# UNIVERSITY OF JAMMU

(NAAC ACCREDITED 'A ++' GRADE' UNIVERSITY)
Baba Sahib Ambedkar Road, Jammu-180006 (J&K)

*Academic Section*
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## NOTIFICATION
**(25/March/Adp./87)**

It is hereby notified for the information of all concerned that the Vice-Chancellor, in anticipation of the approval of the Academic Council, is pleased to authorize the adoption of the syllabi and courses of study for **Four Year Under Graduate Programme (Design Your Degree)** of Semester IV **(as given in the annexure)** for the examinations to be held in the years as per details given below:-

| **Subject** | **Semester** | **For the examinations to be held in the year** |
|---|---|---|
| **FYUGP (Design Your Degree)** | Semester- IV | May 2025, 2026 and 2027 |

**The Syllabi of the courses are also available on the University website: www.jammuuniversity.in**

**DEAN ACADEMIC AFFAIRS**

**No. F.Acd/II/25/** 18994-19003
**Dated:** 17-03-2025

**Copy to:**

1. Director/Convener, Board of Studies in Design Your Degree
2. All members of the Board of Studies.
3. C.A. to the Controller of Examinations
4. Director, Computer Centre, University of Jammu
5. Deputy Registrar/Asst. Registrar (Conf. /Exams. UG)
6. In-charge University Website for necessary action please

# University of Jammu
## Four Year Innovative Undergraduate Program

## (Design Your Degree)

### Semester 4th

| Course Code | Course Title | Credits | Contact Hours (per Credit) |
|---|---|---|---|
| UFDDPC-401 | Digital Humanities | 04 | 15 |
| UFDDPC-402 | Demystifying Human Behaviour | 04 | 15 |
| UFDDPC-403 | Food as Medicine: Traditional and Modern Practices | 04 | 15 |
| UFDDPC-404 | Exploring Tourism in J&K: An Entrepreneurial Perspective | 04 | 15 |
| UFDDPC-405 | Exploring the world of Cinema With Smart Phones | 04 | 15 |
| UFDDPC-406 | Marvels of the World | 02 | 15 |
| UFDDPA-407 | The Art and Science of Predictions | 04 | 15 |

**Prof. Alka Sharma**
**Director, SIIEDC**

**University of Jammu**
**Four Year Innovative Undergraduate Program**
**(Design Your Degree)**
**Semester IV**
**(For the session 2025, 2026 and 2027)**

**Course Code: UFDDPC-401**
**Credits: 04**
**Contact Hours: 15 per credit**

**Course Title: Digital Humanities**
**Maximum Marks: 100**
**Internal Evaluation: 30**
**External Evaluation: 70**

**Course Objectives:**

1. To introduce students to the interdisciplinary field of Digital Humanities (DH), blending technology with humanities research.
2. To equip students with hands-on experience in using digital tools and methods for analyzing, interpreting, and presenting humanities data.
3. To foster critical thinking about the implications of digital technology on humanities disciplines.
4. To encourage collaborative and project-based learning, emphasizing practical applications of digital methods in humanities.

**Learning Outcomes:**

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

1. Understand the core concepts, history, and scope of Digital Humanities.
2. Apply digital tools and methodologies to analyze and visualize humanities data.
3. Design and execute a DH project, incorporating collaborative and interdisciplinary approaches.
4. Critically evaluate the ethical, social, and cultural implications of using digital technologies in humanities.
5. Develop skills in digital storytelling, text analysis, and data visualization

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**Credits: 04** **Maximum Marks: 100**
**Contact Hours: 15 per credit** **Internal Evaluation: 30**
**External Evaluation: 70**

**Introduction to Digital Humanities**

- Historical development and key debates in Digital Humanities.
- Overview of major tools and technologies.

**Activities:**

- Group discussion: What does "Digital Humanities" mean to you?
- Case study analysis: Examples of successful DH projects.
- Tool exploration: Brief introduction to tools like Voyant, Zotero, and Omeka.

**Digital Textual Analysis**

- Text mining and corpus analysis.
- Topic modelling and sentiment analysis.
- Natural language processing basics.

**Activities:**

- Hands-on workshop: Using Voyant for text analysis.
- Mini-project: Analyzing themes in a chosen literary text or historical document.
- Reflection session: Discussing insights from the text analysis.

**Data Visualization and Digital Mapping**

- Introduction to data visualization principles.
- Tools for visualization: Tableau, Gephi, and Flourish.
- GIS and spatial humanities: Mapping historical and cultural data.

**Activities:**

- Workshop: Creating visualizations using Tableau.

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- ❖ Collaborative project: Mapping cultural or historical events using GIS tools.
- ❖ Peer review: Presenting and critiquing visualizations.

**Digital Storytelling and Collaborative Projects**

- ➢ Digital storytelling techniques and platforms.
- ➢ Collaborative project management and tools.
- ➢ Ethics and copyright in digital humanities.

**Activities:**

- ❖ Creating a digital story using tools like StoryMapJS or Twine.
- ❖ Group project: Developing a small-scale DH project.
- ❖ Reflection and feedback session: Sharing experiences and challenges.

**Pedagogical Approaches:**

The pedagogy for the Digital Humanities (DH) course is based on an interdisciplinary, experiential, and collaborative learning approach. Students will be actively engaged through discussions, hands-on workshops, and project-based activities designed to bridge technology and humanities research. The course emphasizes exploratory learning, where students will interact with digital tools and methodologies to analyze and present humanities data while considering its ethical, social, and cultural implications. Each module integrates practical applications, including tool exploration, text analysis, data visualization, and digital storytelling. Collaborative projects will play a central role, requiring students to work in teams, manage tasks, and develop solutions to real-world humanities questions. Students will engage in critical discussions, reflective learning

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sessions, and peer reviews to deepen their understanding and enhance their skills.

**Mode of Evaluation:**

The evaluation for the Digital Humanities course consists of two components: **internal assessment** and **external assessment**, ensuring a holistic evaluation of students' performance.

**Internal Assessment (30%):**

This component focuses on continuous performance monitoring to develop skills in application, effective communication, and teamwork.

Class Participation (10%): Encourages active involvement in discussions and activities, promoting meaningful engagement.

Mini-Projects (20%): Facilitates focused exploration of specific tools and methodologies, enhancing practical knowledge and problem-solving abilities.

**External Assessment (70%):**

The external assessment is centered on a semester-long transdisciplinary major project that demonstrates the practical application of Digital Humanities methodologies.

Digital Humanities Project (30%): Promotes interdisciplinary teamwork to produce a comprehensive and innovative outcome.

Reflection Papers (20%): Provides a platform for critical analysis of readings, experiences, and project development.

Final Presentation (20%): Offers an opportunity to showcase the project's process, findings, and outcomes in a structured and professional manner.

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**Book References:**


1. Gold, M. K. (Ed.). (2012). Debates in the Digital Humanities (NED-New edition). University of Minnesota Press. http://www.jstor.org/stable/10.5749/j.ctttv8hq
2. Berry DM (ed.). 2012. *Understanding Digital Humanities*, Houndmills: Palgrave Macmillan
3. Underwood, T. (2019). Distant Horizons: Digital Evidence and Literary Change, University of Chicago Press
4. JOCKERS, M. L. (2013). Macroanalysis: Digital Methods and Literary History. University of Illinois Press. http://www.jstor.org/stable/10.5406/j.ctt2jcc3m
5. Graham, S., Milligan, I., & Weingart, S. (2015). Exploring Big Historical Data: The Historian's Macroscope.
6. Martyn Jessop, Digital visualization as a scholarly activity, *Literary and Linguistic Computing*, Volume 23, Issue 3, September 2008, Pages 281–293, https://doi.org/10.1093/llc/fqn016
7. Alexander, B. (2011). The New Digital Storytelling: Creating Narratives with New Media.Bloomsbury Publishing
8. McPherson, T. (Ed.) (2008). Digital Youth, Innovation, and the Unexpected. MIT Press

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**Semester: 4th**
**(For the Session 2025, 2026,2027)**

**Course Code: UFDDPC-402**

**Course Title: Demystifying Human Behaviour**

**Credits: 04**
**Contact Hours: 15 hours per credit**

**Maximum Marks:100**
**Internal Evaluation: 30**
**External Evaluation:70**

**Course Objectives**

- To understand why people think, feel and act the way they do
- To systematically observe, analyze and develop insight of human behavior
- To understand the core drivers of behaviour

**Outcomes**

- To create better habits, shift thought patterns, and control emotional triggers
- To develop interventions to behave in a better ways
- To develop App for monitoring behavior

## Biological Foundations of behaviour:

Exploring the biological factors that influence human behavior, including genetics, brain structure, exploring automated systems of the human body and their relationship with our behavior.

**Activity:**

1. How does human brain play role in shaping behavior? Collect evidences and discuss.
2. Which brain parts are involved in behavioral change? Can we improve or transform behaviour? Techniques and methodology to study the same.
3. Design an experiment to find if hormones and which hormones play a role in behavioral differences in various genders if so.
4. Do we inherit behavior? Discussion and activity to find out if so.
5. Conduct experiments to test behavioral change pre- and post-intervention.

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**Resources:**

1. The Female Brain, a book by Louann Brizendine

2. The Male Brain, a book by Louann Brizendine.

3. The Mind and the Brain: Neuroplasticity and the Power of Mental Force. Book by Jeffrey M. Schwartz and Sharon Begley
4. How Genes Influence Behavior,a book by Jonathan Flint

**Movies:**

A Beautiful Mind, based on A mathematical genius, John Nash and directed by Ron Howard.

https://www.youtube.com/watch?v=gkrM1gMpqRU

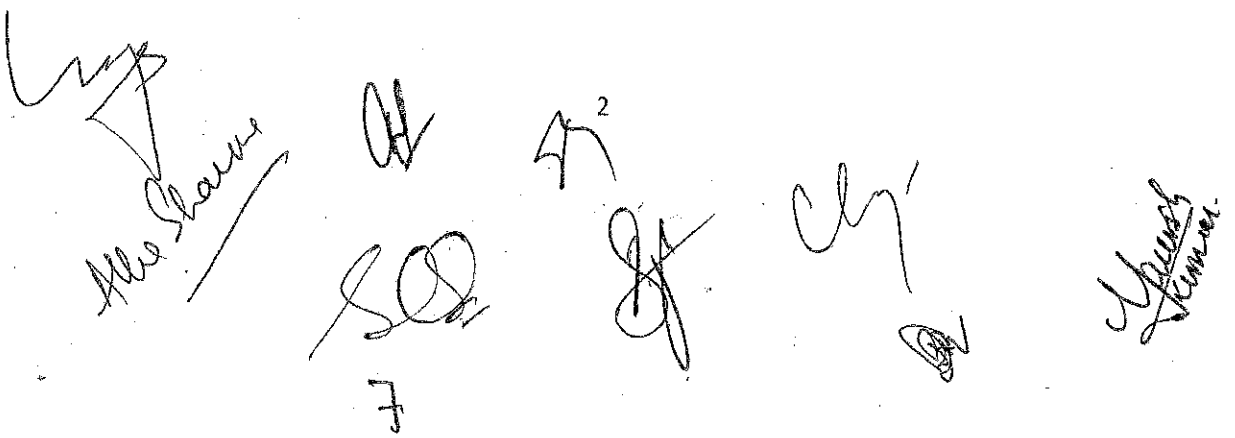
https://www.youtube.com/watch?v=fISwz3DvrII

https://www.youtube.com/watch?v=GogLW14WEb0

https://www.youtube.com/watch?v=yQ6VOOd73MA

## Psychological, socio cultural and evolutionary factors of behavior

Influence of Thoughts, Emotions, Environment, and Unconscious Processes on Human Actions and Behavior, Impact of Social Conditioning and Group Dynamics on Behavior Development, Significance of Survival Instinct in Shaping Human Behavior



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**Activity**

- Data collection with the help of questionnaires/interviews/ case studies/online resources for data collection/ research studies on human behavior, Analyzing and interpreting the data
- Thought-Emotion-Behavior Mapping
- Environmental Triggers Analysis
- Unconscious Bias Test
- Social Norms Challenge
- Conformity Experiment
- Role-Playing Cultural Conditioning
- Fight-or-Flight Simulation
- Scarcity Mindset Experiment
- Evolutionary Behavior Debate

**Resources:**

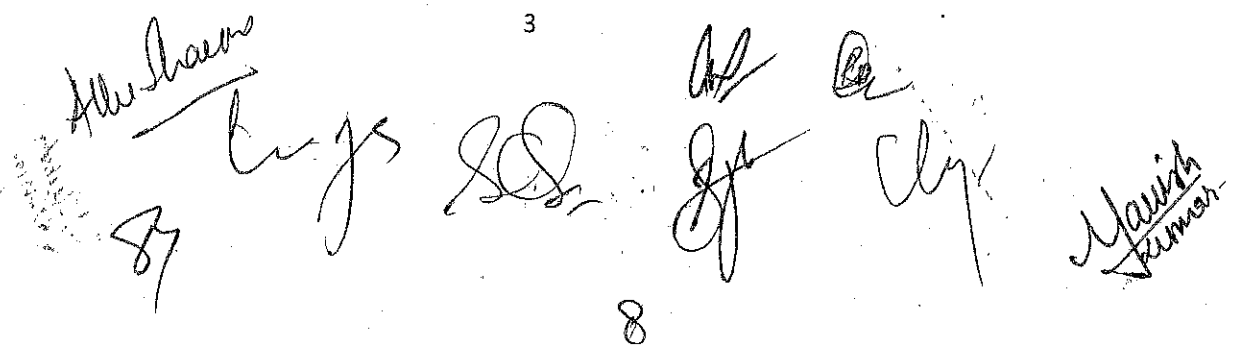
**Films and Documentaries:**

1. "Inside Out" (2015)
2. "The Stanford Prison Experiment" (2015)
3. "Study" (2012)
4. "Eighth Grade" (2018)
5. "Whiplash" (2014)

**Books:**

1. "Influence: The Psychology of Persuasion" by Robert Cialdini"
2. The Social Instinct: How Cooperation Shaped the World" by Nichola Raihani:
3. "Behave: The Biology of Humans at Our Best and Worst" by Robert M. Sapolsky
4. "The Naked Ape: A Zoologist's Study of the Human Animal" by Desmond Morris:
5. "Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives" by Nicholas A. Christakis and James H. Fowle





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**Online Resources:**

- "How Films Reach Into Our Unconscious" by Psychology Todaypsychologytoday.com
- "The Ecology of Human Fear: Survival Optimization and the Nervous System"pmc.ncbi.nlm.nih.gov
- "Inside Out – A Psychological Insight"

## Brain Activities and EEG

Introduction to Brain Activities, Neurons, synapses, and brain waves (Alpha, Beta, Gamma, Theta, Delta), EEG (Electroencephalography), How EEG works and its applications, Basics of EEG signal processing.

**Activity 1:** Explore open-source EEG datasets (e.g., DEAP, SEED).
**Activity 2:** Use Python libraries (e.g., MNE-Python) to visualize EEG signals.
**Project:** Analyze a small EEG dataset and create a visualization of brain wave patterns

**Data Preprocessing, Cleaning and normalizing EEG data**

Feature extraction from EEG signals, Exploratory Data Analysis (EDA), Visualizing emotional data using graphs and charts AI-Based Emotion Classification, Introduction to Machine Learning (ML), Supervised learning basics, Common ML algorithms (e.g., SVM, Random Forest), Building Emotion Classification Models, Training and testing ML models on EEG datasets, Evaluating model performance (accuracy, precision, recall)

**Activity 1:** Preprocess an EEG dataset using Python (e.g., filtering noise, extracting features).
**Activity 2:** Perform EDA on an emotion dataset using Pandas and Matplotlib.
**Project:** Prepare a report on the analysis of an emotion dataset, highlighting key findings
**Activity 3:** Train a simple ML model (e.g., SVM) to classify emotions using an EEG dataset.
**Activity 4:** Build a deep learning model (e.g., CNN) for emotion classification.
**Project:** Develop an AI-based emotion classification system using EEG data and present the result

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**Final Project Description**

Students will work in teams to:

1. Preprocess and analyze an EEG dataset.
2. Build and evaluate an AI model for emotion classification.
3. Present their findings in a report and presentation.

**Deliverables:**
A working prototype or model and a final report and presentation

Key Tools and Resources

1. EEG Datasets: DEAP, SEED, DREAMER.
2. Software: Python, Jupyter Notebook, MNE-Python, TensorFlow, PyTorch.
3. Libraries: Pandas, NumPy, Matplotlib, Scikit-learn

**Pedagogy:** The entire course is a kind of project work which will be pre reads, discussions, activities and explorations of understanding, data gathering from general population and using AI resources to demystifying the behavior from different context. Mentor will provoke students to think innovatively and understand different context and causes of behavior and the factors leading to different behaviours among people hence broadening their understanding about different perceptions, learning, personalities, attitudes and values of the people. students will be allotted different projects in groups which needs to be carried by field visits, interacting with people as well as lab work. The students will also be mentored to learn the AI applications for behavioral monitoring

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**Internal Evaluation: 30**
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**Mode of Evaluation:**

The assessment structure for this program consists of two components: internal assessment and external assessment. The internal assessment, shall account for 30% of the overall grade, on the basis of continuous performance monitoring through tests/ quizzes/ presentations/ class participation/ small live projects emphasizing on development of skills in application, effective communication, and teamwork.

The remaining 70% of the grade shall be accessed through a transdisciplinary major project, which will span an entire semester.

The evaluation of the major project would be comprehensive, considering various factors including the depth and accuracy of the project's content, the applied methodology, research rigor, the effective use of IT tools and data analysis, as well as the meaningful findings and practical implications derived from the project. The assessment shall also include testing innovativeness, communication and problem solving.

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**Semester: 4th**
**(For the Session 2025, 2026,2027)**

**Course Code: UFDDPC-403**

**Course Title: Food as Medicine: Traditional and Modern Practices**

**Credits: 04**
**Contact Hours: 15 hours per credit**

**Maximum Marks:100**
**Internal Evaluation: 30**
**External Evaluation:70**

**Learning objectives:**

1. To understand the foundational principles of food as medicine.
2. To identify real-world nutritional challenges and propose practical solutions.
3. To analyze the political and social aspect of food, including food security policies and their impact

**Learning Outcomes:**

1. To develop basic entrepreneurial skills to create innovative nutrition-based ventures.
2. Gain hands-on experience in designing and implementing nutrition interventions.
3. Work collaboratively in teams and engage with communities and experts effectively.

**Foundations of Food as Medicine**

Historical perspective of food as medicine: Revitalizing traditional food practices to improve health outcomes, disease management and prevention through diet.

**Activities:**

- Develop a list/quiz on nutrition required during infancy, childhood, adolescence
- Workshop: Explore traditional Indian medicinal diets (e.g., turmeric milk, khichdi). Create a "functional food plate" using local ingredients and present its health benefits.
- Case Study: Analyze successful nutrition interventions in India, such as combating anaemia through iron-rich diets.

**Nutrition for Cognitive and Mental Health**

Impact of macro- and micronutrients on brain development and learning, dietary pattern during the Stress and other mental health issues. Mindful eating and emotional well being: Strategies for promoting mental clarity and emotional resilience through nutrition. , impact of social norms and peer influence in shaping food habits

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**Activities:**

- Study the apps in eating behaviour
- Experiential Learning: Conduct a simple dietary assessment in a community or school to identify nutrient gaps
- Reflective Workshop: Design a balanced meal plan for schoolchildren to develop a "Mindful Eating Plan" and document its impact over a week
- Community Engagement: Discuss dietary habits and mental health awareness in small focus group discussion

**Social and Political Impact of Food**

Mid day meal scheme and its social impact, Case Studies of Women as Food Leaders, Rural women forming food cooperatives and dairy collectives (eg Amul)

**Activities:**

- Field Visit: Observe a mid-day meal program or similar nutrition initiative
- To study initiatives like community gardens, farmers' markets
- Future of Women as Food Leaders & Change-Makers research in rural areas of Jammu
- Social Campaigns: Use storytelling and real-life examples to inspire dietary changes in a non-judgmental way
- Role play on food is central to social gatherings, celebrations, and family traditions, influencing dietary choices and habits

**Entrepreneurship in Nutrition**

- **Innovation in Food-Based Solutions:**
  Identifying gaps in the nutrition market.
  Basics of product development and prototyping.
- **Business Planning:**
  Essentials of building a sustainable business model.
  Marketing and branding for food-based ventures.
- **Social Entrepreneurship:**
  Creating impactful community nutrition programs.

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**Activities:**

- Ideation Workshop: develop basic prototype like nutrient rich snacks and beverages
- Project Work: Draft a business plan for a food-based startup or community initiative.
- Explore Culinary tourism You tube and various aspects of enterprenurship with food

**Suggested Readings and Resources**

**Books**


1. Caldecott, T. (2011). Food as medicine: The theory and practice of food. Frog Books.
2. DK Publishing. (2013). Healing foods: Eat your way to a healthier life. DK Publishing.
3. Lesser, M. (2006). Nutrition and mental health: A comprehensive overview of diet, lifestyle, and mental health. Health Press.
4. Morningstar, A. (1995). Ayurvedic nutrition and cooking. Lotus Press.
5. Saarela, M. (Ed.). (2011). Functional foods: Concept to product (2nd ed.). Woodhead Publishing.


**Research Papers and Articles**


1. Fernstrom, J. D. (2000). The role of nutrition in cognitive and mental health. Clinical Nutrition Insights, 2(6), 1-5.
2. Mid-Day Meal Scheme: A study on its impact on nutrition and education in India. (2010). Economic and Political Weekly, 45(21), 52-59.
3. Probiotics and gut-brain communication: The link to mental health. (2019). Frontiers in Psychiatry, 10, 456. https://doi.org/10.3389/fpsyt.2019.00456
4. Ayurveda and functional foods: Applications and scope. (2018). Journal of Traditional and Complementary Medicine, 8(4), 343-350.


**Online Resources**


1. National Institute of Nutrition (India). (n.d.). Dietary guidelines for Indians. Retrieved from https://www.nin.res.in
2. Food and Agriculture Organization (FAO). (n.d.). Food systems and nutrition. Retrieved from http://www.fao.org

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3. Ayush Research Portal (Government of India). (n.d.). Research on Ayurveda, Siddha, and traditional medicine. Retrieved from http://ayushportal.nic.in
4. World Health Organization. (2014). WHO traditional medicine strategy: 2014-2023. Retrieved from https://www.who.int/health-topics/traditional-medicine


**Case Studies**


1. Government of India. (n.d.). Anemia Mukt Bharat Program. Retrieved from https://www.nhm.gov.in
2. Fortification of edible oils in Rajasthan. (2019). Fortify Health India. Retrieved from https://www.fortifyhealth.org
3. Mid-Day Meal Scheme in Tamil Nadu. (2018). Tamil Nadu Government. Retrieved from https://www.tn.gov.in


**Pedagogy:**

The entire course is a kind of project work which will be pre reads, discussion activities and explorations of foods from the surroundings and how can the food be used as asource of medicine and bringing change in the society. Mentor will provoke students to think innovatively about the naturally existing qualities of food and their uses.

Different groups of students will be allotted different projects and to be carried out that will require different task at their own like field visits and explorations from the surrounding as well through online mode along with general guidance/supervision

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# (Design Your Degree)
# Semester IV
# (For the session 2025, 2026 and 2027)

**Course Code: UFDDPC-404**

**Course Title: Exploring Tourism in J&K: An Entrepreneurial Perspective**

**Credits: 04**
**Contact Hours: 15 per credit**
**Maximum Marks: 100**
**Internal Evaluation: 30**
**External Evaluation: 70**

**Course Objectives**

Jammu & Kashmir has tremendous potential in tourism sector owing to its natural beauty, cultural significance, diversity and variety of locations. Tourism has been a major contributor to region economy and also contributes to employment. Innovation in the tourism industry with the use of new ideas, products, and methods to improve customer experiences, efficiency, and economic growth can generate a variety of entrepreneurial opportunities.

This course will

1. Equip students with entrepreneurial skills specific to the tourism industry.
2. Provide insights into the cultural, historical, and natural attractions of Jammu & Kashmir.
3. Develop strategies to leverage sustainable tourism in the region.
4. Address challenges of the tourism sector by proposing innovation business solutions

By the end of the course, students will:

- Develop viable tourism business plan tailored to Jammu & Kashmir.
- Understand the region's tourism potential and challenges.
- Integrate sustainable and community-centric practices into tourism ventures.
- Leverage modern marketing and technology tools for success of the proposed solution

**Understand the Basics of Tourism**

- Components of Tourism Industry
- Types of Tourism
- Tourism Value Chain: Understanding Stakeholders in the Tourism Sector
- Travel Motivations
- Tourist Typologies
- Legal, Regulatory and Policy Framework in Tourism Sector

**Mapping the Tourism Resources**

The students will be encouraged to identify, understand and map the various types of tourism resources for each district in Jammu & Kashmir. They will focus on the following

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- Natural Resources (Landscapes, Waterbodies, Forest and Wildlife)
- Cultural Resources (Historical Monuments, Art & Craft, Festivals & Events, Cuisine)
- Adventure Tourism Resources
- Rural & Agro Tourism Resources
- Health & Wellness Tourism Resources
- Pilgrimage and Spiritual Tourism Resources

**Innovation in Tourism**

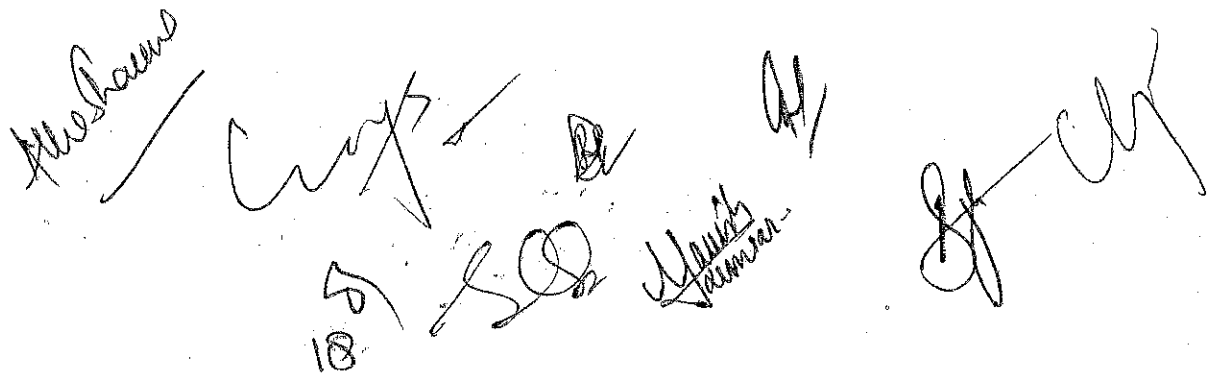
The students will be encouraged to identify and understand various global innovations that have transformed tourism and hospitality sector at the global level. The insights derived will help them develop their major project

- Sharing Economy in Tourism (e.g. AirBnB, Uber, Experience sharing)
- Eco Tourism and Sustainable Tourism Innovations
- Digital and Technology Driven Innovations (e.g. VR, AR, AI Driven Models, Blockchain)
- Cultural and Experiential Tourism Innovations (e.g. Authentic local experiences)
- Gastronomy and Hospitality Innovations (e.g. Cloud Kitchens, Farm to Table Experiences, Automated Dining Experiences)
- Health and Wellness Innovations (e.g. wellness retreat, sleep tourism, digital detox vacations)

**Entrepreneurship in Tourism**

Based on the learning from the above, students will

- Developing a Comprehensive Business Plan for a Tourism Startup
- Prototyping Innovative Tourism Products or Services
- Pitching a Tourism Venture to Potential Investors



# University of Jammu
# Four Year Innovative Undergraduate Program
# (Design Your Degree)
# Semester IV
# (For the session 2025, 2026 and 2027)

**Course Code: UFDDPC-404**

**Course Title: Exploring Tourism in J&K: An Entrepreneurial Perspective**

**Credits: 04**
**Contact Hours: 15 per credit**
**Maximum Marks: 100**
**Internal Evaluation: 30**
**External Evaluation: 70**

**Pedagogy**

This course will follow and experiential based learning pedagogy, wherein the students will immerse themselves in real world tourism opportunities and challenges. While working in groups they will identify problems, challenges and opportunities which are being faced by the tourism stakeholders in J&K. They will also be interacting with industry leaders, do field visits to understand the tourism resources. Different groups of students will be allotted different projects and to be carried out that will require different task at their own like field visits and explorations from the surrounding as well through online mode along with general guidance/supervision

**Reference Books**

- "Smart Tourism: Exploring the Role of Technology in Tourism" – Zheng Xiang, Alastair M. Morrison
- "Responsible Tourism: Using Tourism for Sustainable Development" – Harold Goodwin
- "Sustainable Tourism on a Finite Planet" – Megan Epler Wood
- "Marketing for Hospitality and Tourism" – Philip Kotler, John T. Bowen & James Makens
- "Tourism: Principles, Practices, Philosophies" – Charles R. Goeldner & J.R. Brent Ritchie
- "The Business of Tourism" – Chris Holloway & Claire Humphreys

**Web Resources**

Students are advised to visit websites, follow social media handles of the following organizations to get updated on latest policies and trends

- UNWTO (United Nations World Tourism Organization) ;
- WTTC (World Travel & Tourism Council);
- PATA (Pacific Asia Travel Association);
- IATO (Indian Association of Tourism Operators)
- Ministry of Tourism, Government of India
- Ministry of Culture, Government of India
- State Government Tourism Websites
- Global Sustainable Tourism Council
- Skift, Hospitality Net, Trip Advisor
- Lonely Planet

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**Maximum Marks: 100**
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**External Evaluation: 70**

**Mode of Evaluation:**

The assessment structure for this program consists of two components: internal assessment and external assessment. The internal assessment, shall account for 30% of the overall grade, on the basis of continuous performance monitoring through tests/ quizzes/ presentations/ class participation/ small live projects emphasizing on development of skills. The external assessment shall be based on a major project which will account for 70% of the overall grade.

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**(For the session 2025, 2026, 2027)**

**Course code: UFDDPC-405**

**Credit:** 04
**Contact hours:** 15 per credit

**Course Title:** Exploring the world of cinema through Smartphone
**Maximum marks:** 100
**Internal Evaluation:** 30
**External Evaluation:** 70

## Learning Outcomes

The course will enhance the student's ability to:

- ✓ Understand the value of cinema, various aspects of film making, its scope and the available market.
- ✓ Learn professional script- writing for various types of films (short films, documentaries films, feature films etc.)
- ✓ Be acquainted with their creativeness and aptitude for exploring the possibility of carrier in film Industry.

The tangible learning outcomes will be observed when

- ✓ Students will learn how to craft a compelling narrative that communicates their chosen issue to a wide audience.
- ✓ Students will complete projects that involve analyzing and interpreting various topics/themes through the use of filmmaking tools.
- ✓ Students will engage in group projects, demonstrating their ability to collaborate effectively with peers.
- ✓ Students will write self-assessment reports reflecting on their strengths and areas for improvement, while considering how their use of smartphone technology has enhanced their creative process and teamwork.

## ➢ Topics for Discussion

- ✓ Role of cinema in evolution of Society, narrations building, Components of Film making: Screenwriting, cinematography, production design, sound design, editing, visual effects, and post-production
- ✓ Film techniques: Camera angles, color, sound effects, music, and working with actors.
- ✓ Essential Steps for film making: The Idea, The Script, The Storyboards, The Cast and Crew, The Locations, The Filming, The Post-Production
- ✓ Step-by-step guide to creating your movie script- Write your logline. Create an outline, Build a treatment, Write your screenplay, Format your screenplay, Edit your screenplay, Action lines, Camera angles, Character names, Dialogue descriptions, Dialogue, Locations, Off-screen or off-camera, Scene headings, Voiceover

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- ✓ Steps for using camera in film making- Shot list, Crane shot, First assistant camera, Pre-production, Development, Film editing, Distribution, Types of camera shots and angles used in film making- Medium shot, POV shot, Shoulder level shot, Long shot, Low angle shot, Two shot, Aerial shot, Tilt, Tracking shot
- ✓ Stages of Production- Development, Pre-production, Production, Post-production, Distribution
- ✓ Steps to Post productions- Editing the Content, Sound Editing and Adding Music, Adding Visual Effects, Sound Mixing, Color Grading, VFX
- ✓ Common Tools Used for Post Production- Adobe Premiere Pro, Final Cut Pro, Apple Logic Pro X and Adobe Audition, etc.
- ✓ Gaming, Graphic Designing, Animation & VFx, Photography, Print Media, Industrial Design
- ✓ Range of products of entertainment industry- Movies, cartoon making, Digital painting, TV shows, Radio shows, News, Music, Newspapers and magazines, Books, Video games, Streaming, Live performances, youtube, OTT channels
- ✓ Govt. Schemes for promotion of this industry, National and International Awards

## ➢ Activities:

- Analysis of video in film- making, script- writing, screen plays, camera elements, direction, acting and post- production using Smartphone.
- Visit to local production houses, Doordarshan, All India Radio, interview with experts associated with film making.
- Documentation of information concerning local cinema players and their achievements in last 2-3 decades.

## ➢ Mode of Evaluation-

Major project: The students shall be divided into 4 to 5 groups and evaluated on the basis of 10-12 minutes product (short documentary film) on their chosen themes using smartphone.

Minor Project: student shall be allotted various task of film-making such as Script-writing, dialogues, acting, editing etc. and evaluated accordingly.

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## Resources

Top 20 Best Websites for Filmmakers ( https://www.actionvfx.com/blog/20-best-websites-for-filmmakers-in-2023 )
ActionVFX
ProductionCrate
Pond5
RawFilm
Shutterstock
PremiumBeat
Adobe Creative Cloud
Red Giant
Autodesk
Blackmagic Design
Color Grading Central
FilmConvert
StudioBinder
Celtx
Frame.io
No Film School
Film Riot
ProVideo Coalition
IMDb pro
CineD

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**Course Code: UFDDPC-406**
**Credits: 02**
**Contact Hours: 15 per credit**

**Course Title: Marvels of the World**
**Maximum Marks: 50**
**Internal Evaluation: 15**
**External Evaluation: 35**

**Course Objectives:**

1. Provide students with a comprehensive understanding of key technological innovations, such as space exploration, renewable energy, and the blockchain.
2. Explore the practical applications of these technologies across various industries, including healthcare, finance, and sustainable development.
3. Analyze the societal, ethical, and environmental implications of technological advancements.
4. Develop critical thinking and problem-solving abilities through projects, case studies, and debates focused on real-world technological challenges.
5. Cultivate collaboration and communication skills through team-based projects, presentations, and peer discussions.

**Learning Outcomes:**

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

1. Understand and explain key concepts in space exploration, blockchain, and renewable energy.
2. Assess the impact of technological innovations on society, the economy, and the environment.
3. Evaluate the ethical and governance challenges posed by emerging technologies and propose potential solutions.
4. Communicate complex technological ideas clearly and effectively through written reports, presentations, and debates.
5. Collaborate effectively in teams, demonstrating skills in research, problem-solving, and project management.
6. Synthesize course concepts and apply them to analyze and address modern challenges in technology and society.

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**Introduction to Marvels**

- Concept of Marvel
- Characteristics of a Marvel
- Gemini

**Space Exploration (Mars Rovers, James Webb Telescope)**

- **Mars Rovers:** Overview of missions (Curiosity, Perseverance) and their role in exploring Mars.
- **James Webb Telescope:** Overview of the telescope and its mission to explore deep space.

**Videos:**

*Curiosity Rover: Journey to Mars*
*NASA's Perseverance Rover on Mars*
*James Webb Telescope: Unveiling the Universe*

**Renewable Energy Innovations**

- **Introduction to Renewable Energy:** Types of renewable energy sources (solar, wind, hydropower, geothermal).
- **Innovations in Renewable Energy:** Advances in solar cells, wind turbines, and energy storage solutions.
- **Sustainable Development and Green Technology:** Role of renewable energy in mitigating climate change.

**Videos:**

*Solar Energy Innovations*
*Wind Energy and the Future of Sustainability*
*The Role of Renewable Energy in Fighting Climate Change*

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**Artificial Islands and Floating Cities**

- **Concept of Artificial Islands:** Design and construction of artificial islands.
- **Floating Cities:** Potential of floating cities for addressing rising sea levels and urbanization.
- **Environmental and Engineering Challenges:** Considerations for sustainability and livability.

**Videos:**

*Building Artificial Islands*
*Floating Cities: The Future of Urbanization*
*The Maldives: Artificial Islands in Action*

**Blockchain**

- **Introduction to Blockchain:** How blockchain works, key features (decentralization, immutability).

**Videos:**
*How Blockchain Works*
*Blockchain: Beyond Cryptocurrencies*

**Pedagogical Approaches:**

The pedagogical approach for the course **Marvels of the World** emphasizes active and engaged learning through interactive methods like debates, discussions, and case studies. Students will collaborate on group projects and presentations, developing teamwork, communication, and problem-solving skills. The course integrates multimedia resources, such as videos and virtual tours, to provide practical insights into topics like AI, space exploration, and renewable energy. Reflective practices, including journaling and peer feedback, encourage personal engagement and critical thinking. Additionally, students will conduct research projects and explore real-world case studies, enhancing their creativity and analytical abilities while connecting technological innovations to practical applications.

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**Mode of Evaluation:**

The evaluation mode for this course will consist of both internal and external assessments, providing a well-rounded approach to student performance.

**Internal assessment (15 marks)** will be divided into two components: **Technology Analysis (7.5 marks)**, where students will present a report on a technological innovation, analyzing its societal impact and future potential; **Class Participation and Debate (7.5 marks)**, which will evaluate students' involvement in class discussions, debates, and group activities, promoting critical thinking and effective communication skills.

**External assessment (35 marks)** will focus on a group-based research project designed to promote collaboration and practical application of course concepts. The assessment will be divided into two components. The first component, the Project Presentation (20 marks), will require each group to present their research findings, demonstrating a clear understanding of the selected topic, application of theoretical concepts, and innovative solutions to a modern technological challenge. The presentation will be evaluated based on clarity, depth of analysis, teamwork, and communication skills. The second component, the Project Report Submission (15 marks), will involve submitting a comprehensive written report detailing the research process, findings, and conclusions. The report will be assessed on the quality of independent research, coherence, structure, and the integration of innovative approaches. This assessment aims to evaluate both the collaborative and analytical capabilities of students while encouraging creative problem-solving.

**Recommended Readings:**

**Space Exploration:**

National Aeronautics and Space Administration (NASA). Mars Exploration Rover Missions.

James Webb Space Telescope Overview (NASA).

**Renewable Energy:**

Boyle, Godfrey. Renewable Energy: Power for a Sustainable Future, 3rd Edition. Oxford University Press, 2012.

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**Blockchain:**

Nakamoto, Satoshi. Bitcoin Whitepaper: A Peer-to-Peer Electronic Cash System. .

Tapscott, Don, and Alex Tapscott. Blockchain Revolution: How the Technology Behind Bitcoin and Other Cryptocurrencies is Changing the World. Penguin, 2016.

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**Course code:** UFDDPA-407

**Course Title:** The Art and Science of Predictions

**Credit:** 04

**Maximum marks:** 100

**Contact hours:** 15 per credit

**Internal Evaluation:** 30

**External Evaluation:** 70

**Learning Outcomes:** The objectives of the course on "Art and Science of Predictions" include:

- execution of matrix operations and use them to manipulate and analyse data;
- utilizing eigenvalues, eigenvectors, and matrix factorizations in machine learning and data analysis tasks;
- implementation and interpretation of dimensionality reduction techniques like PCA in data science;
- applicationof statistical methods to real-world problems.
- to foster analytical thinking and problem-solving skills.
- to equip students with tools for data analysis and interpretation.

**Prerequisites:** Basic knowledge of Calculus and Statistics; Introductory knowledge of programming (Python).

## Predictive Foundations – Making Sense of Data with Matrices

Imagine you own a small shop that sells three different types of products. We can represent the sales oflast twelve months in the form of rectangular grid where rows represent products and columns represent months. This mathematical entity is called Matrices.

**Detailed Content:**

a. **The Magic of Matrices:**

Recall how to add, multiply, and manipulate matrices to uncover hidden insights. Special types of matrices are like secret tools that make calculations easier.

b. **Solving Puzzles with Matrices:**

Computer use matrices to break them down complex problems into smaller, manageable pieces. We'll explore how to solve systems of equations using simple steps like Gaussian elimination.

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**c. The Power of Inverses and Determinants:**

Inverses and determinants are like the "undo" buttons and "checkers" of matrices. They help us reverse calculations and understand if a problem has a unique solution.

**Hands-On Activities:**

i. **Image Processing with Python**
ii. **Finding Redundant Data in Machine Learning**
iii. **Secret Messages with Cryptography**

## From Chaos to Clarity: Simplifying Complex Data

Using powerful tools like eigenvalues, eigenvectors, and matrix decompositions, you'll learn how to simplify complex datasets.

**Detailed Content:**

**a. Finding the Hidden Core of Data**

Discover how to uncover the most important patterns in your data. These "hidden gems" help simplify complex datasets, making them easier to analyze. (Behind tools like PCA for reducing clutter in data!)

**b. Breaking Down Data into Key Insights**

Learn how to split messy, complicated data into smaller, meaningful pieces. This technique powers recommendation systems (like Netflix suggestions) and helps spot trends in social media or text.

**c. Reshaping Data for Clearer Analysis**

Transform raw data into a cleaner, more usable format. Think of it like stretching or rotating a cluttered table to highlight what truly matters—perfect for preparing data for machine learning.

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**Hands-On Activities:**

i. **Image Recognition with PCA**
ii. **Google's PageRank Algorithm**
iii. **Movie Recommendation System with SVD**

## Exploring the Potential of Data for Prediction

As an example you will learn how to predict **sales revenue**of a small shop where multiple factors influence sales, such as **product prices, marketing efforts, and customer demographics**. These factors exist on different scales, including **nominal, ordinal, interval, and ratio** data. By the end of this module, you will understand how tochoose suitable models, and evaluate performance to make accurate revenue predictions.

**Detailed Contents**

- To model the relationship by identifying changes in the predictors affect the outcome, which is essential for uncovering cause and effect relationships.
- Simplify complex datasets by grouping variables that are highly correlated, which can reveal hidden patterns and structures.
- To group similar data points together, helping you find natural clusters or patterns within your data.

## Forecasting the Future Through times series data

Imagine a bakery tracks daily bread sales for a year to predict future demand. Using time series data, it adjusts production based on trends, holidays, and seasonal patterns to minimize waste and maximize profit.

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**Detailed Contents**

- Decomposition in time series data separates trend, seasonality, improving forecasting accuracy, decision-making, and resource optimization for better business planning.
- Time series techniques to analyze trends, seasonality, and improving forecasting accuracy, demand prediction, inventory management, and decision-making for optimized business operations and resource allocation.

**Hands-On Activities:**

**Sales Forecasting**: Predict future product sales using historical monthly sales data.

**Energy Consumption Forecasting**: Forecast electricity demand based on past patterns.

**Website Traffic Prediction**: Predict website visits based on past traffic data to plan marketing or server capacity.

**Stock Price Prediction**: Use past stock prices to forecast future trends and volatility.

## Assessment Methods

1. **Projects**: Real-world data analysis and case studies.
2. **Class Participation**: Interactive sessions and group discussions.

**Pedagogy:** Mentor must introduce each topic with the help of real-life situations/problems so as to give complete understanding of the concept and enabling the students to find solutions to the problems at their own by "How to Solve it" approach. Mathematical concepts must come to the students in a natural way instead of imposing on them.

## Recommended Textbooks

1. **Mathematics**

**Primary Textbook**: "Linear Algebra and Its Applications" by Gilbert Strang, Cengage India Private Limited, 2005.

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**Supplementary Textbooks**:

- "Matrix Computations" by Gene H. Golub and Charles F. Van Loan, Johns Hopkins University Press, 2013.
- "Practical linear algebra for data science" by M. X. Cohen, O'Reilly Media, Inc. 2022.

**Software**: Python (NumPy, pandas, scikit-learn), or R for coding exercises

2. **Statistics**
   - *Mathematical Statistics and Data Analysis, 3rd Edition* by John A. Rice, Cengage India Private Limited, 2013.
   - *The Elements of Statistical Learning: Data Mining, Inference and Prediction, 2nd Edition* by Trevor Hastie, Robert Tibshirani, and Jerome Friedman, Springer, 2017.
3. **Supplementary Materials**
   - Statistical software manuals and online tutorials.
   - Research papers and case studies.

**Mode of Evaluation**

The assessment structure for this program consists of two components: internal assessment and external assessment. The internal assessment, shall account for 30 per cent of the overall grade, on the basis of continuous performance monitoring through minor projects, group discussions, presentations/tests/quizzes, class participation, team work and 70% of the grade shall be assessed through a Major Project, which will span an entire semester. The evaluation of the major project would be comprehensive, considering various factors like identification of problem, methodology applied, tools used, data analysis and practical implication of the project. The project may involve choosing a specific war/local issue and conduct a detailed analysis of its long-term economic impacts, presenting their findings in a comprehensive research paper and oral presentation.