

Professional Development Programme for Teaching Staff

Duration: 36 hours

Medium: Online

Type: Theory and Hands-on Training

Objectives

- To enhance knowledge about digital information literacy including information resources, OERs etc.
- To create awareness about the ethical aspects of research and promote academic integrity through IPRs, Open Access concepts, Plagiarism etc.
- To implement the various AI tools in academics including teaching-learning processes, research etc.

Learning outcomes

- To be information literate;
- To understand the sources of digital information;
- To understand the threats of information vulnerability;
- To inculcate the ethical practices pertaining to information through the knowledge of plagiarism etc.;
- To be aware about the different aspects of IPRs and Open Access including Open Licenses;
- To be equipped with necessary AI based skills to to conduct effective research activities;
- To use and utilize the statistical tools fruitfully in research;

Syllabus

- **Module 1: Information Sources and Database Management**
 - a. Understanding Information Sources: Types and Characteristics
 - b. Types of Reference Sources
 - c. Digital Reference Tools
 - d. Database Management Systems: Introduction
 - e. Querying and Retrieval Techniques in Databases
 - f. Data Warehousing and Data Mining Concepts
 - g. Digital Libraries and Repositories: Access
 - h. Information Ethics: Access, Privacy, and Copyright



- **Module 2: Intellectual Property Rights**

- Intellectual Property: Definition, Types
- International Intellectual Property Agreements and Treaties
- Copyright and Fair Use: Applications and Limitations
- Patents, Trademarks, and Trade Secrets: Legal Frameworks
- IP Enforcement and Compliance Measures, Legal Remedies
- Processes and Procedures for Obtaining IP Protections
- Digital Rights Management (DRM)
- Creative Commons and Open Licensing

- **Module 3: Plagiarism**

- Understanding Plagiarism: Types
- Consequences of Plagiarism in Academia and Beyond
- Peer Review Process and Plagiarism Checks
- Academic Integrity Policies and Guidelines
- Plagiarism Detection Tools and Techniques
- Challenges in Plagiarism Detection
- Techniques for Minimizing Plagiarism
- Ethical Writing Practices and Attribution: Citation and Referencing

- **Module 4: AI in Teaching, Learning, and Research**

- Introduction of Artificial Intelligence (AI): Methods, components, types
- Importance of implementing AI in education
- AI-powered Learning Environments, Intelligent Tutoring Systems, Adaptive Learning
- Assessment and Evaluation with AI-based Tools
- AI-driven Research: Data Analysis and Prediction
- Selecting, Designing and Evaluating AI Tools
- Challenges in Integration of AI in education & Research
- Policies and Guidelines for AI-driven Education and Research

- **Module 5: MOOCs, e-Content Development & OER**

- Understanding MOOCs: Evolution and Importance
- Features of MOOCs Compliant E-Content
- Designing Effective MOOCs: Assessment Strategies
- Challenges and Opportunities in MOOC Implementation
- Introduction to Moodle: Features and Functions
- Configuration and Customization of Moodle Courses
- Creating Engaging E-Content: Principles and Strategies
- Multimedia Integration and Interactivity in E-Content
- Exploring OER: Definition, Types, and Accessibility
- OER initiatives and Licensing Models



- **Module 6: Statistical Packages in Research**

- Introduction to Statistical Analysis and Tools
- Statistical Software: SPSS, R, SAS, R-Studio
- Data Visualization Techniques and Tools
- Regression Analysis and Predictive Modeling
- Sampling Techniques and Experimental Design
- Hypothesis Testing and Confidence Intervals
- Multivariate Analysis and Factor Analysis
- Interpretation and Presentation of Statistical Findings

- **Module 7: Data: Ensuring Quality, Security, Privacy, and Management**

- Data Quality: Assessment and Improvement Strategies
- Challenges in Data Security and Management
- Data Security vs. Data Privacy
- Types of Security Measures in Data Protection
- Regulations for Data Security
- Privacy Laws and Guidelines
- Data Storage Practices ensuring Security and Privacy
- Data Security Strategies, Solutions and Trend