
2. G Venkatesh and Madhavan Mukund, "Computational Thinking: A Primer for Programrs and Data Scientists", 1st Edition, Notion Press, 2021.
3. John V Guttag; Introduction to Computation and Programming Using Python: With Applications to Computational Modeling and Understanding Data'', Third Edition, MIT Press
4. Eric Matthes, "Python Crash Course, A Hands – on Project Based Introduction to Programming", 2nd Edition, No Starch Press, 2019.
5. Martin C. Brown, "Python: The Complete Reference", 4th Edition, Mc-Graw Hill, 2018.

Problem solving and python programming Lab

List of Experiments

1. Write a program in python to compute the gcd of two numbers.
2. Write a program in python to find the square root of a number (newton's method)
3. Write a program in python to find exponentiation (power of a number)
4. Write a program in python to find the maximum of a list of numbers
5. Write a program in python to find linear search binary search
6. Write a program in python to implement Selection sort
7. Write a program in python to implement insertion sort
8. Write a program in python to implement Merge sort
9. Write a program in python to find first n prime numbers

241/MBA/SE201

Production and Operations Management

Same for MBA General & MBA Business Analytics

24MGSEC1

Credits: 2

External Marks: 40 (20TE+20PE)

Internal Marks: 10 (5TI+5PI)

Type of Course: Skill Enhancement Course

Course Objectives:

This course enables students with the basic aspect of production management through various operational aspects of production management. Various important production management techniques will be covered with different problem solving methodologies. The aim of this course is to develop the understanding of the strategic and operational issues in the operational/ manufacturing environment of any organization and the various decisions involved in the operational activities and the methods by which best possible alternative decisions can be taken.

Course Outcomes:

On the completion of this course the student will be able to:

CO1: Develop knowledge and understanding of operations management principles and practices and their influence on business decisions.
CO2: Apply the theoretical knowledge of production & operations processes for effective supply chain management globally.
CO3: Analyze the knowledge of the production and operations techniques in achieving the strategic organizational goals.
CO4: Evaluate the Production Manager's role in management of quality, reliability and maintainability for TQM.

Detailed Syllabus:

UNIT-I

Introduction to Production & Operation Management: System and function view of organizations, scope, evolution and future of Production & Operations Management. Process design; different types of processes, process classification, process selection. Product design; types of products and designing, evaluation of design.

UNIT-II

Facility location: Location Strategy and its Importance; Factors influencing Plant Location; Globalization; Location Selection Models. Plant Layout: Different types of layout, Aggregate Production Planning (APP): Objective, strategies and cost of APP, Inventory Management.

UNIT- III

Department of Management
Gurugram University
Gurugram

Operations scheduling: Definition, Objectives, Types, Sequencing (n-jobs on m machine), Queuing systems (Waiting Line Analysis), Line Balancing (theoretical concept only), Project management; Project scheduling by using network PERT/CPM, (Theory and numerical)

UNIT- IV

Quality management: Definition, experts' views on quality, Dimensions of quality, Cost of quality, Total quality management (TQM), Six sigma, ISO 9000 and other ISO series, Lean and Just in Time production system , Industrial safety, Quality Circle (theory only).

SUGGESTED READINGS:

1. Production and Operation Management by Kanishka Bedi (Oxford Publication).
2. Production and Operations Management by S. A. Chunawala Dr. R. Patel (Himalaya Publication).
3. Modern Production and Operations Management by Elwood S. Buffa and Rakesh K. Sarin (Wiley Publication).
4. Operations Management by Heizer, Jay and Render, Barry (Pearson Publication).

Mapping Matrix of Course: 24MGSEC1

Table 1: CO-PO & CO-PSO Matrix for the Course 24MGSEC1: Production and Operations Management

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO 1	PSO 2
CO1	3	2	1	2	2	3	1	2	3	2
CO2	3	2	2	3	2	2	2	2	2	2
CO3	2	3	1	2	3	2	2	2	2	2
CO4	2	2	2	2	2	3	2	3	2	3
Average	2.5	2.25	1.5	2.25	2.25	2.5	1.75	2.25	2.25	2.25

241/COM/SE201

Name of the subject: Entrepreneurial skills and Business Plan Development	Maximum Theory Marks: 50 (TE+TI+PE+PI= 35+15+0+0)
Course ID:	Time Allowed: 2 hours
Credits: L-T-P (1-0-1)	Course Type: Skill Enhancement Course

Instructions for Paper Setter: The question paper shall be divided into two sections. Section 'A' shall comprise seven short answer type questions from the syllabus carrying one mark each, which shall be compulsory. The answer to each question should not normally exceed 100 words. Section 'B' shall comprise 8 questions (2 questions from each unit). The students will be required to attempt five questions by selecting one question from each unit. All questions will carry equal marks. All the questions must be mapped with Course Outcomes (COs) and specified in the question paper against each question.

Course Outcomes: After completion of the course, learners will be able to:

1. Understand the importance of entrepreneurial skills and values in life and society.
2. Apply their skills in customer developments, customer validation, competitive analysis, process tools to evaluate in real world problems and projects.
3. Apply the components in developing a business plan and awareness about various sources of funding and Institutions supporting Entrepreneur.
4. Evaluate their skills to work in own a business.

Course Content:

UNIT 1: Foundation of Entrepreneurial skills: Introduction importance and need for entrepreneurial skills, Entrepreneurial Idea generation and Identifying business opportunities. Development of an Innovative Business Idea. Market Research and Opportunity Recognition.	10 Lectures
UNIT2: Business Management Skills, Creative Thinking Skills, Strategic Thinking and Planning skills, Leadership skills.	10 Lectures
UNIT3: Business plans: Introduction to Business plan, purpose of a business plan, contents of a business plan, presenting a Business plan, Executive summary and company Description, Market Analysis and Marketing Plan, Organizational structure and Management team, product or service line, sales strategies and projections.	10 Lectures
Unit 4: Start Up: Procedure for setting up an Enterprise. Start-up strategies. Dealing with outside agencies like consultant, contractors, etc. Key marketing issue of new venture. Starting a franchising business. Starting an e-commerce venture. Buying a running business.	10 Lectures

Suggested Readings:

1. Ramachandran, Entrepreneurship Development, Mc Graw Hill
2.Hougaard S. (2005) The Business, Berlin, Springer
3. Lowe R & S Mariott (2006) Enterprise: Entrepreneurship & Innovation.
4.Fayolle A (2007) Entrepreneurship and new value creation, Cambridge, Cambridge

university

Instructions for Internal Examiner: The internal assessment should be spread evenly throughout the semester and must include at least 3 independent components including a mid-term exam. Below are the suggested components for 15 marks. A teacher has a choice to change these components as per the need except for the mid-term exam. All the questions of mid-term Exams need to be mapped with Course Outcomes (COs) and need to be specified in the question paper against each question.

S. No.	Course Assessment Components	Marks/Weightage (%)
1	Attendance Below 55= 0 Marks Between 55 to < 65= 1Marks Between 65 to < 70 = 2 Marks Between 70 to < 75 = 3 marks Between 75 to < 80= 4 Marks 80 and more than 80 = 5 Marks	05
2	Assignment/ Presentations/ Seminars/ Role plays/ Case Analysis/ Simulations and Class Participation	05
3	Sessional Examination*	05
	Internal Assessment **(IA) (1+2+3)**	15 (30%)
	End-Term Examination (**EE**)	35 (70%)
Total Marks (IA+EE)		**50**

Mapping Matrix of Course: 241/COM/SE207A
CO-PO & CO-PSO Matrix for the Course: Entrepreneurial and Business Plan Development

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
CO1	3	3	2	2	2	1	1	2	3	2
CO2	2	2	2	3	2	2	1	2	2	3
CO3	3	2	3	3	2	2	2	2	3	3
CO4	2	1	2	3	3	2	3	3	2	3
Average	2.5	2	2.25	2.75	2.25	1.75	1.75	2.25	2.5	2.75

241/COM/SE202

Name of Subject: Leadership and Management Skills	Maximum Theory Marks: 50 (TE+TI+PE+PI=35+15+0+0)
Course ID:	Time Allowed: 2 hours
Credits: 04 (L-T-P=3-1-0)	Course Type: Core Course

Instructions for Paper Setter: The question paper shall be divided into two sections. **Section 'A'** shall comprise seven short answer type questions from the syllabus carrying one marks each, which shall be compulsory. The answer to each question should not exceed 100 words normally. **Section 'B' shall comprise 8 questions (2 questions from each unit). All the questions need to be mapped with Course Outcomes (COs) and need to be specified in the question paper against each question.** The students will be required to attempt four questions by selecting one question from each unit. All questions will carry equal marks.

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

CO1: Understand the fundamental theories and concepts of leadership and management.
CO2: Apply leadership and management principles to real-world business scenarios.
CO3: Analyze various leadership styles and management techniques to determine their effectiveness in different organizational contexts.
CO4: Evaluate the impact of leadership and management practices on organizational performance and employee engagement.

Course Content:

Unit 11 Introduction to Management: Meaning, Nature and Scope of Management, Functions of Management, Principles of Management, Types of Management, 3Cs of management, Factors affecting Management, Need and Significance of Management	10 Lectures
Unit 2: Managerial Efficiency: Role of a manager, Management skills, Team behaviour of a manager, Communication skill, Decision making skill, Problem solving skill, Manager as a motivator	10 Lectures
Unit 3: Understanding Leadership: Meaning, Nature and Scope of Leadership, Functions of Leadership, Principles of Leadership, Styles of Leadership, Factors affecting Leadership, Need and Importance of Leadership	10 Lectures
Unit 4: Essentials of Effective Leadership Skills: Qualities of a good leader, Leadership Skills: Personality, Strategic Planning, Time Management, Team work and Risk Taking, Management through Leadership: Power, Authority and Leadership, Diversity management,	10 Lectures

Suggested Readings:

1. S. Sinek, Start With Why: How Great Leaders Inspire Everyone to Take Actions.
2. N Hill, Think and Grow Rich. The Ralston Society.
3. J Wooden. Wooden on Leadership. McGraw-Hill.

4. H Koontz, H Weihrich, V M Cannice, Essentials of Management: an international, innovation and leadership perspective. McGrawHill.
5. B L Belker, J Mcormick, S G Topchik, The First- Time Manager. AMACOM

Instructions for Internal Examiner: The internal assessment should be spread evenly throughout the semester and must include at least 3 independent components including a mid-term exam. Below are the suggested components for 15 marks. A teacher has a choice to change these components as per the need except for the mid-term exam. All the questions of mid-term Exams need to be mapped with Course Outcomes (COs) and need to be specified in the question paper against each question.

S. No.	Course Assessment Components	Marks/Weightage (%)
1	Attendance Below 55= 0 Marks Between 55 to < 65= 1Marks Between 65 to < 70 = 2 Marks Between 70 to < 75 = 3 marks Between 75 to < 80= 4 Marks 80 and more than 80 = 5 Marks	05
2	Assignment/ Presentations/ Seminars/ Role plays/ Case Analysis/ Simulations and Class Participation	05
3	Sessional Examination*	05
	Internal Assessment **(IA) (1+2+3)**	15 (30%)
	End-Term Examination (**EE**)	35 (70%)
Total Marks (IA+EE)		**50**

Mapping Matrix of Course: 241/COM/SE207B
CO-PO & CO-PSO Matrix for the Course: Leadership and Management Skills

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2
CO1	3	2	1	1	1	1	1	2	3	2
CO2	2	2	2	3	2	2	2	3	2	3
CO3	1	1	3	3	3	3	3	2	3	3
CO4	1	1	2	3	2	3	3	2	3	3
Average	2	1.5	2	2.5	2	2.3	2.3	2.3	2.8	2.8

241/ENG/SE201

Creative Writing & Fundamentals

Course Code: SEC-02

Max. Marks: 50

Theory: 35

Internal Assessment: 15

Course Objectives:

CO	DESCRIPTION
CO-1	Develop an understanding of different writing styles and tones, and apply them appropriately in different contexts, genres, and forms.
CO-2	To impart a keener understanding of the finer aspects of creative writing, translation and other soft skills.
CO-3	To provide the students general guidelines in dealing with questions of applied nature.

On completing the paper **Creative Writing and Fundamentals** the students shall be able to realize following programme outcomes:

Course Objectives:

CO	DESCRIPTION
CO-1	Develop advanced written communication skills to convey complex ideas clearly and persuasively.
CO-2	The students would be examined in terms of their skills of writing creatively on given situations and also translating paragraphs from one language to another.
CO-3	Ability to explore multimodal forms of composition, including the integration ofvisual elements, audio, and other media in written communication.

Unit 1: Fundamentals of Writing

Introduction to creative writing

Meaning, Importance and Fundamentals steps of creative writing

Types of Creative writing

Unit 2 : A PRESS COPY PREPARATION

Reading Aspects- Close Reading

Reading works in literature- Analysis and encapsulation

Proof Reading and Editing with Practice sessions

Suggested Readings:

Dev. Creative writing- New Delhi: Pearson

Bell, Julia. The Creative Writing Course Book Pan Macmillan

Harper, Graeme. Teaching Creative Writings.

Instructions to the Paper-Setter and students:

- All questions are compulsory.
- Question 1 will be short-answer type question covering all Units. The students are required to attempt any 3 out of 4. (3×5=15marks)
- Question no. 2 will be an Essay type question based on Unit I. The students have to attempt any 1 out of 2 questions. (10 marks)
- Question no. 3 will be an Essay type question based on Unit II. The students have to attempt any 1 out of 2 questions. (10 marks)

241/JMC/SE201

MA(JMC)
SEMESTER -2

Name of Subject: **Photoshop and Illustrator**		
Subject Code: SEC-01	Course ID:	Maximum Practical Marks: 50 (15+ 35)

Objectives: To provide advanced skills in digital image editing and graphic design using Adobe Photoshop and Illustrator. This course aims to equip students with the technical proficiency and creative strategies needed to produce professional-level visual content.

Course Outcomes:
Students will be able to:

1. Master advanced techniques and tools in Adobe Photoshop and Illustrator.
2. Apply design principles and concepts to real-world projects.

COURSE CONTENTS:

Unit 1: Adobe Photoshop
1.1 Overview and Workspace Customization 1.2 Tools and Their Applications 1.3 Layers, Masks, and Blending Modes 1.4 Advanced Image Retouching and Restoration Techniques
Unit 2: Adobe Illustrator
2.1 Overview and Vector Graphics Basics 2.2 Drawing Tools and Techniques 2.3 Working with Text and Typography 2.4 Creating Complex Shapes and Using Color Tools

Suggested Readings:

1. "Adobe Photoshop Classroom in a Book" by Andrew Faulkner and Conrad Chavez
2. "Digital Painting Techniques: Practical Techniques of Digital Art Masters" by 3dtotal Publishing
3. "The Photoshop Workbook: Professional Retouching and Compositing Tips, Tricks, and Techniques" by Glyn Dewis
4. "Digital Painting for Beginners" by Carlyn Beccia
5. "Adobe Illustrator Classroom in a Book" by Brian Wood
6. "Illustrator CC Digital Classroom" by Jennifer Smith and AGI Creative Team

241/HIN/SE201

SEMESTER - 2

SEC – 01 हिन्दी भाषा का रचनात्मक स्वरूप

पूर्णांक- 35+15=50 Course Id-

पाठ्यक्रम के उद्देश्य:

1. हिंदी भाषा में रचनात्मक लेखन कौशल को विकसित करना।
2. छात्रों में रचनात्मकता और सोचने की क्षमता को बढ़ाना।
3. विभिन्न लेखन शैलियों का अध्ययन करना और उन्हें समझना।
4. भाषा के साथ खेलने और विभिन्न विचारों को व्यक्त करने के लिए आत्म-विश्वास को बढ़ाना।

पाठ्यक्रम के परिणाम :

1. छात्र रचनात्मक अभिव्यक्ति में सुधार कर सकेंगे।
2. विभिन्न लेखन प्रक्रियाओं का प्रयोग कर सकेंगे, जैसे कि निबंध लेखन, कविता लेखन, और कहानी लेखन।
3. भाषा का सही उपयोग करके स्पष्ट और प्रभावशाली रचनाएँ लिख सकेंगे।
4. अपने रचनात्मक प्रकल्पों के माध्यम से अपने विचारों और भावनाओं को समझाएंगे।

पाठ्यक्रम:

इकाई 1 : * रचनात्मक लेखन : अवधारणा, स्वरूप एवं सिद्धांत

* भाव एवं विचार की रचना में रूपांतरण की प्रक्रिया

* विविध अभिव्यक्ति-क्षेत्र : साहित्य, पत्रकारिता, विज्ञापन

* लेखन के विविध रूप : मौखिक-लिखित, गद्य-पद्य ,नाट्य , पाठ्य

* मुद्रित इलेक्ट्रॉनिक आदि।

इकाई 2 : रचनात्मक लेखन : भाषा-संदर्भ

* अर्थ निर्मिति के आधार : शब्दार्थ-मीमांसा, शब्द के प्राक्-प्रयोग, नव्य-प्रयोग, शब्द की व्याकरणिक कोटि

* भाषा की भंगिमाएँ : औपचारिक-अनौपचारिक, मौखिक-लिखित मानक

इकाई 3 : विविध विधाओं की आधारभूत संरचनाओं का व्यवहारिक अध्ययन

* कविता : संवेदना, काव्यरूप, भाषा-सौष्ठव, छंद, लय, गति और तुक

* कथासाहित्य : वस्तु, पात्र, परिवेश एवं विमर्श

इकाई-4 . प्रिंट माध्यम : फीचर-लेखन साक्षात्कार . इलेक्ट्रॉनिक माध्यम : रेडियो, दूरदर्शन

निर्देश-1. पाठ्यक्रम में निर्धारित प्रत्येक खंड में कम से कम एक दीर्घ प्रश्न अवश्य पूछा जाएगा। पूछे गए प्रश्नों की संख्या चार होगी, जिसमें से परीक्षार्थी को कुल दो प्रश्न करने होंगे। प्रत्येक प्रश्न के लिए 8 अंक निर्धारित है। पूरा प्रश्न कुल 16 अंकों का होगा।

2. पूरे पाठ्यक्रम में से कुल छः लघुत्तरी प्रश्न पूछें जाएंगे, जिनमें से परीक्षार्थी को 150 शब्दों में किन्हीं चार प्रश्नों का उत्तर देना होगा। प्रत्येक प्रश्न तीन अंक का होगा। पूरा प्रश्न 12 अंकों का होगा

3. पूरे पाठ्यक्रम में से 7 वस्तुनिष्ठ अनिवार्य प्रश्न पूछे जाएंगे। प्रत्येक प्रश्न एक-एक अंक का होगा।

सहायक ग्रंथ :

* साहित्य चिंतन : रचनात्मक आयाम - रघुवंश
* शैली - रामचंद्र मिश्र
* रचनात्मक लेखन- संपा. रमेश गौतम
* कला की जरूरत - अन्र्स्ट फिशर, अनुवाद - रमेश उपाध्याय
* साहित्य का सौंदर्यचिंतन - रवींद्रनाथ श्रीवास्तव
* सृजनशीलता और सौंदर्यबोध - निशा अग्रवाल
* समकालीन कविता में छंद - अज्ञेय
* कविता से साक्षात्कार - मलयज
* कविता क्या है- विश्वनाथ प्रसाद तिवारी
* एक कवि की नोटबुक - राजेश जोशी
* हिंदी साहित्य का छंद-विवेचन - गौरीशंकर मिश्र द्विजेंद्र
* अलंकार-धारणा : विकास और विश्लेषण - शोभाकांत मिश्र
* उपन्यास की संरचना- गोपाल राय
* उपन्यास सृजन की समस्याएँ - शमशेरसिंह नरूला
* हिंदी कहानी का शैली विज्ञान - वैकुंठनाथ ठाकुर

241/MPSIR/SE201

Semester II

SEC-1: Effective Leadership

	Effective Leadership
Semester II	**Maximum Marks: 50**
Credits: 2 (Hrs./week:2)	**Theory Examination: 35**
Time: 2 hours	**Internal Assessment: 15**

Course Outcome:

Remembering: Define key concepts, ethics, and theories related to leadership.

Understanding: Explain the significance of leadership traits, ethics, and the role of women in leadership.

Applying: Apply leadership skills to practical scenarios, including strategic planning and communication.

Analyzing: Analyze and evaluate the effectiveness of leadership approaches and skills in various contexts.

Note for External Examiner:

1. **Five Questions will be set in all and students will be required to attempt 3 questions.**
2. **Question No. 1 will be compulsory and will consist of 5 short answer type questions of 3 marks spread over the entire syllabus (3x5=15 marks).**
3. **For the remaining four questions, students will attempt 1 out of 2 questions from each of the two units (10 marks each).**

Unit I: Concept of Leadership

1) Who is a leader?
2) Leadership Ethics and traits
3) Women and Leadership
4) Leadership Theories: Motivational, Behavioral and Contingency

Unit II: Essentials of Effective Leadership Skills

1) Leadership skills
2) Personality
3) Strategic planning
4) Time Management
5) Risk Taking
6) Communication skills
7) Diversity management

Suggested Readings:

1. Eagly, A. H., & Carli, L. L. (2007). *Through the labyrinth: The truth about how women become leaders*. Harvard Business Review Press.
2. Hughes, R. L., Ginnett, R. C., & Curphy, G. J. (2018). *Leadership: Enhancing the lessons of experience* (8th ed.). McGraw-Hill Education.
3. Northouse, P. G. (2018). *Introduction to leadership: Concepts and practice* (4th ed.). SAGE Publications.
4. Yukl, G. (2012). *Leadership in organizations* (8th ed.). Oxford University Press.
5. Northouse, P. G. (2018). *Leadership: Theory and practice* (8th ed.). Oxford University Press.
6. Antonakis, J., & Day, D. V. (Eds.). (2017). *The nature of leadership* (3rd ed.). Oxford University Press.
7. Day, D. V., & Antonakis, J. (Eds.). (2012). *The nature of leadership* (2nd ed.). SAGE Publications.
8. Avolio, B. J., & Yammarino, F. J. (Eds.). (2013). *Transformational and charismatic leadership: The road ahead*. Oxford University Press.
9. Stogdill, R. M. (1974). *Handbook of leadership: A survey of theory and research*. Free Press.
10. Tannenbaum, R., Weschler, I. R., & Massarik, F. (1961). *Leadership and organization: A behavioral science approach*. McGraw-Hill

241/AE/SE201

MA. APPLIED ECONOMICS SEC

241/AE/SE201

SEMESTER II

		L	T	P	C
	Data Analysis with Statistical Softwares- I	0	0	2	2

Max. Marks: 50 **Practical Exam: 35**

Credits: 2 **Practical/ Internal Assessment: 15**

Course objective

The objective of the paper is to make students familiar with theory and application of statistical methods. This course covers the statistical foundations of data analysis including the statistical theory and its applications in Economics through MS Excel and SPSS.

Course Outcomes

CO1: Understand the use of MS Excel and SPSS in data analysis.

CO2: Develop research skills for in-depth analysis of Data

CO3: Ability to use mathematical, statistical, financial, and graphical functions available in MS Excel and SPSS for various computational works related to economics and business.

Module I- MS-Excel: Work sheet-entering data and creating work sheets and work book opening and formatting. Concept of Data-Record and File-types of Data-Data Entry-File handling and Operations like opening, appending and cascading-closing and attribute controls-Data Storage and Retrieval Data Operations-Preparation and Formatting of Text, Tables and Graphs-Estimation of Descriptive Statistics.

Module II- Cross Section & Panel Data Techniques and Methods using SPSS- Groups, Tables, Graphs and Objects, Descriptive Statistics, One Way Tabulation, Cross Tables, One Sample T Test, Independent Sample Test, Paired Sample T Test, One Way ANOVA, Correlation-Bivariate Partial, Regression-Least Square, Binary& Logistic Regression, 2 Stage Least Square, Factor Analysis, Principal Component, Panel Regression Analysis.

241|MAT|SE201

M.Sc. MATHEMATICS 2nd SEMESTER
Computational Technique Using MATLAB

SEC-01
Credits: 2(1L+1P)

Maximum Marks: 50
Theory External: 20
Theory Internal: 05
Practical External: 20
Practical Internal: 05

Max. Time: 2 hrs
Course ID:

Note: *There shall be nine questions in all. Question no. 1 shall be compulsory, consisting of four short answer type questions covering the entire syllabus. Two questions will be asked from each unit. Students will have to attempt one question from each unit. Each question shall carry equal marks.*

Course Learning Outcomes:

CLO1 Know the basic concepts of MATLAB software.
CLO2 Understand various elementary Matrix operations and loops.
CLO3 Study symbolic toolbox and programs for solving systems of linear equations.
CLO4 Learn various types of graphs using MATLAB.

Unit-I

Introduction to MATLAB Programming: Basics of MATLAB programming, Variables and assignments, Operators, Working with complex numbers, Mathematical operations, Functions for input and output.

Unit-II

Introduction to Matrices in MATLAB: Defining Matrices, Matrix functions, Matrix operations, Vector functions. Loops: for loops, while loops.

Unit-III

Linear Algebra: Solving a linear system, finding eigenvalues and eigenvectors, Numerical Integration, Introduction of symbolic toolbox, finding roots of polynomial equations.

Unit-IV

Graphs and plots: Basic 2-D plots, Overlay plots, specialized 2-D plots, 3-D plots, Interpolated surface plots, using subplots for multiple graphs, saving and printing graphs.

Practicals:

1. Basic mathematical computation.
2. Program to generate Matrix with addition, subtraction and multiplication of matrices.
3. Solving System of Linear equations with two variables.
4. Program to use inbuilt functions and creating new functions.
5. Plotting the graph of function of two variables
6. Program to Differentiate and Integrate.
7. Program to find root of higher degree equations.
8. To plot Graph of Various Functions like sin x, cos x, etc.
9. To find Eigenvalues and Eigenvectors of given matrix.

Mark

241/BOT/SE201

Skill Enhancement Course

BOTANY: SEMESTER-II								
Course Code	Course ID	Course Title	Credit	Contact Hours/Week	Internal Assessment marks	End Term Marks	Max. Marks	Exam Duration
SEC-01 2 credit		Genomics	2	2	15	35	50	3 hrs.

Course Learning Outcomes (CLO)

1. The students get acquainted about the basic principles of DNA sequencing and evolution of DNA sequencing techniques.
2. Help the students to understand methods/techniques employed in proteome and genome analysis.
3. This course will enable the students to learn about the various databases utilize for the storage and analysis of proteome/genome information.
4. The students will learn about the various computational tools used for analysis of genome sequence data.

Instructions for Paper-Setter

1. Nine questions will be set in all. All questions will carry equal marks.
2. Question No. 1, which will be short answer type covering the entire syllabus, will be compulsory. The remaining eight questions will be set unit wise selecting two questions from each Unit I to IV. The candidate will be required to attempt question No. 1 and four more questions selecting one question from each unit.

UNIT	TOPICS	CONTACT HOURS
I	**Genome**: Completely sequenced prokaryotic and eukaryotic genomes; Mitochondrial and Chloroplast genomes. **Mapping of Genome**: Genetic mapping- using DNA markers and Linkage analysis; Physical mapping- restriction mapping, Fluorescent *in-situ* hybridization and Sequence Tagged Sites (STSs) mapping.	8
II	**Genome sequencing**: Chain termination and chemical degradation methods; Next generation sequencing (NGS)- Human Genome Project. **Understanding a Genome Sequence**: Gene location using 1.) ORF scanning, Automatic annotation, Homology searches and comparative genomics. 2.) Experimental techniques- northern hybridization, cDNA sequencing and RACE.	8
III	**Identification of a Gene Function**: Using computer analysis; Experimental analysis- gene inactivation and overexpression; Directed mutagenePsis; Reporter genes and Immunocytochemistry. **Analysis of the Transcriptome**: Expressed Sequence Tags (ESTs); Serial analysis of gene expression (SAGE); Differential Display (DD); Representational Difference Analysis (RDA) and DNA Microarrays. **Proteome Analysis:** Using 2-D; Protein identification; Protein-DNA and Protein- Protein interactions and Biochips.	7
IV	**Biological Databases**: Introduction; Primary and Specialized Databases; Database Scheme; Database Annotation; Retrieval System; Nucleotide Databases; Protein Databases; Genomic Databases and Resources; Gene Databases and Resources; Transcriptome Databases; Mutation Databases; Mitochondrial Databases and Resources.	7

Learning Resources

1. Birren B, Green ED, Klapholz S, Myers RM and Roskams J (1997) Genome Analysis, CSHL Press.
2. Brown TA (1999) Genomes. John Wiley & Sons (Asia) Pvt. Ltd., Singapore.
3. Brown TA (2002) Genomes 2, Wiley-Liss, New York
4. Brown TA (2007) Genomes 3, Garland Science Publishing New York, London.
5. Chawla HS (2009) Introduction to Plant Biotechnology (3rd Ed.). Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
6. Dale JW, Schantz MV and Plant N (2012) From Genes to Genomes (3rd Ed.), John Wiley and Sons, Ltd. UK.
7. Dawson, MT, Powell R and L Gannon F (1996) Gene Technology, BIOS Sci. Pub. Ltd., Oxford, UK. DNA Amplification, Stockton Press, New York, USA.

24.01.25

8. Glick B and Pasternak JJ (2003), Molecular Biotechnology (3rd Ed), ASM Press, Washington.
9. Hartl DL and Ruvolo M (2011) Genetics- Analysis of Genes and Genomes (8th Ed.), Jones and Bartlett Publishers, Inc., USA.
10. Hunt SP and Livesey FJ (2000) Functional Genomics, Oxford University Press, New York. London.
11. Lewin B (2005) Genes VIII, Oxford University Press, Oxford, UK

M.Sc. ENVIRONMENTAL SCIENCE – SEMESTER- II
SUBJECT NAME: BASICS OF REMOTE SENSING AND GIS
COURSE CODE: SEC-1
Course ID: .

NO. OF CREDITS: 2

L	T	P		
2	0	0	**TE**	: 50
			Total	: 50

Note: 1. Nine questions will be set in all. All questions will carry equal marks.
2. Question no. 1 which will be short answer type, covering the entire syllabus will be compulsory. The remaining eight questions will be set unit wise selecting two questions from each unit I to IV.
The candidates will be required to attempt question no.1and four more questions.

Outcomes: After course completion learner will be able to:

CO.1 Understand the concepts of Photogrametry and compute the heights of objects

CO.2 Understand the principles of aerial and satellite remote sensing, comprehend the energy interactions with earth surface features, spectral properties of water bodies.

CO.3 Understand the basic concept of GIS and its applications, know different types of data representation in GIS

CO.4 Illustrate spatial and non-spatial data features in GIS and understand the map projections and coordinates systems

CO.5 Apply knowledge of GIS and understand the integration of Remote Sensing and GIS

Unit - I

Definition, Introduction and scope of remote sensing. Electromagnetic radiation, atmosphere window, Platforms, Sensors and type of scanning systems. Basic characteristics of sensors; salient features of sensors used in LANDSAT, SPOT and Indian remote sensing satellites.

Unit - 2

Aerial photography- vantage point, cameras, Filters and types of films. Elements of visual image interpretation. Multispectral Remote sensing, Microwave Remote sensing, Photogrammetry - Introduction, Stereo- scopic vision, Projection types.

Unit - 3

Digital image and image structure, Image restoration and image enhancement. Image classification. Remote sensing application in Forestry, Ecology and environment, Land use, Agriculture, soils and geology, Disaster management.

Unit- 4

GIS technology and its uses in environmental science, Hardware and software requirement for

24.01.25

GIS. Conceptual model of spatial information, Conceptual model of non-spatial information. GPS.

References:

1. Introduction to Environmental remote sensing - Curtis

2. Principles of Remote sensing - Lily and kliffer.

24.01.25

241/MUS/SE201

MA Music SEC

SEMESTER - 2

Name of Subject: **Harmonium Practical Aptitude**	Maximum Practical Marks : 50 (15+35)
Subject Code:	

Course Objectives

1. To know about the basic knowledge of Music.
2. To know about the Basic knowledge of Harmonium.

Course Outcomes

On successful completion of this course, the students will be able to

1. Students will get basic knowledge of Indian Music.
2. Students will learn the basic knowledge of Harmonium.

Unit – 1

1. Play 5 Alankar in any Taal.
2. Play Shudha and Vikrit Swara on harmonium.
3. Play Swaras in all three Saptak.

Unit – 2

1. Play Swaras of ten Thaats of Hindustani Sangeet.
2. Play Raag Bhupali Composition on Harmonium.
3. Play any 1 songs based on Ragas.

Suggested Readings: -

1. Harmonium: Vividh Aayam: Dr Vinay Kumar Mishra :- Akanksha Publication, New Delhi, 1stEditon: 2015
2. Samvadini – Jayant Bhalodkar :- Kanishka Publication, New Delhi, 1st Edition: 2006
3. Abhinav Geetanjali Part 5th: Pandit Ramashreya Jha, Sangeet Sadan Prakashan, Allahabad.

241/PSY/SE201

Skill Enhancement Course from the department for pool of the Courses in the University
(These courses are offered by Department of Psychology for students of other departments/same departmentand is designed to provide value-based and/or skill-based knowledge and should contain both theory and lab/hands-on/training/field work.)

M.Sc. Psychology/ M.A. Psychology
Semester 2

Counselling Skills and Techniques

SEC-1 Counselling: Skills & Techniques (
Credits:2 (Hrs./Week: 2)

Maximum Marks: 50
Theory Examination: 20
Internal Assessment: 05
Practical Examination: 20
Practical Assessment: 05
Time: 2 hrs.

Note: The students will be required to attempt three questions in all. Question No. I will be compulsory comprising of 8 short answer type questions of 1 mark each and will cover the entire syllabus. The answer should be in 100 words. The students are required to attempt six short answer type questions out of 8, i.e., 6 x1 = 6 marks. In addition to it, Question Nos. II to V will consist of long answer (essay type) questions, two Questions from each Unit with internal choice carrying 7 marks each i.e. 2x7 =14 marks thus making it the total weight age to 20 marks. Two questions to be attempted. One from each unit.

Course Outcomes:

- Students will demonstrate a comprehensive understanding of the basic steps, types and approaches of counselling.
- Students will cultivate critical thinking skills to analyze and apply different counselling skills.
- Students will demonstrate the practical application of counselling skills and techniques by effectively utilizing reinforcement, mindfulness, meditation, and art therapies in real-world situations.

Unit-I

Guidance v/s Counselling; Counselling: Meaning, Goals, Process of counselling, Needs and Types of counselling; Basic counselling skills.

Contemporary Issues in counselling: Working with children and their parents, older adults, differently abled and substance abusers.

Unit-2

Strategies of Counselling: Directive, Non-Directive Approach to Counselling. Psychoanalytic approaches to counselling.

Behavioural Contingencies: Reinforcements, Premack Principle, Shaping and Modelling. Promotional Approaches: Creative Art Therapies, Mindfulness ,yoga, meditation

Suggested Readings:

1. Capuzzi, D and Gross D.R. (2008). Counseling and Psychotherapy Theories and Interventions.Dorling Kindersley (India) Pvt. Ltd., Licensees of Pearson Education in South Asia.
2. Gibson, R.L., & Mitchell, M.H. (2008). Introduction to Counselling and Guidance. Delhi:PHI Learning.
3. Sharma, R. A. (2007). Fundamentals of Guidance and Counselling. Meerut: R. Lall Book.
4. Gladding, S.T and Batra, P (2018). Counseling A Comprehensive Profession. Pearsons India Education services Pvt. Ltd.
5. Bhola, P. &Raghuram, A. (2016). Ethical Issues in Counselling and Psychotherapy Practice:
6. Murphy, J.J. (2015). Solutions Focused Counselling in Schools. Wiley. (Chapter 3, Appendix E, G, H, J)
7. Nelson, R. J. (2015) Theory and Practice of Counselling and Psychotherapy. 6th edition. New Delhi: Sage South Asia.
8. Capuzzi, D. & Stauffer, M. D. (2022). Counselling and Psychotherapy: Theories and Interventions (7th Ed.) American Counselling Association
9. Seligman, L &Reichenberg, L.W. (2010) Theories of counselling and Psychotherapy. New Jersey: Pearson (SFBT and family systems)

241/MSW/SE201

Master of Social Work
Semester – II
Counselling in Social Work

SEC-01
Credits: 2 (Hrs./Week: 2)
Maximum Marks: 50
Theory Examination: 35
Internal Assessment: 15

Course Outcomes:

- Develop Proficiency in Counselling Techniques
- Demonstrate Essential Counselling Skills
- Apply counselling methods effectively in social work to address psychosocial needs

Unit-I
Introduction to Counselling

- Counselling: Concept, Types & Scope
- Assumptions, Principles, and Goals of Counselling
- Attributes of a Counsellor
- Counsellor Self-Care

Unit-II
Stages and Skills of Interpersonal Counselling

- Stages in the Interpersonal Counselling Process
- Counselling Skills for Relationship Building and Exploration
- Counselling Skills for Developing a New Perspective
- Counselling Skills for Facilitating Positive Action, Goal Setting, and Follow-Up

Unit-III
Therapeutic Interventions

- Grief and Trauma Counselling
- Child-Centered Counselling
- Motivational Enhancement Therapy for Working with Addiction
- Solution-Focused Therapy

Unit-IV
Application and Integration of Counselling in Social Work

- Counselling in Diverse Settings
- Cross-Cultural Counselling
- Integrating Counselling with Social Work Practice
- Evaluation and Ethical Issues in Counselling

Suggested Readings:

Neilson, P., & Others (Eds.). (2016). Creative arts in counselling and mental health.

Jones, R. N. (2011). Theory and practice of counselling and therapy (5th ed.). Sage Publications.

Corey, G. (2005). Theory and practice of counselling and psychotherapy. Brooks/Cole.

Worden, J. W. (2001). Grief counseling and grief therapy: A handbook for the mental health professional. Springer Publishing Company.

Hoffman, M. A. (1996). Counseling clients with HIV disease. Guilford Press.

Street, E. (1994). Counselling for family problems. Sage Publications.

Young, M. E. (1992). Counselling methods and techniques: An eclectic approach. Macmillan.

Velleman, R. (1992). Counselling for alcohol problems. Sage Publications.

Ivey, A. E., & Others. (1987). Counselling and psychotherapy: Integrating skills, theory and practice (2nd ed.). Prentice Hall.

Patterson, C. H. (1986). Theories of counselling and psychotherapy. Harper & Row.

Karpf, M. J. D., & Others. (1958). Marriage counseling: A casebook. Association Press.

Pepinsky, H. B., & Others. (1954). Counselling theory and practice. Ronald Press Company.

Loughran, H. (2019). Counselling skills for social workers. Routledge.

Boynton, H. M., & Vis, J.-A. (Eds.). (2022). Trauma, spirituality, and posttraumatic growth in clinical social work practice (Paperback ed.). University of Toronto Press.

Seden, J. (2005). Counselling skills in social work practice (2nd ed.). Open University Press, McGraw-Hill Education.

Miller, L. (2011). *Counselling skills for social work.* SAGE.

241/HIS/SE201

SEC -01 BASICS OF ARCHAEOLOGY

Credit: 2 (Hrs/week: 2)

Maximum Marks: 50
Theory Examination: 35
Internal Assessment: 15
Time: 3 Hours

Learning Outcomes:

- To acquaint with the discipline of archaeology with regards to aims, scope and history
- To understand the theoretical concepts and practices in data collection in archaeology
- To appreciate various dating methods in grasping and interpreting historical data.
- To delineate various trends and conservation methods in Archaeology and their application in interpreting historical data.

Note: The students will be required to attempt three questions in all. Question No. I will be compulsory comprising of 8 short answer type questions of 3 marks each and will cover the entire syllabus. The answer should be in 100-200 words. The students are required to attempt five short answer type questions out of 8, i.e., 5X 3 = 15 marks. In addition to it, Question Nos. II to IX will consist of long answer (essay type) questions, two Questions from each Unit with internal choice carrying 5 marks each i.e. 4 X 5 = 20 marks thus making it the total weight age to 35 marks. Two questions to be attempted. One from each unit.

Unit I: Definition, Aims , scope and History

Definition, aims, scope, Development of studies in Archaeology from antiquarian till the present, History of Indian Archaeology (from Cunnigham to Wheeler)

Unit II: Methods of Data Extraction and Documentation

Aims and Methods of Exploration, Methods of Excavations-Vertical and Horizontal,
Maintaining record of the excavated remains.

Unit III: Chronology and Dating Methods

Stratigraphy , Methods of Dating- Relative and Absolute

Unit IV: New Trends in Indian Archaeology and Conservation Techniques

Marine Archaeology in Indian Context , New Archaeology, Industrial Archaeology, various conservation and preservation methods of archaeological remains.

Recommended Readings:

- Binford, L. R., An Archaeological Prespective, London, 1972.
- Daniel, G. A., Hundred Years of Archaeology, London, 1950.
- Sankalia, H. D., New Archaeology: Its Scope and Application in India, Lucknow, 1977. Wheeler, M., Archaeology from the Earth, New Delhi, 1968.
- Chakrabarti,D. K. 1988, History of Indian Archaeology. Delhi: Munshiram Manoharlal.
- Fagan, Brian.1994. In the Beginning: An Introduction to Archaeology. London.
- Agrawal,D.P and M.D.Yadava. 1995. Dating the Human Past. Pune: ISPQS.
- Allchin, B. and F. R. Allchin. 1982. The Rise of Civilization in India and Pakistan. Cambridge: Cambridge University Press. 37

- Allchin, B. and F. R. Allchin. 1997. Origins of a Civilization: The Prehistory and Early Archaeology of India. New Delhi: Penguin Books India.
- Chakrabarti, D. K. 2012, Fifty Years of Indian Archaeology (1960-2010): Journey of a Foot Soldier. New Delhi: Aryan Books International
- Dhavalikar, M.K. 1999. Historical Archaeology of India. Delhi: Books and Books.
- Ghosh, A. 1989. An Encyclopaedia of Indian Archaeology. Vols. I and II. New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd.
- Sengupta, G. and K. Gangopadhyay. 2009. Archaeology in India – Individuals, Ideas and Institutions. New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd.
- Skeates, R., C. McDavid and J. Carman. 2012, The Oxford Handbook of Public Archaeology. Oxford: Oxford University Press.
- Walker, M. 2005. Quaternary Dating Methods. West Sussex: John Wiley and Sons.

241/GEO/SE201

Gurugram University Gurugram, Haryana(India)

PG Program: (Semester-II) **Geography** Subject SEC-1 Paper Syllabus
(as per NEP 2020 w.e.f session 2024-25)

READING AND INTERPRETATION OF MAPS

Paper Code: **SEC-01 (Theory and Practical Paper)**
Course Id:

Credit: 02 (1+0+2) L+T+P Hrs/Week	**Total Marks**	**50**
Time: 3 Hours Theory	End Semester Exam: Internal Assessment: (Attendance)	20 Marks 5 Marks
Note: Theory Exam: as the instructions mentioned under **Practical Exam:** as the instructions mentioned under Practical Exam Time: 3 Hours	Practical Exam: Internal Assessment: Attendance	20 Marks 5 Marks

Course Outcomes (COs):

CO-01: The students will able to understand Maps, their different types and their essentials elements.
CO-02: They will know and application of geographical coordinates with their importance.
CO-03: They will be able to understand Weather map, Topographical map, Conventional signs and Digital mapping through GIS.
CO-04: The Students will able to learn essential observational and practical skills to identify different features on various types of maps and their appropriate interpretation.

Theory

UNIT-I

Cartography: Meaning, brief History and development.
Maps: Meaning and classification. Map and Sketch, Elements of Map. Map and Globe
Map Scale: Types and conversion. Small scale and Large scale maps.

UNIT-II

Directions and sub-directions: Methods of determination of North Direction.
Latitudes and Longitudes: their marking, reading and importance, Geographical Location of any place.
Local Time and Standard Time, World Time Zones.

UNIT-III

Symbols: Conventional signs and Weather symbols. Isopleths: Types and significance.
Topographical Map: Types, Reading and Interpretation of Topographical Map
Area and Length calculation. GIS and digital mapping.

Practical

UNIT-IV

Reading and Interpretation of Physical Map: Physical feature analysis.
Reading and Interpretation of Political Map: Cultural feature analysis.
Weather Map: Reading and Interpretation of Weather Map.

Note: Theory Exam

1. The Question one of paper is compulsory. Question one of paper will contain short answer type of five marks covering entire course.
2. The question paper will comprise two questions from each Unit (Unit-1,2 & 3) total six question in all. Candidates are required to attempt one question from each unit which will be of five marks each.

Note: Practical Exam

1. The question paper unit four will comprise practical part. Candidates (s) are required to prepare one each on interpretation of Physical Map, interpretation of Political Map and Weather Map report. These reports will be of 05 marks each.
2. Candidates will be required to prepare report precisely on the specified Analysis of different Maps.
3. Map reports will be of Maximum 15 Marks.
4. Viva Voce will be of Maximum 5 Marks

Suggested Readings:

- Maling, H.(1973): Co-Ordinate System and Map Projections, George Philip, London.
- Mishra, R.N. and Sharma, P.K.(2020): Prayogik Bhugol, (in Hindi), Rawat Publications, Jaipur.
- Misra, R.P. and Ramesh, A.(1989): Fundamental of Cartography, Concept Publishing Company, New Delhi.
- Richardus, P. and Adler Ron K.(1972): Map Projections, North Holland Publishing Co., Amsterdam.
- Robinson, A.H. et. Al. (1992): Elements of Cartography, John Willy & Sons, New York, 6th edition.
- Sarkar, A. (2015): Practical Geography: A Systematic Approach, Orient Black Swan Private Ltd., New Delhi.
- Sharma, J.P.(2020): Prayogik Bhugol, (in Hindi), Rastogi Publications, Meerut.
- Singh, R. L. and P. K. Dutta, (2012): Prayogatmak Bhugol, (in Hindi), Central Book Depot, Allahabad.
- Singh, R.L.and Rana P.B. Singh (2020): Elements of Practical Geography, Kalyani Publishers, Ludhiana.

241/SOC/SE201

Semester-II

SEC-1 Basics of Social Research

Credit- 2

Maximum Marks –50

Theory – 35

Internal Assessment – 15

Time – 2 hours

The students will be required to attempt three questions in all. Question No. I will be compulsory comprising of 8 short answer type questions of 3 marks each and will cover the entire syllabus. The answer should be in 100-200 words.The students are required to attempt five short answer type questions out of 8,i.e., 5X 3 = 15 marks. In addition to it, Question Nos. II to V will consist of long answer (essay type) questions, two Questions from each Unit with internal choice carrying 10 marks each i.e. 2 X 10 = 20 marks thus making it the total weight age to 35 marks .Two questions to be attempted. One from each unit.

Course Outcomes:

- Students will be introduced with concept of social research,.
- Students will learn about both quantitative and qualitative methods of data collection

UNIT – I

Concepts of Social Research: Nature, Definition and Steps of Social Research; Objectivity and Subjectivity in Social Research

UNIT – II

Quantitative and Qualitative Methods: Nature & Characteristics of observation, questionnaire, Schedule, Interview, Case Study, Content Analysis and Social Survey - Their Importance in Social Research

Readings :

Ahuja, Ram (2001): Research Methods, New Delhi: Rawat Publication.

Goode, W.J. and P.K.Hatt (1952): Methods in Social Research, New York: McGraw International.

Seltiz, Claise et al; (1959): Research Methods in Social Relation, New York: Henry Holt and Co.

Srivastava, Prakash G.N.(1994): Advances Research Methodology, Delhi: Radha

Publication.

Thakur, Devender(2003): Research Methodology in Social Science, Delhi: Deep and Deep Publication.

Young, P.V.(1988): Scientific Social Survey and Research, New Delhi Prentice Hall.

241/ZOO/SE201

Skill Enhancement Course

ZOOLOGY: SEMESTER-II								
Course Code	Course ID	Course Title	Credit	Contact Hours/Week	Internal Assessment marks	End Term Marks	Max. Marks	Exam Duration
SEC-1		Economic Zoology	1	1	5	20	25	3 hr
			1	2	5	20	25	

Course Learning Outcomes (CLO)

1. Students will understand the economic importance of various animals and their roles in agriculture, medicine, and industry.
2. Students will gain knowledge about the management and sustainable utilization of economically significant animal resources.
3. Students will be able to identify and address the challenges related to pest control, animal husbandry, and aquaculture practices.
4. Students will develop skills in the conservation of economically valuable species and the assessment of their ecological impacts.

Instructions for Paper-Setter

1. Five questions will be set in all. All questions will carry equal marks.
2. Question No. 1, which will be short answer type covering the entire syllabus, will be compulsory. The remaining four questions will be set unitwise selecting two questions from each Unit . The candidate will be required to attempt question No. 1 and two more questions selecting one question from each unit.

UNIT	TOPICS	CONTACT HOURS
I	Definition and scope of economic zoology, importance of animals in agriculture, medicine, and industry, Historical developments and contributions of eminent zoologists, Impact of zoological research on economic development. Economic status and products of poultry keeping and dairy industry in Haryana	8
II	Role of insects in pollination and pest control, impact of parasitic invertebrates on human and animal health, utilization of mollusks, crustaceans, and other invertebrates in industries, apiculture, sericulture, and lac culture	7
Practical	1. Techniques for breeding and managing livestocks 2. Rearing insects for food, feed or other products 3. Identification and management of economically important insects 4. Testing and quality control of animal products 5. Analysis of nutritional value and safety 6. Market analysis and product development	30

Learning Resources

1. Jordan, E.L. & Verma, P.S. (2018). Invertebrate Zoology. S. Chand Publishing (New Delhi), pp. 1200.
2. Shukla, G.S. & Upadhyay, V.B. (2010). Economic Zoology. Rastogi Publications (Meerut), pp. 600.
3. Srivastava, R.P. & Singh, R.P. (2002). An Introduction to Economic Zoology. Anmol Publications (New Delhi), pp. 500.
4. Kotpal, R.L. (2019). Modern Textbook of Zoology: Invertebrates. Rastogi Publications (Meerut), pp. 900.
5. Atwal, A.S. & Dhaliwal, G.S. (2005). Agricultural Pests of South Asia and Their Management. Kalyani Publishers (Ludhiana), pp. 487.

24.01.25

241/SKT/SE202

SEMESTER: II
SKILL ENHANCEMENT COURSES
MA (Sanskrit)

Course Code	241/SKT/SE202	Credit	Structure			
			L	T	P	TOTAL CREDIT UNITS
Course Title	**Introduction to Jyotish Shastra**		1	0	1	2

Instructions for External Examiner: This question paper shall be divided in two sections. Examiner is requested to set section A as compulsory question and from the entire syllabus (can be either objective or subjective). Section B will be in choice from two of the questions from each unit. The students will be required to attempt one question from each unit. All questions from each unit will carry equal marks.

Course Description:
This foundational course provides a comprehensive introduction to the principles and practices of Jyotisha, the ancient Indian system of astrology. It bridges theoretical knowledge with practical applications, enabling students to understand celestial influences on human life and how to interpret them.

Course Objectives:

- To explore the historical, philosophical, and cultural roots of Jyotisha and its relevance in modern times.
- To familiarize students with key texts and scriptures related to astrology, such as the *Brihat Parashara Hora Shastra* and *Saravali*.
- To provide a comprehensive understanding of planetary positions, zodiac signs, and their significance.
- To study the Panchang (Hindu almanac) and its components: Tithi, Vara, Nakshatra, Yoga, and Karana.
- To teach the role of time, place, and date in astrological calculations.
- To demonstrate how to assess and predict life events through case studies and real-life examples.
- To introduce traditional remedies such as mantra chanting, gemstone recommendations, and rituals for planetary pacification.
- To understand the connections between Jyotisha and related fields like Ayurveda, Yoga, and Vastu Shastra.

Learning Objectives: By the end of the course, students will:

- Understand the historical and philosophical roots of Jyotisha.

- Learn the fundamental concepts of planetary positions, houses, and zodiac signs.
- Gain proficiency in constructing and analyzing a birth chart (kundali).
- Apply astrological principles to assess aspects of life such as health, career, relationships, and spirituality.
- Explore practical remedies like mantras, gemstones, and rituals for balancing planetary influences.

इकाई 01:

- ज्योतिष शास्त्र का परिचय
- ज्योतिष का इतिहास और विकास।
- वैदिक, पारंपरिक और आधुनिक ज्योतिष का परिचय।
- ज्योतिष और अन्य विद्या जैसे आयुर्वेद, वास्तु से संबंध।

इकाई 02:

- ग्रह, नक्षत्र, राशि और उनके गुण।
- पंचांग का परिचय (वार, तिथि, नक्षत्र, योग, करण)।
- सूर्य और चंद्र कैलेंडर का उपयोग।
- कुंडली क्या है और इसके प्रकार।

इकाई 03: (व्यावहारिक)

- सॉफ्टवेयर और मैन्युअल विधियों से कुंडली बनाना।
- व्यक्ति के स्वास्थ्य, शिक्षा, विवाह, करियर और धन पर ग्रहों का प्रभाव।
- मंत्र, रत्न और यंत्र का उपयोग।
- व्रत और धार्मिक अनुष्ठान।
- ग्रह शांति के उपाय।

Suggested Readings

1. भारतीय ज्योतिषशास्त्र का इतिहास-गोरखप्रसाद, हिन्दी संस्थान, लखनऊ।
2. भारतीय ज्योतिषशास्त्र का इतिहास-नेमिचंद्रशास्त्री, भारतीयज्ञानपीठ, नई दिल्ली।
3. भारतीय ज्योतिषशास्त्र का इतिहास शंकर बालकृष्ण दीक्षित (अनु.), शिवनाथ झारखण्डी, हिन्दी संस्थान, लखनऊ।
4. भारतीय कुण्डली विज्ञान ओझा, मीठालाल हिम्मतराम, देवर्षि प्रकाशन, वाराणसी।
5. भारतीय कुण्डली विज्ञान-झा, सुरकांत, चौखंभा संस्कृत सीरीज ऑफिस, वाराणसी
6. भारतीय ज्योतिष शास्त्री, नेमिचन्द्र, भारतीय ज्ञानपीठ प्रकाशन, नईदिल्ली- 1987
7. History of Indian Astronomy - Sankar Balkrishna Dikshit, Government of India Book Dept., Calcutta.
8. Tucker, W.M. Astrology for Everyman, Sagar Publication, New Delhi.

SEC-1

Script Nigaari Max Marks:35

اسکرپٹ نگاری

Objective:

اس پرچے کا مقصد یہ ہے کہ:

۱۔طلباء ایک کہانی کو اسرپٹ میں بدلنے کا طریقہ سیکھ سکیں تا کہ وہ ٹیلی وژن کی دنیا میں بہتر اسکرپٹ لکھ کر معاشی بہتری حاصل کر سکیں اور اپنے اندر لکھنے کا ہنر پیدا کر سکیں ۔

Course Outcome:

اس پرچے کی مکمل تدریس کے بعد طلباء اس قابل ہو جائیں گے کہ وہ:

۱۔اکرپٹ کیا ہوتی ہے اور اس کی کیتنی قسمیں ہیں جان جائیں گے۔

۲۔اسکرپٹ نگاری کے کچھ اصول ہوتے ہیں مثلاً ریسرچ، ڈانچہ، منصوبہ یا تجویز، بصری مکالمہ ان سے واقف ہو جائیں۔

۳۔اسکرپٹ لکھنے کا مشق انہیں بہتر اسکرپٹ لکھنے میں مدد کریگا اور وہ اچھے اسکرپٹ نگار بن سکتے ہیں۔

unit-1

اسکرپٹ کی تعریف اور قسمیں

unit-2

اسکرپٹ نگاری کے اصول

(ریسرچ، ڈانچہ، منصوبہ یا تجویز، بصری، مکالمہ)

unit-3

کہانی کو اسکرپٹ میں بدلنے کا تریقہ

unit-4

اسکرپٹ لکھنے کی مشق

کتب برائے مطالعہ

۱۔انجم عثمانی، ٹیلی وژن نشریات، مکتبہ جامعہ، نئی دہلی

۲۔کمال احمد صدیقی، اردو ریڈیو اور ٹیلی ویژن میں ابلاغ کی زبان، قومی اردو کونسل، نئی دہلی

۳۔اے کے چڑجی، عوامی ترسیل، نیشنل بک ٹرسٹ، نئی دہلی

۴۔(ہندی) منوہر شیام جوشی، پٹ کتھا لیکھن: ایک پریچئے، راج کمل پرکاشن

۵۔(ہندی) اصرف وجاہت: پٹ کتھا لیکھن بیوہارک نبر دشیکا

Instructions to the Paper-Setter and Students:

All questions are compulsory to attempt.

Unit-1 There will be two questions of which one is to be opted of 10 marks.

Unit-2 There will be two questions of which one is to be opted 10 marks.

Unit-3 There will be two questions of which one is to be opted 8 marks.

Unit-4 There will be two questions of which one is to be opted 7 marks.

241/MPH/SE201

Computer Application (Credit 2)

Unit-I

–Fundamentals of Computer-Hardware and Software Application of Computers

–Operating System

–Internet

Unit-II

–MS-Office's-Word, MS- Excel & Power Point

–MS-DOS, MS WINDOWS

–Introduction to Data Base Management System

–Spreadsheet: Introduction to Spreadsheet -Application —Data Entry — Statistical, Logical and Financial Functions -Graphical Application and Data Analysis

Books:

- **K. Park, Textbook of Preventive & Social Medicine, Banarsidas Bhanot Publishers Jabalpur India**
- **Coroxtn and Cowden Applied General Statistics**
- **Mueller and Schuessler-Statistical Reasoning in Sociology**
- **Lohen, Lilian-Statistical methods for Social Science**

241/MEDU/SE201

Semester 2

e-Content Development-I

Course Code : SEC-1
Course Title: e-Content Development-I
Credits:2 (Hrs./Week: 2)

Maximum Marks: 50
Theory Examination: 20
Internal Assessment: 05
Practical Examination: 20
Practical Assessment: 05
Time: 2 hrs.

Course Outcomes:

- After completion of the course students will be able to:
- Write e-content incorporating images, graphics etc.
- Include multimedia supplements in the e-contents
- Incorporate relevant supplementary study materials

Unit -1 (Quadrant-I) (e-Text):

- Content Writer is expected to write detailed write-up on the topic of module as per content

structure. The textual description should also be enriched with multimedia supplements, wherever applicable. Multimedia supplements may include images, animations, graphics, video or audio clips, line drawings, hand drawings whichever applicable/possible. For each topic or subtopic, Content Writer should use examples to explain the module, if required.

Unit –II (Quadrant-III) (Learn More / Source for Further reading / Web Resources):

This quadrant contains supplementary material of the topic of the module in different forms like other related reading materials, source of further reading (such as books, articles etc.) and links to websites dealing with the topic etc.

Suggested Readings:

1. **Smith, J. (2022). *Understanding Digital Learning*. XYZ Publications.**
2. **Doe, J. (2021). *Educational Technology in the Modern Classroom*. ABC Press.**
3. **Johnson, E. (2020). *Theories and Practices of Online Education*. EduTech Books.**

Web Resources:

1. **Edutopia. (n.d.). *Technology Integration*. Retrieved from https://www.edutopia.org**
2. **Coursera. (n.d.). *Educational Technology Courses*. Retrieved from https://www.coursera.org**
3. **Educational Technology and Mobile Learning. (n.d.). *Tools and Resources*. Retrieved from https://www.educatorstechnology.com**
4. **OER Commons. (n.d.). *Open Educational Resources*. Retrieved from https://www.oercommons.org**

241/MEDU/SE201

Skill Enhancement Course from the department for pool of the Courses in the University

(These courses are offered by Department of Education for students of other departments/same department and is designed to provide value-based and/or skill-based knowledge and should contain both theory and lab/hands-on/training/field work.)

The student has to opt one from the following two skill enhancement courses

Semester 2

SEC-1

Course Title: E-CONTENT DEVELOPMENT-I

Credits:2 (Hrs./Week: 2)

Maximum Marks: 50
Theory Examination: 20
Internal Assessment: 05
Practical Examination: 20
Practical Assessment: 05
Time: 2 hrs.

Course Outcomes:

- After completion of the course students will be able to:
- Write e-content incorporating images, graphics etc.
- Include multimedia supplements in the e-contents
- Incorporate relevant supplementary study materials

Unit -1 (Quadrant-I) (e-Text):

Content Writer is expected to write detailed write-up on the topic of module as per content structure. The textual description should also be enriched with multimedia supplements, wherever applicable. Multimedia supplements may include images, animations, graphics, video or audio clips, line drawings, hand drawings whichever applicable/possible. For each topic or subtopic, Content Writer should use examples to explain the module, if required.

Unit –II (Quadrant-III) (Learn More / Source for Further reading / Web Resources):

This quadrant contains supplementary material of the topic of the module in different forms like other related reading materials, source of further reading (such as books, articles etc.) and links to websites dealing with the topic etc.

Practicum:

1. **Develop e-Content**: Create detailed and structured e-content enriched with multimedia elements like images, graphics, and videos.

2. **Multimedia Enhancement**: Integrate and edit animations, audio clips, and other relevant media to enhance the learning experience.
3. **Supplementary Materials**: Compile additional resources such as articles, books, and web links related to the e-content topic.
4. **Peer Review**: Collaborate with peers for feedback and refine the content for clarity and accuracy.
5. **Presentation**: Present the final e-content, emphasizing its structure, multimedia features, and supplementary materials.

Suggested Readings:

1. **Smith, J. (2022). *Understanding Digital Learning*. XYZ Publications.**
2. **Doe, J. (2021). *Educational Technology in the Modern Classroom*. ABC Press.**
3. **Johnson, E. (2020). *Theories and Practices of Online Education*. EduTech Books.**

Web Resources:

1. **Edutopia. (n.d.). *Technology Integration*. Retrieved from https://www.edutopia.org**
2. **Coursera. (n.d.). *Educational Technology Courses*. Retrieved from https://www.coursera.org**
3. **Educational Technology and Mobile Learning. (n.d.). *Tools and Resources*. Retrieved from https://www.educatorstechnology.com**
4. **OER Commons. (n.d.). *Open Educational Resources*. Retrieved from https://www.oercommons.org**

241/MEDU/SE202

OR

SEC-1

Course Tittle: EDUCATIONAL GUIDANCE AND COUNSELLING -I

Credits:2 (Hrs./Week: 2)

Maximum Marks: 50
Theory Examination: 20
Internal Assessment: 05
Practical Examination: 20
Practical Assessment: 05
Time: 2 hrs.

Course Outcomes

After completion of the course, students will be able to

- **Identify the areas/situations that need guidance and counselling**
- **Identify the students with behavioural problems and design remedial measures**
- **Acquaint oneself with different types and approaches to counselling**

Unit-1

Meaning of Guidance and Counselling, Individual and Group guidance techniques: career talk, orientation talk, group discussion Nature and causes of behavioural problems among underachieving students, school discipline problems, bullying, drug abuse, truancy, and dropout

Practicum:

Prepare an Orientation programme schedule for the first semester students of our university Organise group discussions on any topic relevant to guidance and counseling Use different tools to assess behavioural problems in adolescents.

Prepare a documentary on any of the behavioural problems of adolescents Design remedial measures for children having behavioural problems

Unit-II

Types of counselling: Directive counselling, Non- directive counselling and Eclectic counselling Approaches to counselling: Cognitive- Behavioural by Albert Ellis – REBT & Humanistic, Person-centered Counselling by Carl Rogers

Practicum:

Conduct simulated situations to practice Directive counselling, Non- directive counselling and Eclectic counselling Identify various case studies where different areas of counselling are addressed

Transaction Mode

Seminar, practicum, field visit, e-tutoring, peer group discussion, self-learning, Collaborative learning and Cooperative learning

Suggested Readings

1. Gibson, R. L., & Mitchell, M. H. (2008). *Introduction to counselling and guidance*. New Jersey: Pearson Prentice Hall.
2. Gupta, S. (2013). *Guidance and career counselling*. New Delhi: APH Publishing Corporation.
3. Jothiet. (2009). *Guidance and counselling*. New Delhi: Centrum Press.
4. Naik, D. (2007). *Fundamentals of guidance and counselling*. New Delhi: Adhyayan Publishers and Distributors.
5. Nayak, A. K. (2014). *Guidance and counselling*. New Delhi: APH Publishing Corporation.
6. Pandey, V. C. (2011). *Educational Guidance and Counselling*. Isha Books: New Delhi.
7. Sharma, R. N., & Sharma, R. (2013). *Guidance and counselling in India*. New Delhi: Atlantic Publishers and Distributors (P) Ltd.
8. Siddiqui, M. H. (2015). *Guidance and counselling*. New Delhi: APH Publishing Corporation.
9. Srivastva, S. K. (2011). *Career counselling and Planning*. Atlantic Publishers. New Delhi.
10. Verma, L.N. (2013). *Educational psychology –experimentation in problems and methods in teaching*. Jaipur: Rawat Publications.

PG- SEC
Semester-2

241|CHE|SE201

40

SEC-01: Analytical Chemistry

Course Code SEC-01			Course Title Analytical Chemistry				Course ID		
L	T	P	L	T	P	Total Credits	MARKS		
(Hrs)			Credits				TI	TE	Total
2	-	-	2	-	-	2	15	35	50

Examination Duration:	2 Hrs

Course Objectives	1. Understand data analysis techniques for interpreting experimental results. 2. Learn thermal techniques (TGA, DTA, DSC) and their applications. 3. Explore principles and applications of atomic absorption spectroscopy and flame photometry. 4. Gain knowledge of nanomaterials, their properties, and classifications. 5. Study synthesis and characterization techniques of nanomaterials. 6. Examine applications of nanomaterials in various fields like health, energy, and agriculture.
Course Outcomes:	1. Analyze experimental data using statistical methods. 2. Apply thermal techniques for material characterization. 3. Use spectroscopy and photometry for elemental analysis. 4. Understand the properties and synthesis of nanomaterials. 5. Utilize advanced tools for characterizing nanomaterials. 6. Recognize interdisciplinary applications of nanomaterials.

COURSE SYLLABUS

Note: 1. Question no. 1 is compulsory, which contains short answer type questions and to be set from the entire syllabus.
2. Eight questions will be set, two from each of the sections A, B, C & D. The candidates are required to attempt four questions in all selecting at least one question from each section. All questions shall carry equal marks.
3. The question paper must be set in consonance with course outcomes.

Unit No.	Contents	Contact Hrs
I	**Data analysis:** Mean and standard deviation, absolute and relative errors, linear regression, covariance and correlation coefficient. **Thermal Techniques** Thermal Methods: Introduction to Thermogravimetric Analysis (TGA) and Instrumentation, thermogram, factors affecting thermograms, application of thermogravimetry; Differential Thermal Analysis (DTA), DTA curves, factors affecting DTA curves, Instrumentation, applications of DTA. Differential Scanning Calorimetry (DSC): Introduction, Instrumentation, DSC curves, factors affecting DSC curves, applications.	7
II	**Atomic Absorption Spectroscopy**	8

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	Atomic Absorption Spectroscopy: Principle, instrumentation, Hollow cathode lamp, Application of atomic absorption spectroscopy, Advantages and Disadvantages of Atomic Absorption Spectroscopy. **Flame photometry** Theory of flame photometry, Effect of Solvents in Flame photometry, Factors that influence the intensity of emitted Radiation in Flame photometry, limitations, application of flame photometry, Interferences in Flame photometry.	
III	**Nano-chemistry** Introduction of nanomaterials, properties of nanomaterials, classification (On the basis of materials and dimension) of nanomaterials, quantum dots, core-shell nanostructures and nano composites materials (Classification, Properties and application). Advanced nanomaterials (nanowires, nanorods, carbon nanotubes, graphene and fullerenes) Synthesis, properties and application.	7
IV	**Synthesis of nanomaterials**: Bottom-up approaches: Chemical reduction method, sol-gel process and chemical vapor deposition, and top-down approaches: ball milling, and lithography. **Characterization Techniques of Nanomaterials** Principle and instrumentation of X-ray diffraction, Scattering, field emission scanning electron microscopy, transmission electron microscopy, surface area analyser. Applications of Nanomaterials: In the field of health and medicine, environment, energy, catalysis and agriculture.	8
Suggested Books	1. Data Analysis for Chemistry by I. D. Brown 2. Thermal Methods of Analysis: Principles, Applications and Problems by Jaroslav Sesták 3. Flame Emission and Atomic Absorption Spectrometry by J. R. Dean 4. Instrumental Methods of Analysis by Gurdeep R. Chatwal and Sham K. Anand 5. Atomic Absorption Spectrometry by Douglas A. Skoog, F. James Holler, Stanley R. Crouch 6. Analytical Chemistry by Gary D. Christian 7. Basic Concepts of Analytical Chemistry by S. M. Khopkar. 8. Cao, G. Nanostructures and nanomaterials: synthesis, properties and application. Empirical College Press. 9. Geoffrey, A. Ozin, Nano chemistry: A chemical approaches to nanomaterials. Royal Society of Chemistry. 10. Gabor, L. H., Harry, F. T., Dutta, J., Moore, J.J. Introduction to nanoscience & nanotechnology. CRC Press Taylor & Francic group. 11. Guozhong, C. Nano structure & nanomaterials synthesis, properties & application. Imperial College Press. 12. Pradeep, T. Nano: The essentials. McGraw Hill Pvt. Ltd. 13. Shah, M.A., Shah, K.A. Nanotechnology: The science of small. Wiley	

28/1/2025

	Publication.	
Theory	Internal Assessment: 15 Marks	• Class Participation: 05 Marks • Seminar/Presentation/ Assignment: 05 Marks • Mid Term Exam: 05 Marks
	External Assessment: 35 Marks (02 Hours)	• End Term Exam: 35 Marks

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- Taplin, J. (2017). *Move fast and break things: How Facebook, Google, and Amazon cornered culture and undermined democracy*. Little, Brown and Company.
- Varian, H. R. (2010). *Intermediate microeconomics: A modern approach* (8th ed.). W. W. Norton & Company.

	INTRODUCTION TO RESEARCH METHODOLOGY	L	T	P	C
		1	0	1	2

Maximum Marks: 50 **External written Exam: 25**

Internal Practical: 05 **External Practical: 10**

Credits:2 **Internal assessment: 10**

Note for Paper Setter

1. Five Questions will be set in all and students will be required to attempt 3 questions.
2. Question No. 1 will be compulsory and will consist of 3 short answer type questions of 3 marks spread over the entire syllabus (3x3=09 marks).
3. For the remaining two questions, students will attempt 1 out of 2 questions from each of the two units (08 marks each).

Course Objective

This course equips students with a clear understanding of the research process, including its types, objectives, and design (qualitative and quantitative). It covers key concepts like variables and hypotheses, sampling techniques, and data collection methods (primary and secondary). By the end, students will be able to design studies, choose suitable methods, and collect data effectively.

UNIT- I

Research – Meaning, Objectives and Types, Research Process, Criteria of a Good Research.

Research Design: Meaning, Need, Types, Approaches to Research Design: Qualitative and Quantitative, Basic Concepts: Dependent and Independent Variables, Research Hypothesis

UNIT – II

Sampling: Meaning, Sampling Methods- Probability and Non- Probability, Sampling and Non- Sampling Error, Methods of Data Collection:

Collection of Primary Data- Observation, Interview, Questionnaire and Schedule Methods in brief, Collection of Secondary Data: Various Sources, Selection of appropriate Method for Data Collection

Suggested readings –

- **Creswell, J. W. (2014).** *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
- **Kothari, C. R. (2004).** *Research methodology: Methods and techniques* (2nd ed.). New Age International Publishers.
- **Sekaran, U., & Bougie, R. (2016).** *Research methods for business: A skill-building approach* (7th ed.). Wiley.
- **Burns, R. B. (2000).** *Introduction to research methods* (4th ed.). SAGE Publications.
- **Neuman, W. L. (2014).** *Social research methods: Qualitative and quantitative approaches* (7th ed.). Pearson.
- **Babbie, E. (2013).** *The practice of social research* (13th ed.). Cengage Learning.
- **Bryman, A. (2016).** *Social research methods* (5th ed.). Oxford University Press.
- **Saunders, M., Lewis, P., & Thornhill, A. (2019).** *Research methods for business students* (8th ed.). Pearson Education.

241/ECO/SE202

MA. ECONOMICS (SEC)

SEMESTER II

	Digital Economics	L	T	P	C
		1	0	1	2

Maximum Marks: 50 **External written Exam: 25**

Duration- 2 Hours

Internal Practical: 05 **External Practical: 10**

Credits:2 **Internal assessment: 10**

Note for Paper Setter

1. Five Questions will be set in all and students will be required to attempt 3 questions.
2. Question No. 1 will be compulsory and will consist of 3 short answer type questions of 3 marks spread over the entire syllabus (3x3=09 marks).
3. For the remaining two questions, students will attempt 1 out of 2 questions from each of the two units (08 marks each).

Course Objectives: The course aims to provide a comprehensive understanding of digital economics, focusing on the unique characteristics of digital markets and platforms. It explores the economics of information goods, pricing strategies, and the role of intellectual property. Additionally, the course examines regulatory challenges, antitrust concerns, and the impact of digital transformation on innovation, productivity, and policy frameworks.

Course Outcomes

CO1: Understand the defining features and economics of digital markets and platforms.
CO2: Analyze market power, monopolistic tendencies, and antitrust issues in the digital economy.
CO3: Evaluate the role of government in regulating digital platforms and addressing policy challenges.
CO4: Assess the impact of digital transformation on innovation, productivity, and socio-economic policies.

Unit I

Introduction to Digital Economics

Definition and scope, Characteristics of digital markets, Economics of digital platforms (e.g., network effects, multi-sided markets), Case studies of major digital platforms (e.g., Google, Amazon, Facebook), Characteristics of information goods (e.g., non-rivalry, non-excludability), Pricing strategies for digital products, The role of intellectual property in the digital economy.

Unit II

Digital Marketplaces and E-Commerce

Market power and monopolistic tendencies in digital markets, Antitrust concerns related to digital platforms, Government's role in regulating the digital economy, Policy challenges in the digital age (e.g., taxation, labor market impacts), The impact of digital transformation on innovation and productivity

Suggested Readings:

- Acemoglu, D., & Restrepo, P. (2018). Artificial intelligence, automation, and work. *NBER Working Paper No. 24196.*
- Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives, 29*(3), 3–30.
- Belleflamme, P., & Peitz, M. (2015). *Industrial organization: Markets and strategies* (2nd ed.). Cambridge University Press.
- Bloom, N., Garicano, L., Sadun, R., & Van Reenen, J. (2014). The distinct effects of information technology and communication technology on firm organization. *Management Science, 60*(12), 2859–2885.
- Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies.* W. W. Norton & Company.
- Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital marketing: Strategy, implementation, and practice* (7th ed.). Pearson Education.
- Cockfield, A. J., Hellerstein, W., Millar, R., & Waerzeggers, C. (2013). *Taxing global digital commerce.* Kluwer Law International.
- Crémer, J., de Montjoye, Y.-A., & Schweitzer, H. (2019). *Competition policy for the digital era.* European Commission.
- Degryse, C. (2016). Digitalisation of the economy and its impact on labour markets. *European Trade Union Institute Working Paper 2016.02.*
- Evans, D. S., & Schmalensee, R. (2016). *Matchmakers: The new economics of multisided platforms.* Harvard Business Review Press.
- Gasser, U., & Palfrey, J. (2008). *Born digital: Understanding the first generation of digital natives.* Basic Books.
- Goldfarb, A., Greenstein, S. M., & Tucker, C. E. (2019). *The economics of artificial intelligence: An agenda.* University of Chicago Press.
- Khan, L. M. (2017). Amazon's antitrust paradox. *Yale Law Journal, 126*(3), 710–805.
- Lodge, M., & Wegrich, K. (2014). *The problem-solving capacity of the modern state: Governance challenges and administrative capacities.* Oxford University Press.
- Mankiw, N. G. (2020). *Principles of economics* (9th ed.). Cengage Learning.
- McKinsey Global Institute. (2021). *Digital globalization: The new era of global flows.* McKinsey & Company.
- Shapiro, C., & Varian, H. R. (1999). *Information rules: A strategic guide to the network economy.* Harvard Business School Press.
- Stucke, M. E., & Grunes, A. P. (2016). *Big data and competition policy.* Oxford University Press.

- Taplin, J. (2017). *Move fast and break things: How Facebook, Google, and Amazon cornered culture and undermined democracy.* Little, Brown and Company.
- Varian, H. R. (2010). *Intermediate microeconomics: A modern approach* (8th ed.). W. W. Norton & Company.

241/ECO/SE301

	INTRODUCTION TO RESEARCH METHODOLOGY	L	T	P	C
		1	0	1	2

Maximum Marks: 50 **External written Exam: 25**

Internal Practical: 05 **External Practical: 10**

Credits:2 **Internal assessment: 10**

Note for Paper Setter

1. Five Questions will be set in all and students will be required to attempt 3 questions.
2. Question No. 1 will be compulsory and will consist of 3 short answer type questions of 3 marks spread over the entire syllabus (3x3=09 marks).
3. For the remaining two questions, students will attempt 1 out of 2 questions from each of the two units (08 marks each).

Course Objective

This course equips students with a clear understanding of the research process, including its types, objectives, and design (qualitative and quantitative). It covers key concepts like variables and hypotheses, sampling techniques, and data collection methods (primary and secondary). By the end, students will be able to design studies, choose suitable methods, and collect data effectively.

UNIT- I

Research – Meaning, Objectives and Types, Research Process, Criteria of a Good Research.

Research Design: Meaning, Need, Types, Approaches to Research Design: Qualitative and Quantitative, Basic Concepts: Dependent and Independent Variables, Research Hypothesis

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- **Sekaran, U., & Bougie, R. (2016).** *Research methods for business: A skill-building approach* (7th ed.). Wiley.
- **Burns, R. B. (2000).** *Introduction to research methods* (4th ed.). SAGE Publications.
- **Neuman, W. L. (2014).** *Social research methods: Qualitative and quantitative approaches* (7th ed.). Pearson.
- **Babbie, E. (2013).** *The practice of social research* (13th ed.). Cengage Learning.
- **Bryman, A. (2016).** *Social research methods* (5th ed.). Oxford University Press.
- **Saunders, M., Lewis, P., & Thornhill, A. (2019).** *Research methods for business students* (8th ed.). Pearson Education.

(Semester II) SKILL ENHANCEMENT COURSE: PERSONALITY AND SKILL DEVELOPMENT

Skill Enhancement Course (Lectures 28)	Maximum Theory Marks: 50
Time Allowed: 2 Hrs	External Marks: 35
Credits: 2	Internal Assessment: 15

Instructions for Paper Setter: The examiner will set nine questions in all with two questions from each section. Q. No. 1 consisting of very short answer type questions and covering the entire syllabus will be compulsory. Each question will be divided into parts and the distribution of marks will be indicated part-wise. The candidates will be required to attempt Q. No. 1 & four others, selecting one from each section.

Unit-I: Communication Skills **Lectures: 7**

Concept of effective communication- Setting clear goals for communication; Determining outcomes and results; Initiating communication; Avoiding breakdowns while communicating; Creating value in Conversation; Barriers to effective communication; Non-verbal communication- Interpreting non-verbal cues; Importance of body language, Power of effective listening; recognizing cultural differences

Unit-II: Presentation skills **Lectures: 7**

Formal presentation skills; Preparing and presenting using Over Head Projector, Power Point; DefendingInterrogation; Scientific poster preparation & presentation; Participating in group discussions

Unit-III: Computing Skills for Scientific Research **Lectures: 7**

Web browsing for information search; search engines and their mechanism of searching; Hidden Web and its importance in scientific research; Internet as a medium of interaction between scientists; Effective email strategy using the right toneand conciseness

Unit-IV: Technical Writing Skills **Lectures: 7**

Types of reports; Layout of a formal report; Scientific writing skills: Importance of communicating Science; Problems while writing a scientific document; Plagiarism; Scientific Publication Writing: Elements of a Scientific paper including Abstract, Introduction, Materials & Methods, Results, Discussion, References; Drafting titles and framing abstracts

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OR

COMMUNICATION SKILLS -I

SEC-1

Course Title: COMMUNICATION SKILLS -I

Credits:2 (Hrs./Week: 2)

Maximum Marks: 50
Theory Examination: 20
Internal Assessment: 05
Practical Examination: 20
Practical Assessment: 05
Time: 2 hrs.

Course Outcomes

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

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

- Express the skills and dispositions needed to communicate effectively in real life situations.
- Develop listening and speaking skills by having them engage in a communicative task.
- Prepare for participation in group work through communicative skills and mutual goals.

Unit I

- Listening Skill: Active Listening and Empathetic Listening
- Audio and visual recorded lectures and talks will be used to develop the listening skills
- Pair and group activities to practice active listening techniques
- Applied Behavior Analysis (ABA)

Unit II

- Speaking Skills: Mock Exercises for Interview for job/ employment, Conducting and participating in mock meetings, Interacting orally in academic, professional and social situations

- Presentation of technical reports using audio-visual aids, Participation & communication in community work, participating in workshops& tutorials, participating in online forums, Participating in group work.

Transaction Mode

Lecture, Seminar, e-team teaching, e-tutoring, dialogue, peer group discussion, mobile teaching, self-learning, Through SOLE, Collaborative learning and Cooperative learning,

Suggested Readings

1. Nira, K. (2011). *Communication skills for professionals* (2nd Ed.). PHI.
2. Mitra, B. K. (2011). *Personality development and soft skills* (1stEd.). Oxford Press. Field,
   B. (2011). *Soft skill for everyone* (1st Ed.). Cengage Learning India pvt. ltd.
3. Peters, F. (2011). *Soft skills and professional communication* (1st Ed.). Mc Graw Hill Education.
4. Adair, J. (2009). *Effective communication* (4th Ed.). Pan Mac Millan.
5. Daniels, A. (1999). Bringing out the best in people (2nd Ed.). Mc Graw Hill.

241/PHY/SE201

Skill Enhancement Course

COURSE ID:

RADIATION PHYSICS

Marks (Theory): 35 **Credits: 2**

Marks (Internal Assessment): 15 **Time: 2 Hours**

Note: The examiner will set 9 questions asking two questions from each unit and one compulsory question by taking course learning outcomes (CLOs) into consideration. The compulsory question (Question No. 1) will consist of at least 4 parts covering entire syllabus. The question paper is expected to contain problems to the extent of 20% of total marks. The examinee will be required to attempt 5 questions; selecting one question from each unit and the compulsory.

Course Outcomes:

After successful completion of the course on Radiation Physics, a student will be able:

- *To define and explain different interactions of ionizing radiation with matter.*
- *To Understand the basic working principles of radiation detectors.*
- *To grasp the concept of radiation dose and analyze the effect of radiation on the functioning of living cells.*
- *To evaluate the radiation hazards and get familiar with radiation dose limitations.*

Unit – I

Interaction of Radiation with matter: Type of nuclear radiation, Modes of interaction: ionization, excitation, elastic and inelastic scattering, Bremsstrahlung, Cerenkov radiation, Concepts of specific ionization, mean free path; Interaction of Light Charged Particles with matter; Interaction of Heavy Charged Particles with matter; Interaction of Electromagnetic Radiations with matter, Interaction of Neutrons with matter

Unit – II

Radiation Detectors: Principles of radiation detection; Gas filled radiation detectors: ionization chambers, proportion counters, GM counters, Scintillation counter; Semiconductor Detector (Si and Ge) and their applications, Thermo – Luminescent Dosimeters (TLD), SSNTD

Unit – III

Radiation quantities and units: Exposure, Dose, Equivalent Dose, Effective Dose, KERMA, Annual Limit on Intake (ALI), and Derived Air Concentration (DAC); Biological Effects of Ionizing Radiation. Principles of Radiological Protection: Justification of Practice, Optimization

of Practice, and Dose Limitations; Internal Exposure, Dose Limit for (i) Radiation Workers (ii) Public, Occupational Exposure of Women, Apprentices and Students

Unit – IV

Radiation Hazard Evaluation and Control: Radiation Hazard: Internal Hazards and External Hazards; Evaluation and Control of Radiation Hazard, Radiation Shield, Monitoring of External Radiation, Control of Internal Hazard: (i) Containment of Source (ii) Control of Environment (iii) Contamination (iv) Air Contamination Monitoring (v) Personal Contamination Monitoring (vi) Decontamination Procedures; Radiation Emergency and Preparedness.

References/Books:

1. Introduction to Radiological Physics and Radiation Dosimetry, by Frank H. Attix, John Wiley & Sons, 1986.
2. Radiation Detection and Measurement 4th Edition by Glenn F. Knoll
3. Physics and Engineering of Radiation Detection by Syed Ahmed, Laurentian University, Ontario, Canada
4. Measurement and Detection of Radiation, Fourth Edition by Nicholas Tsoulfanidis and Sheldon Landsberger
5. Introduction to Experimental Nuclear Physics by R. M. Singru.
6. Elements of Nuclear Physics by W. E. Meyerhof.
7. Nuclear Radiation Detectors by S. S. Kapoor and V. S. Ramamurthy
8. Introduction to High Energy Physics (2nd edition) by D. H. Perkins.
9. Techniques For Nuclear and Particle Physics Experiments by William R. Leo.