



Established in 2008
"बेटी बचाओ, बेटी पढ़ाओ"

India's First State Private Women's University

JAYOTI VIDYAPEETH WOMEN'S UNIVERSITY, JAIPUR

ज्योति विद्यापीठ महिला विश्वविद्यालय, जयपुर

NAAC Accredited | (2f), (12b) UGC Approved | Recognized by Statutory Councils

PROGRAM

DOCTOR OF PHILOSOPHY

COURSE WORK

SYLLABUS

DURATION – 6 MONTHS

DIRECTORATE OF RESEARCH & DEVELOPMENT

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Programme Academic Hours with Credit structure

Doctor of Philosophy (Ph.D.) Course Work

Category	Credit	Hours
Core Course work	16	160
University Compulsory Courses (UCC)	03	30
Total	19	190

The course work has the two Parts:

(A) The Core course work shall comprise of four papers:

- Research Methodology
- Computer Applications
- Quantitative & Statistical Techniques
- Research & Publication Ethics
- Dissertation on Review of Literature

S.No.	Core Courses	Credit	Hours
1.	Research Methodology	4	40
2.	Computer Applications	4	40
3.	Quantitative & Statistical Techniques	4	40
4.	Dissertation on Review of Literature	4	40
5.	Research & Publication Ethics	4	40
Total		20	200

(B) The Research Scholars shall also undertake the following compulsory courses under

University Compulsory Courses (UCC) for the fulfillment of University Mission.

- Women Rights &Law
- Environmental Studies & Disaster Management
- Cyber Security

S.No.	Community Awareness Education Courses	Credit	Hours
1	Women Rights &Law	1	10
2	Environmental Studies & Disaster Management	1	10
3	Cyber Security	1	10
Total		3	30

Course Structure

Objective: To Understand, Comprehend and apply Research Methodology, Quantitative Methods (Statistical Techniques), Computer Applications, Review of Literature, Skill Development and Community Awareness(in the chosen field of Research) in order to do Research work of Global Standards.

Coursework Structure						
Course Code	Course Name	Max. Marks	C	L	T	P
D/101	Research Methodology	100	4	4	-	-
D/102 or D/103	Computer Applications# or Advanced Computer Applications##	100 or 100	4 or 4	4 or 4	- or -	1 or 1
D/104	Quantitative & Statistical Techniques	100	4	4	-	-
D/105	Dissertation on Review of literature	100	4	-	-	-
D/106	Research & Publication Ethics	100	4	4	-	-
	Women Rights & Law*	50	1	1	-	-
	Environmental Studies & Disaster Management*	50	1	1	-	-
	Cyber Security*	50	1	1	-	-
Total Credit			23			

Note:

- C represents number of Credits per subject
- L,P,T represents number of Lecture, Practical & Tutorial Hours respectively in a week Per subject
- *University Compulsory Courses (UCC)
- #All Ph.D. Students except Ph.D. Students of Computer Science
- ##Only for Ph.D. Students of Computer Science

RESEARCH METHODOLOGY

UNIT-I (Credit 1.5)

Research: Definition-Characteristic-Types-paradigms, Research Methods versus Methodology, Research and Scientific Method, Research process: An eight-step model, planning, conducting, Criteria of Good Research

Review of literature: procedure, search for existing literature, development of theoretical and conceptual framework, writing up the literature reviewed

UNIT-II (Credit 1.5)

Formulation of research problem: Importance, Sources of research problem, Consideration in selecting a research problem, Steps of formulation, establishment of operational definitions, indicators, variables, measurement scale

Research design: Need for Research Design, Features of a Good Design, definition and functions of research design, selecting a study design, validity and reliability of research design, writing of research proposal

UNIT-III (Credit 1)

Interpretation and Report Writing: Meaning of Interpretation, Technique of Interpretation, Precaution in Interpretation, Significance of Report Writing, Different Steps in Writing Report, Layout of the Research Report, Types of Reports, Oral Presentation, Precautions for Writing Research Reports

Text/Reference Books:

1. **Kothari:** Research Methodology.

COMPUTER APPLICATIONS

(All branches except Computer Science)

UNIT-1(1Credit)

The basics of Computer System, Architecture, Basic knowledge of Hardware and Software, Computer System Characteristics, Capabilities and Limitations, Memory system and Input- Output Devices, Introduction of Application and System Software, Introduction of Programming Languages. Fundamentals of Operating System, Review of MS Windows, file management and GUI operations.

UNIT-2 (1.5Credits)

Microsoft Word – Creating and Editing a Document: Text and Paragraph Manipulations, Use style in a document, Find and replace selected text with new text. Import a picture, Resize a picture, Print a document, Correct errors in a document, Use Word's Help facility, Using Wizards to Create a Document, Create a resume using Word's Resume Wizard, Identify the Word screen in page layout view, Insert a table, Use AutoFormat as you type, Explain the components of a business letter, Using Word's letter template, Insert an AutoText entry, Spell and grammar check a document at once. Microsoft Word – Creating a Research Paper: Describe the MLA documentation style for research papers.

UNIT-3(1.5Credits)

Microsoft Excel: Describe the Excel worksheet, Selecting a cell or range of cells, Enter text and numbers, Use the AutoSum button to sum a range of cells, Copy a cell to a range of cells using the fill handle, Apply the AutoFormat command to format a range, Use the Name box to select a cell, correct errors on a worksheet. **Microsoft Access:** Describe databases and database management systems, Describe the features of the Access screen, Create a database, Create a table, Define the fields in a table, Add records to an empty table, Use a form view data, Create a custom report, Use Online Help, Design a database to eliminate redundancy. **Microsoft PowerPoint** – Building a Slide Presentation: Describe the PowerPoint window, Use the PowerPoint Pick a Look Wizard, Select a design template, Add a new slide, View a presentation in slide show view, Edit a presentation.

Text/Reference Books:

1. Introduction to Information Technology: Rajaraman, PHI
2. Fundamentals of Computers 4/E: Rajaraman, PHI
3. Fundamentals of Computers: P. Mohan, Himalaya
4. Information Technology: Dennis P. Curtin, McGraw Hill International
5. Fundamentals of Information Technology: Saha et al, Himalaya

ADVANCE COMPUTER APPLICATIONS

For Ph.D. Students (Computer Science)

UNIT-1(1Credit)

Object Modeling and Design: Basics of object-oriented approach, Classes, objects, relationships, key abstractions, common mechanisms, visual modeling, UML diagrams, class diagrams, advanced classes, advanced relationships, interfaces, types, roles, packages, instances, object diagrams, interactions, use cases, use case diagrams, interaction diagrams, activity diagrams, events and signals, state machines, processes, threads, state chart diagrams, components, deployment, Introduction to Modeling tools.

UNIT-2(1.5Credits)

Software Architecture: Component, Relationship, View, Architectural Styles, Frameworks, Patterns, Methodologies, Processes, Functional and Non-functional Properties of Software Architectures. Enabling Techniques for Software Architecture-Abstraction, Encapsulation, Information Hiding, Modularization Separation of Concerns, Coupling and Cohesion, Sufficiency, Completeness and Primitiveness Separation of Policy and Implementation, Separation of Interface and Implementation.

UNIT-3(1.5Credits)

Model Taxonomy: State-Oriented models - finite-state machine, Petri net, Hierarchical concurrent finite state machine; Activity-oriented models - Dataflow graph, flow charts; Heterogeneous model - control/data flow graph, Object oriented model, Program-state machine; ArchitectureDescriptionLanguages,Architectureframeworks,Applicationspecificarchitectures - Controller Architecture, Data path architecture. **Software Metrics:** Metrics in process and project domains, Software measurement, Software quality, Framework for Technical software metrics, Metrics for analysis model, Metrics for design mode, Metrics for source code, Metrics for testing, Metrics for maintenance. Internal and external software metrics.

Text/ReferenceBooks:

1. SoftwareMetrics-ARigorous&PracticalApproach,NormalFenton&Pleeger,And International Thomson Computer Press.
2. SoftwareArchitecture-PerspectivesonanEmergingDiscipline,Shaw&Garlan, Prentice-Hall.
3. DesignPatterns-ElementsofReusableObject-OrientedSoftware,Gamma,Helm, Johnson & Vlissides, Addison Wesley.
4. TheUnifiedModelingLanguageUserGuide,GradyBooch,JamesRumbaugh,Ivar Jacobson, Pearson Education, New York.

5. The Unified Modeling Language Reference Manual, James Rumbaugh, Ivar Jacobson, Grady Booch, Addison-Wesley.
6. HighLevelSystemModeling:SpecificationandDesignMethodologieseditedby Ronald Waxman, Kluwer Academic Publishers
7. HighLevelSystemModeling:SpecificationandDesignMethodologieseditedby Ronald Waxman, Kluwer Academic Publishers

QUANTITATIVE&STATISTICAL TECHNIQUES

UNIT-I(Credit 1)

Collection of Data: Introduction, Types of data: Primary and secondary data, Methods of collecting primary data, Sources of secondary data, Drafting or framing the questionnaire. **Classification and Tabulation of Data:** Meaning and objective of classification, types of classification, formation of discrete and continuous frequency distribution, relative and bivariate frequency distribution, Role of tabulation, parts of a table, types of tables.

UNIT-II(Credit 1.5)

Diagrammatic and Graphical representation: Significance of diagram and graphs, Types of diagrams: One dimensional or Bar-diagram and its different types, two dimensional diagrams,Pie chart, Graphs: Techniques and types of graphs, Graphs of frequency distribution. **Measures of central tendencies:** Objectives of averaging, requisites of a good average, Types of averages with their merits and demerits. **Measures of Dispersion:** Meaning and significance, Different measures of dispersion: absolute and relative measures with their merits and demerits.

UNIT-III(Credit 1.5)

Sampling Theory: sampling, principal of sampling, types of sampling: probability and non probability sampling, Sampling errors, population, sample, statistic, parameter, sampling distribution of a statistic, **Estimation:** Meaning, criterion of a good estimator, point and interval estimation. **Correlation and regression analysis:** Meaning and types of correlation, measure of correlation, linear regression, coefficient of regression. Index numbers and time series analysis.

Text/ReferenceBooks:

1. Gupta,S.,P.,“Statisticalmethods”,SultanChand&Sonseducationalpublishers,New Delhi.
2. Gupta,S.,C.,“FundamentalofMathematicalStatistics”,SChand&Sons,NewDelhi.
3. Nagar,K.,“Sankhyikikemooltatva”.

Research & Publication Ethics

UNIT-I(Credit1)

Philosophy and Ethics

Introduction to Philosophy: Definition, nature and scope, concept, branches; Ethics: definition, moral philosophy, nature of moral judgments and reactions

UNIT II (Credit1) Scientific Conduct

Ethics with respect to science and research; Intellectual honesty and research integrity; Scientific misconduct: Falsification, Fabrication and Plagiarism (FFP); Redundant Publications: duplicate and overlapping publications, salami slicing; Selective reporting and misrepresentation of data

UNIT III (Credit1) Publication Ethics

Publication ethics: definition, introduction and importance - Best practices / standards setting initiatives and guidelines: COPE, WAME, etc. - Conflict of interest - Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice versa, types - Violation of publication ethics, authorship and contributor ship - Identification of publication misconduct, complaints and appeals - Predatory publisher and journals.

UNIT IV (Credit 1) OPEN ACCESS PUBLISHING

Open access publications and initiatives - SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies - Software tool to identify predatory publications developed by SPPU - Journal finder / journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer, Journal Suggested, etc.

Unit V (Credit 1) PUBLICATION MISCONDUCT

Group Discussion (2Hrs.): a) Subject specific ethical issues, FFP, authorship b) Conflict of interest c) Complaints and appeals: examples and fraud from India and abroad

Software tools (2Hrs.): Use of plagiarism software like Turnitin, Urkund and other open sources

Unit VI: DATA BASES AND RESEARCH METRICS

Databases (4Hrs): Indexing databases, Citation databases: Web of Science, Scopus, etc. Research Metrics (3 Hrs.): Impact Factor of journal as per Journal Citations Report, SNIP, SJR, IPP, Cite Score - Metrics:

h-Index, g-index, i10Index, altmetrics.

**Units 1, 2 and 3 are to be covered via Theory mode and Units 4, 5 and 6 are to be covered via practice mode*

WOMEN RIGHTS & LAW

(Credit Hrs 1)

Objective: The paper aims at creating awareness as to importance and role of women in society through the medium of law. It also focuses on women welfare laws.

Unit-I: Meaning of law, Constitutional Safeguards for Women, Right to Equality (Art-14), Life & Personal Liberty, Right to Education (Art-21, 21-A), Right against Sexual Exploitation (Art- 23, 24), Constitutional Remedies (Writs- Art-32-35), Participation in Panchayat and Municipalities, Marriage : Conditions, Ceremonies, Registration, Restitution of Conjugal Rights, Judicial Separation, Void & Voidable Marriages, Legitimacy of Children of Void & Voidable Marriages, Punishment of Bigamy, Divorce Common Grounds for Divorce, No Petition for divorce within 1 year of marriage, Divorced Person when may marry again, Maintenance: Wife, widowed daughter-in-law, Children, Amount of Maintenance, Interim Maintenance, Maintenance Provisions under Cr.PC, Adoption: Requisites of a valid adoption, Capacity of a male Hindu to take in adoption, Capacity of a female Hindu to take in adoption, Persons capable of giving in adoption, Persons who may be adopted, Effects of Adoption,.

Unit – II: Indian Penal Code, 1860 Right of Private Defence, Dowry Death, Abetment of Suicide, Cruelty by Husband or Relatives of Husband, Sex Selection & Causing Miscarriage, Hurt & Grievous Hurt, Wrongful Restraint & Confinement, Outraging the modesty of a woman, Kidnapping and Abduction, Offences regarding Prostitution, Rape, Bigamy, Adultery, Domestic Violence, Sex Determination Test -The Medical Termination of Pregnancy Act, 1971, The Pre- Conception and Pre-Natal Diagnostic Techniques Act, 1994, Reproductive Technologies: Meaning, Concept & Challenges of A.I, IVF & Surrogacy, Right of HIV/ AIDS Victims, Introduction to Consumer Protection Act , Tenancy Act, Right to Information Act, Motor Vehicles Act, Intellectual Property Rights, Act & Rules Maternity Benefits Act 1961.

1. Law relating to Women – S.R. Myneni
2. Law relating to Women – Dr. S.C. Tripathi

Suggested Readings:

1. Women and Law – Prof. Nomita Aggarwal
2. Women and Law – Dr. Manjula Batra
3. Women and Law – G.P. Reddy

ENVIRONMENTAL SCIENCE AND DISASTER MANAGEMENT

(Credit 1)

Objective: To enable students to aware about the Environmental Science for sustainable development and also about the Disaster Management for precautionary as well as rescue purpose.

UNIT I (Ecosystem and pollution) (0.75-0-0) Theory (0.75 credits)

Environmental Science and Ecosystem: Definition, scope and importance, Concept of Ecosystem, Ecological Pyramids, and Functions of Ecosystem: brief idea of energy flow. Environmental Pollution and other Problems: Definition, Causes, Effect, Control and preventive measures of air, water, noise, nuclear pollution. Global problems: Climate change, global warming, Ozone layer depletion and Acid Rain.

UNIT II (Biodiversity and Conservation)(0.75-0-0) Theory (0.75 credits)

Biodiversity and its Conservation: Definition, Types and Importance, Spots of Biodiversity, Endangered and Endemic Species of India, Threats to Biodiversity, Habitat loss, Poaching of wild life, Conservation of Biodiversity: Brief idea of *in situ* and *ex situ* conservation of Biodiversity. Brief idea of Natural Resources and their conservation

UNIT III (Concept and Types of Disaster)(0.75-0-0) Theory (0.75 credits)

Concept and definitions (Disaster, Hazard, Vulnerability, Resilience, Risks), Disaster: classification, causes, impacts (including social, economic, political, environmental, health, psychosocial, etc), Differential impacts-in terms of caste, class, gender, age, location, disability, Global trends in disasters, urban disasters, pandemics, complex emergencies, climate change, Disaster cycle-its analysis, phases, culture of safety, prevention, mitigation, and preparedness, community based DRR, Structural –non structural measures, roles and responsibilities of community, Panchayati Raj Institutions/Urban Local Bodies (PRIs/ULB,s) states, Centre and other stake-holders.

UNIT IV (Components and Management of Disaster) (0.75-0-0) Theory (0.75 credits)

Factors affecting Vulnerabilities, differential impacts, impact of development projects such as Dams, embankments, changes in Land use etc, Climate change Adaptation, Relevance of indigenous knowledge, appropriate technology and local resources, Disaster risk Management in India: Hazard and Vulnerability profile of India, Components of Disaster Relief: Water, Food, Sanitation, Shelter, Health, Waste Management, Institutional arrangements (Mitigation,Response and Preparedness, DM Act and Policy, Other related policies, plans, programs and legislation, Project Work: (Field Work, Case Studies)

RecommendedTextBooks:

1. “Disaster Management(2003)”-H.K.Gupta
2. Elements of Environmental Science(2012)Kaushik and Kaushik

ReferenceBooks:

1. P. Bakre, V. Bakre and V. Wadhwa. 2005. Paryavarniya Adhyyan. Rastogi Publications, Meerut.

2. E.Bharucha.2005.EnvironmentalStudies.UniversityPress,Hyderabad.
3. G.R. Chatisel and H. Sharma. 2005. A Text Book of Environmental Studies. HimalayaPublishing House, Delhi.
4. J.P.Sharma.2005.EnvironmentalStudies.LaxmiPublicationsLtd.,Jalandhar.
5. S.V.S.Rana.2007.EnvironmentalStudies.RastogiPublications,Meerut.

CYBER SECURITY

Objective: This paper aims at creating awareness regarding Cyber Security.

Unit –I Introduction to network & Computer technology, Cyber Security, E-Commerce, Digital Signatures, Electronic Signatures, The beginning: Electronic data, Electronic data interchange, Transmission of a Purchase Order, Electronic Data Interchanges : The Early Adopters, Coming of age of Electronic Commerce, Securing E-Commerce, Adoption of Digital Signatures, Technology behind Digital Signatures, Creating a Digital Signature, Verifying a Digital Signature, Public Key Infrastructure, PKI Process, Digital Signature and the Law. Firewall, Security Assurance, Security Laws, International Standards of Security

UNIT-II The Information Technology Act, 2000, Transition from Handwritten Signatures to Digital Signatures, Transition from Handwritten Signatures to Electronic Signatures, Authentication of electronic records, Electronic Signature Application, Digital Signature Application, Duties of Subscribers, Step to become a Subscriber, Generating key pair, Illustration: Dual key pair, Encryption key pair, Signing key pair, Duties of subscriber of Electronic Signature Certificate, Acceptance of Digital Signature Certificate, Control of private key, The Cyber Appellate Tribunal, Establishment of Cyber Appellate Tribunal, Composition of Cyber Appellate Tribunal, Qualifications for appointment as chairperson, Qualifications for members of the Cyber Appellate Tribunal, Term of office, conditions of service, etc. of chairperson and members, Salary, allowances and other terms and conditions of service of chairperson and members, Procedure and powers of the Cyber Appellate Tribunal, Appeal to High Court., Cyber Offences and Punishment.

Recommended textBooks:

1. Computer & Information Technology Law: Dr. KrishnaPal Malik, Allahabad Law Agency, Law Publishers.
2. InformationTechnology: VakulSharma, Universal Law Publishing Co.New Delhi.

ReferenceBooks:

1. Cyber Law and Crimes: Barkha & U.RamaMohan, AsiaLawHouse, Hyderabad.