Value Added **Courses**

SYLLABUS

2023-24

RAIPUR | INDIA

SYLLABUS
2023-24

VALUE ADDED
COURSES

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INDEX

FACULTY OF
ARTS &
HUMANITIES

ADVANCED CREATIVE WRITING (VAC60)

Total Duration: 40hrs

Course Objectives:

1. To Develop a deep understanding of advanced narrative techniques, including point of view, voice, and structure, enabling students to craft compelling and innovative narratives.
2. To Cultivate the ability to create complex and multidimensional characters with depth and authenticity, enhancing the richness and believability of their storytelling.
3. To Acquire advanced skills in plot development, including the creation of intricate and engaging storylines, subplots, and narrative arcs that captivate readers.
4. To Encourage students to experiment with diverse writing styles, literary devices, and linguistic techniques to enhance the impact and originality of their writing.
5. To Equip students with the skills and knowledge necessary for effective self-editing, revision, and preparation of their work for publication, along with an understanding of the publishing industry and submission strategies.

Course Outcomes:

1. The students will be able to Demonstrate mastery of advanced narrative techniques, character development skills, and plot construction, as evidenced by the production of polished and engaging written work.
2. The students will Develop a unique writing voice and style, experimenting with different literary techniques to create original and imaginative pieces of writing.
3. The students will be able to Apply critical thinking skills to analyze and evaluate literature and one's own writing, recognizing strengths and areas for improvement, and incorporating feedback effectively.
4. The students will be able to Engage in constructive peer feedback sessions, providing and receiving feedback to improve writing skills, fostering a collaborative and supportive writing community.
5. The students will be able to demonstrate an understanding of the editing process, including self editing and revision, and develop a portfolio of work prepared for potential publication. Gain knowledge of the publishing industry and submission strategies, empowering students to pursue publication opportunities.

Module 1: Exploring Narrative Techniques

Introduction to advanced narrative techniques such as point of view, voice, and structure Analysis of different narrative styles and their impact on storytelling Exploration of experimental and innovative approaches to narrative construction

Module 2: Character Development and Complex Characters

In-depth examination of character development techniques Analysis of multidimensional and complex characters in literature

Exploration of character psychology and motivations

Module 3: Advanced Plot and Story Development

Advanced techniques for developing intricate and engaging plots

Analysis of different narrative arcs and story structures

Exploration of subplots, plot twists, and pacing

Module 4: Stylistic and Linguistic Experimentation

Exploration of advanced writing techniques, such as imagery, figurative language, and wordplay

Analysis of literary devices and their impact on the reader

Experimentation with different writing styles and genres

Module 5: Editing and Revising for Publication

Techniques for self-editing and revision of creative work

Analysis of the editing process and its importance in preparing work for publication

References-

1. "The Art of Fiction: Notes on Craft for Young Writers" by John Gardner
2. "Steering the Craft: A Twenty-First-Century Guide to Sailing the Sea of Story" by Ursula K. Le Guin
3. "The Making of a Story: A Norton Guide to Creative Writing" by Alice LaPlante
4. "On Writing: A Memoir of the Craft" by Stephen King
5. "Bird by Bird: Some Instructions on Writing and Life" by Anne Lamott

छत्तीसगढ़ी भाषा और साहित्य (मूल्य वर्धित पाठ्यक्रम) (VAC61)

कुल अध्यापन अवधि-40 घंटा

प्रथम इकाई- छत्तीसगढ़ी भाषा-परिचय एवं स्वरूप।

छत्तीसगढ़ी भाषा- परिचय, वर्णमाला एवं शब्द निर्माण योजना।

द्वितीय इकाई- छत्तीसगढ़ी भाषा व्याकरण।

छत्तीसगढ़ी भाषा व्याकरण, वाक्य निर्माण योजना एवं भाषा के विविध रुप।

तृतीय इकाई- छत्तीसगढ़ी भाषा का इतिहास।

छत्तीसगढ़ी भाषा का इतिहास एवं विकास क्रम।

चतुर्थ इकाई- छत्तीसगढ़ी साहित्य का परिचय।

छत्तीसगढ़ी साहित्य परिचय, गद्य एवं पद्य एवं प्रमुख रचनाकार एवं उनकी रचनाएँ।

पंचम इकाई- छत्तीसगढ़ की कला एवं संस्कृति।

छत्तीसगढ़ का संगीत, नृत्य, कला एवं संस्कृति, जनऊला,

मुहावरे, हाना एवं लोकोक्तियाँ।

संदर्भित ग्रंथ-

छत्तीसगढ़ी भाषा - डॉ. शंकर शेष

छत्तीसगढ़ की भाषा और संस्कृति - डॉ. शकुंतला वर्मा

सन्दर्भ छत्तीसगढ़ - सं. ललित सुरजन (देशबंधु प्रकाशन)

छत्तीसगढ़ के प्रमुख रचनाकार - डॉ. परदेशीराम वर्मा

छत्तीसगढ़ी भाषा और साहित्य - डॉ. सत्तयभामा आड़िल

KALINGA UNIVERSITY | 4

AN INTRODUCTION TO GENDER AND GENDER EQUALITY (VAC62)

<div align="right">**Total Duration: 40hrs**</div>

Course Objectives:

1. To Develop a comprehensive understanding of key concepts and terminology related to gender, including gender identity, gender expression, and the social construction of gender.
2. To Examine the historical context of gender inequality, understanding its origins, manifestations, and impact on individuals and society.
3. To Explore the concept of intersectionality and its relevance to understanding and addressing gender inequality, recognizing the interconnectedness of gender with other social categories such as race, class, and sexuality.
4. To Analyze gender disparities in various spheres, including education, employment, politics, and the media, and critically assess the factors contributing to these inequalities.
5. To Gain insights into effective strategies, interventions, and policies for promoting gender equality and fostering social change in diverse contexts.

Course Outcomes:

1. The students will Acquire a comprehensive understanding of gender concepts, theories, and historical perspectives, enabling students to critically analyze and interpret gender-related issues and phenomena.
2. It will develop critical thinking about gender inequalities, recognizing the multifaceted nature of gender and its intersections with other social identities.
3. The students will be able to apply analytical skills to identify and challenge gender norms and stereotypes.
4. The student will be able to recognize and appreciate the complexity of intersectionality by understanding how gender interacts with other social categories, promoting a more inclusive and holistic understanding of individuals' experiences.
5. The students will be able to Identify and evaluate effective strategies, interventions, and policies aimed at promoting gender equality in various spheres. Apply this knowledge to advocate for gender equality and contribute to social change.

Module 1: Understanding Gender Concepts and Terminology

Introduction to key concepts: sex, gender, gender identity, and gender expression

Discussion of the social construction of gender

Examination of the differences between gender and biological sex

Overview of various gender identities (e.g., cis gender, transgender, non-binary)

Module 2: Historical Perspectives on Gender Inequality

Exploration of the historical context of gender inequality

Discussion of the roots of gender-based discrimination and stereotypes

Examination of significant events and movements that have shaped gender equality

Analysis of the impact of colonialism, imperialism, and globalization on gender dynamics

Module 3: Intersectionality and Gender Equality

Introduction to the concept of intersectionality

Discussion of how gender intersects with other social categories such as race, class, sexuality, and ability

Analysis of how intersectionality affects individuals' experiences of gender discrimination and inequality

Exploration of strategies for promoting inclusive and intersectional approaches to gender equality

Module 4: Gender Inequality in Different Spheres

Examination of gender disparities in education, employment, politics, and the media

Analysis of the factors contributing to gender inequality in each sphere

Discussion of the consequences of gender inequality on individuals and society

Exploration of initiatives and policies aimed at reducing gender disparities in various contexts

Module 5: Promoting Gender Equality and Social Change

Overview of key theories and frameworks for promoting gender equality

Examination of successful interventions and campaigns for achieving gender equality

Discussion of the role of individuals, communities, and institutions in challenging gender norms and stereotypes

Exploration of strategies for fostering inclusive and equitable environments

Analysis of the importance of allyship and advocacy in advancing gender equality

REFERENCES

Mukherjee, Mukul (1992), Human Rights and gender issues, New Delhi: Institute of Social Sciences

Bhasin Kamala (2000): Understanding gender, kali for women, N. Delhi.

Gupta K R (2009), Gender: Problems and policies, New Delhi: Atlantic Publishers

Manoranjan pal (2009), Gender and Discrimination: Health, Nutritional status and role of women in India, London : Oxford University Press

FACULTY OF
COMMERCE &
MANAGEMENT

BUSINESS ANALYTICS USING PYTHON PROGRAM (VAC63)

Total Duration: 40hrs

Course Objectives:

- The basics of programming in Python programming language, including syntax, data types, variables, and control structures.
- Data manipulation and cleaning for import and export of data, and to manipulate and clean data using Python libraries such as Pandas and NumPy.
- Creation and visualizations of data using libraries such as Matplotlib and Seaborn, and to interpret and communicate insights from these visualizations.

Course Outcome:

After successful completion of the Value-Added Course, students will be able to:

- Work with Python libraries such as pandas, numpy, matplotlib, seaborn, etc., to manipulate data and generate visualizations.
- Identify and deal with data quality issues such as missing values, data inconsistencies, and outliers, using Python.
- Create various visualizations such as scatter plots, bar graphs, histograms, box plots, heat maps, etc., to effectively communicate insights from the data.

Target Group:

BBA III, VI

MBA I, III semester students

Syllabus Content:

Unit-I

Introduction to Python

Introduction to Python: Features, Application, Installation and Working with Python, Understanding Python variables Python basic Operators Understanding python blocks Data Types: Data types and Operators, string, list, tuple, set, dict and different methods and operators

Unit-II

Program Flow Control

Program Flow Control: Branching-Conditional blocks using if, else and elif Simple for loops in python, for loop using ranges, string, list and dictionaries Use of while loops in python, Loop manipulation using pass, continue, break, exit and else Programming using Python conditional and loops block

Unit-III

Python Functions, Modules and Packages

Python Functions, Modules and Packages: - Organizing python codes using functions Organizing python projects into modules, importing own module as well as external modules, Understanding Packages, String, List and Dictionary Manipulations: Building blocks of python programs Understanding string inbuilt methods List manipulation using inbuilt methods Dictionary manipulation, Programming using string, list and dictionary in build functions

Unit-IV

Python Plotting   (10 Hours)

Python Plotting: - Matplotlib, plotting a chart and showing it, Format strings in plotting, Different types of charts, setting labels and title, Adding gridlines, Subplot Data Set Operation: Python File operations, CSV handling, pandas series and frames, Seaborn

Text Books:

1. Business Statistics: Text and Problems - With Introduction to Business Analytics by N D Vohra - 2nd Edition, Tata Mc Graw Hill Publishers – 2021

Reference Books:

1. Statistical Methods by S.P. Gupta - 43rd Edition, Sultan Chand Publishers – 2014

2. Business Statistics by Digambar Patri, D.N. Patri - 3rd Edition, Kalyani Publishers –2014

3. Goon A.M., Gupta M.K. and Dasgupta B. (2002): Fundamentals of Statistics, Vol. I & II, 8th Edn. The World Press, Kolkata

FINANCIAL MODELING AND ANALYSIS / DIGITAL MARKETING (VAC64)

Total Duration: 40hrs

Value added courses for commerce students

As a commerce student, there are several value-added courses you can consider to enhance your knowledge and skills in specific areas. Below, I'll provide you with a list of five value-added courses along with a brief syllabus for each unit:

Subject[A]-Financial Modeling and Analysis

Unit 1: Introduction to Financial Modeling
Basic financial concepts and terminology
Understanding financial statements
Introduction to Excel and its functions

Unit 2: Financial Modeling Techniques
Building financial models for forecasting and budgeting
Valuation techniques and analysis
Sensitivity analysis and scenario planning

Unit 3: Advanced Excel for Financial Modeling
Advanced Excel functions and formulas
Data manipulation and analysis
Automating financial models using macros

Unit 4: Financial Statement Analysis
Ratio analysis and interpretation
Cash flow analysis
Identifying financial strengths and weaknesses

Unit 5: Application of Financial Models
Investment analysis and decision-making
Mergers and acquisitions modeling
Risk assessment and management

Subject[B]-Digital Marketing

Unit 1: Introduction to Digital Marketing
Evolution and importance of digital marketing
Digital marketing channels and platforms
Digital marketing strategy and planning

Unit 2: Search Engine Optimization (SEO)
Keyword research and analysis
On-page and off-page optimization
SEO tools and techniques

Unit 3: Social Media Marketing
Creating and managing social media profiles
Social media advertising
Engaging and building a social media community

Unit 4: Pay-Per-Click (PPC) Advertising
Google AdWords and Bing Ads
Keyword bidding and campaign optimization
Conversion tracking and measurement

Unit 5: Digital Marketing Analytics
Web analytics and tracking
A/B testing and conversion rate optimization
Performance reporting and analysis

These value-added courses provide in-depth knowledge and skills in areas such as financial modeling, business analytics, digital marketing. Choose the one that aligns with your interests and career goals to enhance your expertise as a commerce student.

FACULTY OF
EDUCATION

COMMUNICATION SKILL (VAC65)

Total Duration: 40hrs

COURSE OUTCOME

- Understand and apply communication theory
- Critically think about communication processes and messages
- Write effectively for a variety of contexts and audiences
- Interact skillfully and ethically
- Develop and deliver professional presentations
- Engage in scholarly inquiry and social scientific research
- Recognize the effects of diversity, access, and power on communication.

Allocation of Total Hours for Each Session

Days	MODULE	Theory	Practical
1	**LISTENING**	4 Hour	4 Hour
2	**READING**	4 Hour	4 Hour
3	**WRITING**	4 Hour	4 Hour
4	**LANGUAGE LAB**	4 Hour	4 Hour
5	**SPEAKING**	4 Hour	4 Hour

MODULE-I

LISTENING

Objectives

1. To develop familiarity with simple English terms
2. Vocabulary
3. Pronunciation
4. Context
5. Style of speaking
6. Comprehension

Activities

· Listening to audio stories with animation.

Testing the objectives & monitoring the progress

· Questioning
· Narrate the story in your own words
· Which new words they have learnt

MODULE-II

READING

Objectives

1. To pronounce words correctly

2. To recognize words and understand their meaning in phrase, sentences and paragraphs.

3. To develop the habit of reading with a purpose

Activities

· Reading materials will be provided and one by one each student will read the paragraphs of story and describe it in her own words.

· Students will read and describe the slides through presentations.

Testing the objectives & monitoring the progress

· Teacher will rectify the wrongly pronounced words.

· Questioning will be done to test the comprehension ability of the student.

MODULE-III

WRITING

Objectives

1. To develop the ability to write simple and correct English

2. To enable the pupils to write on simple topics of day-to-day life such as letters to friend and relations, applications, simple notices, notes, advertisements or invitations.

Activities

1. Use of writing cards (word cards) – Teacher will prepare writing cards and present those cards in jumbled form. Pupils will make sentences by using the cards.

2. Transactions- Students will copy a written module (for spelling observations and language constructions)

3. Dictation and free hand writing (writing letters on some given topic)

Testing the objectives & monitoring the progress

Teacher will rectify the spelling and grammatical mistakes of the students.

MODULE-IV

LANGUAGE LAB

Objectives

1. To improve the listening skills of the students.

2. To enable students to speak and respond correctly.

3. To make them learn correct pronunciation.

Activities

Students will be taken in Language Lab and every student will go through all the module available in the lab.

Testing the objectives & monitoring the progress

The system itself evaluates the listening, speaking, comprehension and pronunciation of every student

MODULE-V

SPEAKING

Objectives

1. Use of proper rhythm, stress, intonation & juncture.

2. To enable students to talk about events, places, things and person in simple English.

3. To build confidence for speaking in English.

Activities

Every student will be asked to present herself through declamation etc.

Testing the objectives & monitoring the progress

Teacher will evaluate the student while presentation.

References

Barker, A. (1956). Improve Your Communication Skill. 2nd ed. Kogan Page Publishers. UK.

Berlo, D. K. (1960). The Process of Communication: An introduction to Theory and Practice. New York, NY: Holt, Rinehart, and Winston.

Castells, M. (2009). Communication Power. Oxford University Press, New Delhi.

Greene, J. O. and Burleson, B. R. (2003). Handbook on Communication and Social Interaction Skills. Lawrence Erlbaum Associates, Inc., New Jersey.

DIGITAL LITERACY (VAC66)

Total Duration: 40hrs

COURSE OUTCOMES

The Course is Designed to:

➤ Develop digital literacy skills that will enable them to function as discerning students in an increasingly digital society.

➤ Access various tools and applications for learning and skill development. Operate a variety of hardware and software independently and troubleshoot common problems.

➤ Acquire confidence in using computer techniques available to users;

➤ recognize the basic components of computers and terminology; Understand data, information and file management;

➤ Create documents using Word processor, Spreadsheet & Presentation Software; Understand computer networks, Internet;

➤ Browse the internet, content search, email and collaborate with peers;

➤ computer to improve existing skills and learn new skills.

Allocation of Total Hours for Each Session

Days	Chapter	Theory	Practical
1	Microsoft Word	1 Hour	3 Hour
2	Microsoft Excel	1 Hour	3 Hour
3	Microsoft Power Point	1 Hour	3 Hour
4	Introduction to Internet	2 Hour	2 Hour
5	Understanding Google drive: Google excel, doc, slide and form	2 Hour	4 Hour
6	E-Content development	2 Hour	3 Hour
7	Familiar with LMS	1 Hour	2 Hour

➤**Syllabus outline:**

1. Microsoft Word- Word Processing Basics: opening and closing of documents, Formation of text, Table Handling, Keyboard Shortcuts, Mail Merge, Printing of Word document, Insert video and image.

2. Microsoft Excel- Basics of Spreadsheet, Manipulation of cells, Formulas and function, Editing of spreadsheet, Data Analysis tools and Printing of Spreadsheet.

3. Introduction of Spread Sheet- Basics of Presentation software, Creating presentation, Presentation of slides, Slide show, Animation-Custom animation and Slide effects, inserting audio and video in slides, Taking Printout of Presentation.

4. Google drive- Google drive-Create google document, working with google sheet, google slides, Creating Google form, Generate e-certificates.

5. Introduction to Internet- Concept of Internet, Connecting to internet, Creating E-mail if, Sending and Receiving e-mail , accessing sent e-mails, Using e-mail, document collaboration instance messages, upload content on you tube.

6. E-Content Development- Creating lessons with audio and video through mix software on laptop and developing e-content (pdf, image, audio, video) through VIDMA recorder app on mobile.

7. Familiar with LMS- Creating batch, add students' attendance, assignments, notes tests, upload videos, study material, announcements, how to take online class through different attached apps in LMS like google meet and zoom.

References

· International Society for Technology in Education. (2016). ISTE standards for students. Retrieved from https://www.iste.org/standards/for-students

· Pegrum, M. (2010, January). "I link, therefore I am": Network literacy as a core digital literacy. E-Learning and Digital Media, 7(4), 346–354. https://doi.org/10.2304/elea.2010.7.4.346

FACULTY OF
TECHNOLOGY

QUALITY ASSURANCE AND QUALITY CONTROL IN CIVIL ENGINEERING: A HANDS-ON APPROACH (VAC67)

Total Duration: 40hrs

Course objectives:

A. Understand the principles and concepts of quality assurance and quality control in building construction.

B. Learn to apply quality control techniques and tools.

C. Develop skills in quality inspection and testing.

D. Understand the role of documentation and record-keeping in quality control.

E. Foster a proactive approach to quality improvement.

Course Outcomes:

A. Ability to implement quality control processes.

B. Competence in documentation and reporting.

C. Proficiency in analyzing and resolving quality issues.

Unit 1: Introduction to Estimation and Quality Control in Building Construction

Importance of estimation and quality control in building construction , Roles and responsibilities of an estimator and quality control personnel, Understanding construction drawings and specifications.

Estimation techniques and methodologies, Quality control standards and regulations in the construction industry.

Unit 2: Quantity Takeoff and Cost Estimation

Measurement units and conversions ,Reading and interpreting construction drawings for quantity takeoff , Estimating quantities of various construction materials (e.g., concrete, steel, bricks, etc.),

Estimation of labor and equipment requirements, Cost estimation methods, including material and labor costs, Preparation of bill of quantities (BOQ).

Unit 3: Estimation Software and Tools

Introduction to estimation software and computer-aided tools,Utilizing construction software for quantity takeoff and cost estimation ,Generating accurate estimates using software functionalities,

Comparison and evaluation of different software options, Integrating estimation software with other project management tools.

Unit 4: Quality Control in Building Construction (09 Hrs.)

Understanding quality control processes in construction, Importance of quality standards and specifications, Inspection and testing methods for construction materials, Quality control documentation and record-keeping, Non-destructive testing techniques, Corrective and preventive actions for quality control.

Unit 5: Quality Assurance and Quality Control Plans (06 Hrs.)

Development of quality assurance plans (QAP), Establishing quality control procedures and protocols, Quality control checklists and inspection forms, Implementation of quality control measures at various stages of construction, Quality control audits and monitoring, Continuous improvement and feedback mechanisms.

KALINGA UNIVERSITY
RAIPUR INDIA

Case Study / Project :

Report will be prepared by the students - Brickwork , Tiling wall dadoing & plastering calculations, checklists for bhoomi pujan , concreting, excavation, mesonry, painting , PCC & reinforcement, anti termite treatment , granite, marble laying with detailed estimation , rate analysis & labour requirement.

Reference Books:

1.Construction Quality Management: Principles and Practice" by Alan Griffith and Paul Watson

2. "Total Quality Management for Project Management" by Kim H. Pries and Jon M. Quigley

3. "Quality Control and Continuous Improvement" by John S. Oakland

4. "Quality Management for Organizational Excellence: Introduction to Total Quality" by David L. Goetsch and Stanley Davis

5. "Construction Quality Assurance: Principles, Practice, and Procedures" by Edward R. Fisk, Wayne D. Reynolds, and David S. Brook

6. "Quality Management in Construction Projects" by Abdul Razzak Rumane

7. "Quality Planning and Analysis: From Product Development through Use" by Juran, Gryna, and Bingham

8. "Construction Quality Management" by Martin Loosemore, Kate Hampson, and Peter S. D. Jones

9. "Quality Management in Construction: Project Quality Assurance and Quality Control" by Chartered Institute of Building (CIOB)

10. "Quality Assurance: Principles, Methods, and Techniques" by Gerd F. Kamiske

11. Construction Project Management: Planning, Scheduling and Control" by K.K. Chitkara

12. "Quality Assurance and Quality Control in Construction Projects" by V. B. Agrawal

13. "Total Quality Management in Construction Projects" by P. D. Sharma

14. "Construction Management: Theory and Practice" by S. Seetharaman

15. "Quality Control and Total Quality Management" by S. L. Singh and M. S. Mann

16. "Quality Management: Concepts and Tasks" by Vijay Madan

17. "Construction Quality Management" by N. Venugopal and A. Jayaraman

18. "Principles and Practices of Construction Quality Management" by R. Srinivasa Kumar

19. "Project Management in Construction: Principles, Processes, and Practice" by A. K. Gupta

20. "Construction Management and Project Control" by A. M. Chandra

FACULTY OF
INFORMATION TECHNOLOGY

DATA SCIENCE (VAC68)

COURSE OBJECTIVE:

1. The aim of this course is to understand the fundamental concepts of Data Science and acquire the overview of data engineering and business intelligence.
2. It inculcates the importance of data visualization techniques, machine learning and statistical modeling which are used in data science domain.

CO Number	CO Statement	Knowledge Level
Co1	**Understand the concept of Data Science.**	K1
Co2	**Understanding the Machine Learning.**	K2
Co3	**Data Visualizations concept.**	K2, K3
Co4	**Web Services in Python**	K3, K4
Co5	**Library for Statistics.**	K5

Unit 1:

Introduction: Data Science- A Brief History of Data Science - A History of Data Analysis -The Emergence and Evolution of Data Science.

Levels K1, Sessions 08

Unit 2:

Learning from Data with Your Machine: Defining Machine Learning and Its Processes -Learning Styles - Selecting algorithms based on function. Math, Probability Modeling: Exploring Probability and Inferential Statistics - Quantifying Correlation

Levels K2, Sessions 08

Unit 3:

Data Visualizations: The Big Three - Picking the Most Appropriate Design Style – Selecting the Appropriate Data Graphic Type - Web- Based Applications for Visualization Design

Levels K2,K3, Sessions 08

Unit 4:

Web Services in Python: Parsing XML, JSON, Application Programming Interfaces NumPy Libraries for Arrays, Pandas Library for Data Processing

Levels K3,K4, Sessions 10

Unit 5:

Matplotlib for Visualization, Seaborn Library for Visualization, SciPy Library for Statistics

Levels K5, Sessions 06

Learning Resources

Textbooks

1. John D. Kelleher and Brendan Tierney, ―Data Science ‖, First Edition, The MIT Press, London, 2018.

Unit I (Text Book 1): Chapter 1.1, 1.2, 1.3, 2.1, 3.1, 3.2.

2. Lillian Pierson, ―Data Science for Dummies ‖, 2nd Edition, John Wiley & Sons publications, 2017.

Unit II (Text Book 2): Chapter 4.1, 4.2, 4.3, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7.

Unit III (Text Book 2): Chapter 9.1, 9.3, 9.5, 11.1, 11.2.

3. Wesley J Chun, Core Python Applications Programming, 3rd Edition. Pearson

4. Michael Bowles, Machine Leaning in Python, Essential techniques for predictive analysis, Wiley

Al Sweigart,―Automate the Boring Stuff with Python ‖,1st Edition, No Starch Press, 2015. (Available under CC-BY-NC-SA license at https://automatetheboringstuff.com/)

Reference Books

1. Davy Cielen, Arno D. B. Meysman, Mohamed Ali, ―Introducing Data Science ‖, Manning Publications Co, 2016.

2. Ramesh Sharda, DursunDelen, Efraim Turban, ―Business Intelligence, Analytics, and Data Science: A Managerial Perspective ‖, Pearson Education, Fourth edition, 2019.

3. Mark Pilgrim, Dive into Python: Python Novice to pro (source: http://diveintopython.org/.)

4. Alex Martelli, Python Cookbook, O'REILLY Shai Vaingast, Beginning Python Visualization, Crafting Visual Transformation

Website/ Link

1.https://www.edureka.co/blog/what-is-data-science

https://www.en.m.wikipedia.org/wiki/data_science

Mapping with Programme Outcomes

CO Number	Po1	Po2	Po3	Po4
Co1	S	S	S	-
Co2	S	M	M	S
Co3	S	L	L	M
Co4	M	S	M	S
Co5	S	L	S	S

CHATBOT DEVELOPMENT (VAC69)

Course Overview

This course provides an introduction to the principles and techniques of chatbot development. Students will learn how to design, build, and deploy chatbots using various frameworks and tools. The course will cover both theoretical concepts and hands-on programming exercises.

Course Syllabus

Module 1 - Introduction to Chatbots

- What are chatbots?
- Chatbots are trending
- Leader in the Industry
- Lab 1: Create an instance of Watson Assistant

Module 2: Working with Intents

- How chatbots work
- Understanding Intents
- Lab 2: Create Dialog Skill and Intents
- Lab 3: Import Intents

Module 3: Working with Entities

- Understanding Entities
- Lab 4: Create Entities
- Lab 5: Import and Export Entities

Module 4: Defining the Dialog

- Putting it all together
- Building user-friendly chatbots
- Lab 6: Implement the Dialog
- Lab 7: Define Domain-Specific Intents

Module 5: Deploying your Chatbot

- Deploying to a WordPress site
- Lab 8 - Add a preview and retrieve your credentials
- Lab 9: Deploy your Chatbot

Module 6: Advanced concepts – Part 1

- Working with Context Variables and Slots
- Lab 10: Explore Context Variables
- Lab 11: Master Slots

Module 7: Advanced concepts – Part 2

- Understanding Digressions
- Lab 12: Enable Digressions
- Lab 13: Get to know the Analytics tab
- Lab 14: Create your own Chatbot
- Watson Assistant in the Private Cloud

PROJECT MANAGEMENT FOR COMPUTER SCIENCE (VAC70)

Total Duration: 40hrs

Course Overview:

This course provides an introduction to project management principles and practices as they apply to computer science projects. It covers essential concepts, techniques, and tools used in planning, organizing, and executing projects within the field of computer science. Students will gain practical skills and knowledge necessary to successfully manage software development projects.

Course Duration:

Typically offered as a semester-long course (14-16 weeks)

Course Objectives:

· Understand the fundamental concepts, principles, and processes of project management.
· Learn to identify project stakeholders, define project objectives, and develop a project charter.
· Acquire knowledge of project planning techniques, including work breakdown structure (WBS), scheduling, and resource allocation.
· Gain skills in project risk management, including identifying, assessing, and managing project risks.
· Learn effective project communication and team management techniques.
· Understand project quality management and its importance in software development.
· Develop an understanding of project monitoring, control, and project closure processes.
· Apply project management tools and software to manage and track project progress.

Course Topics:

UNIT I: Introduction to Project Management

Definition of a project , Project life cycle and phases , Project constraints (scope, time, cost) , Key project management knowledge areas ,

UNIT II: Project Initiation and Planning

Project stakeholders and their roles , Defining project objectives and deliverables

Developing a project charter , Work breakdown structure (WBS) , Project scheduling techniques (Gantt charts, critical path method) , Resource allocation and levelling

UNIT III: Project Risk Management

Identifying project risks , Risk assessment and probability analysis ,Risk response strategies (avoidance, mitigation, transfer) , Monitoring and controlling project risks

UNIT IV: Project Communication and Team Management

Effective project communication strategies, Team roles and responsibilities , Team building and motivation , Conflict resolution and management

UNIT V: Project Quality Management

Quality planning and standards , Quality assurance and control processes , Software testing and quality metrics , Continuous improvement techniques

UNIT VI: Project Monitoring & Control and Project Closure

Project monitoring techniques and tools , Change management and configuration control , Earned value management , Performance reporting and project status updates. Project acceptance criteria , Project documentation and archiving ,Lessons learned and knowledge transfer ,Celebrating project success and closure

Assessment Methods:

· Assignments and homework

· Group projects and case studies

· Quizzes and exams

· Class participation and discussions

FACULTY OF
LAW

LAW OF MARITIME DISPUTE RESOLUTION (VAC71)

Total Duration: 40hrs

Overview

International Law is broadly classified into two: Public International Law and Private International Law. The law of the sea falls under the purview of Public International Law and can be distinguished from two closely related bodies of law: maritime and admiralty. Maritime law is the private law relating to ships and the commercial business of shipping. Admiralty law, often used synonymously with maritime law, applies to the private law of navigation and shipping, in inland waters as well as on the ocean. The latter may also refer to the legal jurisdiction of specialized Admiralty courts. There may be important overlaps between the public international law of the sea and private maritime law, as may occur through the application of rules for vessel passage through a jurisdiction or the enforcement of domestic law in the ocean.

Learn about Maritime Law

Maritime law is defined as "the corpus of rules, concepts and legal practices governing the business of carrying goods and passengers by sea."

Shipping moves international trade and the global economy. It connects countries, economies and businesses. As maritime trade involves parties across borders, there will be interplay of different legal systems as the cargo moves across borders. This course is framed to impart understanding on how trade dispute emerge in commercial shipping industry.

Aim of the Course:

The aim of this course is to provide candidates a thorough knowledge of Private International Law that governs the commercial aspects of the shipping industry, followed by a comprehensive and practical insight to the dispute resolution mechanism. The course delivers the essential knowledge and expertise required to build and enhance the candidate's understanding of the maritime disputes and the process of settlement of disputes through arbitration.

LAW OF MARITIME DISPUTE RESOLUTION COURSE MODULES

Module 1- Introduction to Admiralty Jurisdiction

· Nature and History of Admiralty Law
· Carriage of Goods by Sea Act, 1971
· Admiralty Jurisdiction: Nature and Content
· Admiralty actions in rem and in Personam

Module 2- Introduction to Maritime Lien

· Introduction to the basics
· Arrest of ships and its modern alternatives
· Mareva injunctions
· Extinction of liens

Module 3- Collision Claims and Limitation Claims

· Introduction to collision claims
· International Regulations for Preventing Collisions at Sea, 1972 (COLREGS)
· Introduction to Limitation Claims
· Convention on Limitation of Liability for Maritime Claims (LLMC)

Module 4- Dispute Settlement Mechanism

· Nature and types of Maritime Claims
· Arbitration and Conciliation Act, 1996
· Arbitration Procedure
· Maritime Arbitration

THEORY AND PRACTICE OF MEDIATION IN INDIA (VAC72)

Total Duration: 40hrs

Overview

Mediation in India is an increasingly popular method of alternative dispute resolution (ADR) that provides parties with a platform to resolve their disputes outside of traditional court litigation. It is a voluntary and confidential process facilitated by a neutral third party, known as a mediator, who helps the parties in reaching a mutually acceptable resolution.

Mediation serves as an alternative to the adversarial nature of litigation, emphasizing collaboration, communication, and self-determination. It is designed to empower the parties involved by allowing them to actively participate in the resolution process and find creative solutions that meet their interests and needs.

The concept of mediation has been present in Indian society for centuries, rooted in traditional practices of dispute resolution such as panchayats (village councils) and lok adalats (people's courts). However, formal recognition and promotion of mediation as a structured ADR mechanism gained traction in recent years.

The legal framework for mediation in India is primarily provided by the Civil Procedure Code, 1908, and the Alternative Dispute Resolution and Mediation Rules, 2003. Additionally, individual states have enacted their own mediation rules to complement the national framework.

Mediation can be applied to a wide range of disputes, including civil, commercial, and family matters. It is particularly suitable for resolving disputes related to contracts, property, business, consumer issues, employment, family disputes, and more. However, criminal cases and cases involving offenses punishable with imprisonment generally do not fall within the scope of mediation.

The mediation process typically begins with the parties voluntarily agreeing to participate in mediation. They select a mutually acceptable mediator or seek assistance from a mediation center. The mediator, who is an impartial and neutral third party, facilitates communication, assists in identifying issues, explores interests, and helps generate options for resolution. The mediator does not impose a decision but encourages the parties to reach a mutually acceptable settlement.

Aims and Objectives of the Course

1. Understanding the Principles of Mediation: The course aims to provide participants with a comprehensive understanding of the fundamental principles and concepts of mediation. This includes learning about the role of a mediator, the voluntary nature of the process, the importance of impartiality and neutrality, and the principles of confidentiality and self-determination.

2. Developing Mediation Skills: One of the primary objectives of this course is to develop the practical skills necessary for effective mediation. This includes enhancing communication and active listening skills, promoting empathy and understanding, fostering negotiation and problem-solving abilities, and facilitating constructive dialogue between parties in conflict.

3. Knowledge of Mediation Process and Techniques: Participants in this course are typically introduced to the step-by-step process of mediation, from the initial preparation and opening statements to identifying issues, generating options, and reaching a resolution. The course aims to familiarize participants with various mediation techniques, such as reframing, summarizing, and reality testing, to facilitate productive discussions and promote settlement.

4. Ethical and Professional Conduct: The course emphasizes the importance of ethical and professional conduct for mediators. Participants learn about the ethical standards and guidelines that govern the practice of mediation, including issues of confidentiality, impartiality, and conflict of interest. They are encouraged to develop a strong sense of professionalism and adhere to ethical principles throughout the mediation process.

5. Application of Mediation in Various Contexts: The course may explore the application of mediation in different contexts, such as civil disputes, commercial disputes, family disputes, community conflicts, workplace conflicts, and more. Participants gain insights into the specific considerations and techniques relevant to each context.

6. Mediation Advocacy and Practice: For individuals interested in becoming mediation practitioners or advocates, the course may provide guidance on establishing a mediation practice, marketing mediation services, and navigating the practical aspects of working as a mediator. It may also cover the role of lawyers, organizations, and institutions in supporting and promoting mediation.

7. Role-Play and Practical Exercises: Many mediation courses incorporate role-play simulations and practical exercises to allow participants to apply their knowledge and skills in simulated mediation scenarios. These exercises provide an opportunity to practice mediation techniques, handle challenging situations, and receive feedback for improvement.

COURSE MODULES

Module 1. Introduction
- Historical Perspective of Mediation
- Mediation In India
- Legal Recognition of Mediation in India
- Evolution of Mediation in India

Module 2. Understanding Conflict
- Nature
- Dimensions of Conflict
- Causes of Conflict

Module 3. Concept of Mediation
- Types of Mediation
- Advantages of Mediation
- Role of referral Judges
- Role of Lawyers and Parties in Mediation
- Comparison between Judicial Process and other ADR processes

Module 4. Process of Mediation

- Stages of Mediation

- Communication in Mediation

- Mediators (Role, Functions, Qualification and Ethics & Code of Conduct

Module 5. Negotiation and Bargaining in Mediation

- Types of Negotiation and Bargaining

- Barriers to Negotiation

- Impasse

Exercise - ROLE PLAY to demonstrate the process of Mediation and differences between various ADR Processes.

FACULTY OF
PHARMACY

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BASIC NUTRITION, FOODS AND DIETETICS (VAC73)

Total Duration: 40hrs

COURSE OBJECTIVES

1. To create a better understanding of the basic aspects of human nutrition by providing information on the current concepts of nutritional principles

2. To study the interrelationships between nutrients along with their recommended allowances and food sources so as to enable students to become aware of the importance of a balanced diet based on sound nutritional principles.

3. Acquire skills in assessing food preservation and to prevent food spoilage.

4. To enable the students to understand concepts of an adequate diet.

SYLLABUS

Unit 1

1. Vitamins: Physiological and biochemical role of fat and water soluble vitamins, sources and digestion, Effects of deficiency and excess.

2. Minerals: Classification of macro and micro nutrients along with their physiological and biochemical role. Food sources and recommended allowances. Effects of deficiency and excess in the diet.

Unit 2

1. Fluid and electrolyte balance

2. Acid base balance : recommended intake and sources.

3. Interrelationships between nutrients: Protein and energy, Protein, Fat, Carbohydrates, Vitamin D, Calcium and Parathyroid hormone, Vitamin E and PUFAs, Vitamin C and Iron, Vitamin B12 and Folic acid.

Unit 3

1. Food spoilage and factors affecting food spoilage

2. Food preservation Methods of preservation – Dehydration, freezing and canning, radiation, use of microwaves, home-scale methods of preservation and fermentation.

3. Use of processed foods and their contribution to the daily diet.

4. Role of packaging in maintaining quality of processed foods

Unit 4

Use of processing technology for Breakfast cereals, Alcoholic beverages, vegetable and fruit products, flesh foods, milk and milk products, egg and egg products.

Unit 5

1. Concepts of an adequate diet, food budget proportionate cost of various foods in relation to their nutrient content.

2. Principles involved in Planning diets. Normal Dietetics – Meal planning for the family at various stages of the life cycle – infancy to old age factors, affecting food habits and their modifications, cultural food patterns in India.

1. Eva Medved (1986) Food – Preparation and theory, Prentice – Hall, Inc. Englewood Cliffs, New Jersey.

2.Shakuntal N. Manay and Shadaksharaswamy M. (1987) Foods – Facts and Principles, Wiley Eastern Limited.

3.Davidson S., Passmore R. and Brock J.F., (1986), Human Nutrition and Dietetics, Churchill Livngstone, Edinburg.

4.Devlin T.M., (1986), Textbook of Biochemistry with clinical correlations (2nd Edition), John Wiley.

LIFESTYLE AND HEALTH MANAGEMENT (VAC74)

Total Duration: 40hrs

COURSE OBJECTIVES

1. To create a better understanding of the basic aspects of human health by providing information on the current concepts of physiology

2. To study the interrelationships between lifestyle like diet, sleep and medication along with their recommended allowances of the same sources so as to enable students to become aware of the importance of a balanced health.

3. Acquire skills in assessing health management in accordance with lifestyle.

4. To enable the students to understand concepts of regulation of lifestyle.

SYLLABUS

Unit 1

Diet and Health

1. Fluid and electrolyte balance

2. Acid base balance: recommended intake and sources

3. Protein, carbohydrate and lipids balance in Health

Unit 2

Steroids and Health

1. Androgens and Anabolic steroids.

2. Estrogens, progesterone and oral contraceptives.

3. Drugs acting on the uterus.

Unit 3

Mental stress and Health

1. Anxiety, depression and CNS activity

2. Mood effect on Hormone regulation

Oxidative stress on various diseases. Role of antioxidants

Unit 4

Biological Clock and health.

1. Circadian rhythms and day light cycle

2. Circadian rhythms on various diseases

3. Circadian rhythms in various treatments

Unit 5

Drugs and Health

1. Alcohols and disulfiram

2. Enzyme induction, enzyme inhibition, kinetics of elimination

3. combined effects of drugs and factors modifying drug action. b. Adverse drug reactions. c. Drug interactions (pharmacokinetic and pharmacodynamic

References

1. Cardinali, D. P., Brown, G. M., & Pandi-Perumal, S. R. (2021).Chronotherapy. Handbook of clinical neurology, 179, 357–370. https://doi.org/10.1016/B978-0-12-819975-6.00023-6

2. Schneiderman, N., Ironson, G., & Siegel, S. D. (2005). Stress and health: psychological, behavioral, and biological determinants. Annual review of clinical psychology, 1, 607–628. https://doi.org/10.1146/annurev.clinpsy.1.102803.144141

3. Casey G. (2017). Sex hormones and health. Nursing New Zealand (Wellington, N.Z. : 1995), 23(1), 24–28.

4. Anabolic Steroids and Other Appearance and Performance Enhancing Drugs (APEDs). https://nida.nih.gov/research-topics/anabolic-steroids

5. Ross and Wilson Anatomy and Physiology in Health and Illness, International Edition, 14e. Waugh.

6. Goodman & Gilman's: The Pharmacological Basis of Therapeutics, 13e Laurence L. Brunton, Randa Hilal-Dandan, Björn C. Knollmann

FACULTY OF
SCIENCE

NEEDLE & CRAFT (VAC75)

Program Outcomes: -

POs 1:-Program outcomes in needle and craft can vary depending on the specific goals and objectives of the program. Here are some common outcomes that can be achieved through needle and craft programs:Skill Development,Creativity and Self-Expression,Personal Growth and Confidence Building

POs 2: needle and craft programs offer a wide range of outcomes, combining skill development, creativity, relaxation, community engagement, cultural preservation, economic empowerment, and personal growth. These outcomes contribute to the holistic development and well-being of participants.

Syllabus
Unit 1

Surface ornamentation - Introduction, tools and materials used in surface embellishment. Basic embroidery stitches - Definition, classification, methods and implementation of basic embroidery stitch - straight stitch - stem, back, fly stitch, flat stitch - satin, cross, loop stitch - herring bone, Feather stitch, knotted stitch - French knot, bullion knot.

Unit 2

Traditional Indian embroidery - History, types, symbolism of embroidery of different states of India - Kasuthi, Chambarumal, Zardozi, Chikankari, Kutch, Kathiawar, Sindh, Phulkari, Kantha, Kashida - Material, motifs, symbolism, colour, stitches, technique and relevance.

Unit 3

Tribal embroidery - Introduction, types - Nagaland, Manipuri, Lambadi, Thoda with their Traditional influence, material, motifs, symbolism, colour, stitches and technique.

Unit 4

Crochet - Introduction, definition, tools, material, techniques, types - single crochet, double Crochet, treble pattern.

Knitting - Definition, tools and materials used for knitting, techniques employed in knitting, terminologies, features and applications of elementary stitches (garter, stockinet, rib), texture - Diagonal, moss, lace pattern, cable pattern, cross and knotted.

Unit 5

Crochet - Introduction, definition, tools, material, techniques, types - single crochet, double Crochet, treble pattern.

Knitting - Definition, tools and materials used for knitting, techniques employed in knitting, terminologies, features and applications of elementary stitches (garter, stockinet, rib), texture - Diagonal, moss, lace pattern, cable pattern, cross and knotted.

Course Outcomes: -

COs 1: Needle and craft refer to the specific learning objectives and skills that students are expected to achieve upon completing a needle and craft course. Here are some common course outcomes in needle and craft

COs 2:-Historical and Cultural Appreciation: Students will gain an understanding of the historical and cultural significance of needlework and craft traditions. They will learn about different cultural practices, techniques, and motifs, fostering an appreciation for the diversity and heritage associated with needle and craft work.

CO3:- Collaboration and Communication: In group or collaborative settings, students will develop effective communication and teamwork skills. They will learn to share ideas, provide constructive feedback, and work collaboratively to complete shared projects. These skills are particularly important when engaging in community-based or larger-scale craft initiatives

Co4:- Understanding of Materials and Tools: Students will gain knowledge about various materials, fibers, fabrics, and tools used in needle and craft work. They will learn about the properties, advantages, and limitations of different materials, allowing them to make informed choices when selecting materials for their projects.

References

1. Anne Mathew, "Vogue Dictionary of Crochet Stitches", David & Charles, London, 1989.

2. Readers Digest, "Complete Guide to Needle Work", APH Corp, New Delhi, 1996.

3. Satheesan, Innova, "Indian Ethnic Designs", Honesty Publishers and Distributors, Mumbai, 2009.

4. Shailaja. D. Naik, "Traditional Embroideries of India", APH Corp, New Delhi, 1996.

5. Sheila Paine, "Embroidered Textile", Thames & Hudson Ltd., 1990.

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6. UshaSrikant, "Ethnic Embroideries of India", Samata Enterprises, 1998 and 2000.

ANCIENT INDIAN PHYSICS (VAC76)

Total Duration: 40hrs

Program Outcomes

POs 1: Developing intellectual, personal and professional abilities through effective AIP skills; ensuring high standard of behavioral attitude through literary subjects and shaping the students socially and morel responsible citizens.

POs 2: On successful completion of the programme, the students are introduced to AIP skills, to define, classify and understand the methods of this, to improve their AIP skills, to enable them to practice those skills in their daily life.

Course Outcomes

COs 1: On successful completion of the programme, the students are introduced to Ancient Indian Physics (AIP) to skills, to define, classify and understand the methods of AIP, to improve their skills, to enable them to practice those skills in their daily life.

COs 2: To gain knowledge on fundamental principles of AIP including parts of space, time and matter etc.

COs 3: To learn the literary, societal, cultural and historical background of the AIP by Indian Physicist.

COs 4: Students will develop understanding on various theory of AIP.

COs 5: Develop research skills on the basis of AIP area.

Module 1: Introduction, 2500 years old atomic theory

Module 2: Vaisasika Darshan and Veda, Great sages and their work

Module 3: The Philosophical Systems at the basis of Indian Physics

Module 4: Vedic Cosmology, Astronomy in ancient India

Module 5: Times, Space and Matter