

# **SYLLABI OF Ph.D. Programme (Regular Mode)**

Session 2020-21 Onwards

(Revised with Ref.: IGNTU/RO/2021/43 Dt. 27/04/2021)



**DEPARTMENT OF EDUCATION  
IGNTU, AMARKANTAK (MP)**

**Ph.D. (Education) Course Work**  
(Revised with Ref.: IGNTU/RO/2021/43 Dt. 27/04/2021)

**Semester – I**

Course No.	Course Name	Credit	Hours	Marks	Approved in BoS held on 31/08/2018
Ph.D. - 101	Research Methodology and Statistics in Education	4 (3+1)	60+30	100 (60+40)	IGNTU/FOE /2018 /September/167 Dt. 14/09/2018
Ph.D. – 102 (RCS-103)	Computer Application *	4 (3+1)	60+30	100 (60+40)	
Ph.D. – 103 A	Research and Publication Ethics (RPE)	2 (1+1)	30+20	50 (30+20)	IGNTU/FOE /2018 /September/167 Dt. 14/09/2018
Ph.D. – 103 B (DSE-2)	Teacher Education *	2 (1+1)	30+20	50 (30+20)	
Ph.D. – 104 (DSE – 1)	Departmental specific Elective (optional) a) Tribal Education b) Language Development through Educational Technology c) Educational Psychology d) Educational Technology e) Digital Literacy f) Any other	4 (3+1)	60+30	100 (60+40)	IGNTU/FOE /2018 /September/167 Dt. 14/09/2018
	Curriculum Development *	4 (3+1)	60+30	100 (60+40)	
<b>Total</b>		<b>16 (11+5)</b>	<b>240+150 (390)</b>	<b>400 (240+160)</b>	

\* Need approval

	Marks			Credits		
	Theory	Practicum	Total Marks	Theory	Practicum	Total Credits
Semester - I	240	160	400	11	5	16

**Practical:** Assignment, Presentation, Activity (Paper based)

**Admission Criteria:** As per IGNTU Norms, Ref. IGNTU/990/2016 Dt. 25/11/2016  
(Annexure – 1)

## **RESEARCH METHODOLOGY AND STATISTICS IN EDUCATION**

**Ph.D. - 101**

**Credit - 4 (3+1)**

**Total Marks - 100**

**External - 60, Internal - 40**

### **Objectives:**

- To explore research in the field of education.
- To equip the students to examine the philosophical and socio-cultural context of research and relate it to the contemporary paradigm shift.
- To explore different traditions such as empiricism, rationalism and constructivism etc.
- To investigate educational processes, systems and institutions.

### **Unit 1: Educational Research**

**12 Hrs**

- Meaning, Nature, Scope and Importance of Research
- Types of Research: Qualitative and Quantitative Research
- Ethics in Research and Plagiarism
- Selection and Formulation of Research Problem
- Steps, Function and Importance of Literature Review
- Objectives, Hypotheses and Variables

### **Unit 2: Research Designs**

**14 Hrs**

- Concept of Population and Sample
- Methods of Sampling
- Quantitative Research Designs: Experimental, Non experimental research Design: descriptive, Correlation, Survey and Ex post facto research. External and Internal Validity of Quantitative design
- Qualitative Research Designs: Case Study, Ethnographic and Analytical (Historical). External and Internal Validity of Qualitative design

### **Unit 3: Tool Construction, Data Collection and Report Writing**

**12 Hrs**

- Construction and adaptation of tool: Observation, Questionnaire, Interview, Inventory, Rating Scale etc.
- Types of Data: Primary and Secondary
- Data Collection Technique
- Organization of Research Report
- Preliminaries, Content of report, reporting Style, Bibliography, Appendices
- Criteria for the evaluation of the Research Report

**Unit 4: Parametric Statistics****12 Hrs**

- Test Scales: standard scores, the T & C scale and Stanines
- Measures of Relationships: concept and computation of co-efficient of correlation, Bi-serial, point biserial and phi coefficient. Multiple correlation, Regression equation and Prediction.
- Analysis of variance and co-variance-concept and computation
- Factor Analysis: nature and basic assumptions of factor analysis and its application.

**Unit 5: Non-Parametric Statistics****10 Hrs**

- Concept and computation of Sign test,  $\chi^2$ -test, Sign-Rank test of Differences, Composite-Rank method, K-S Test with small and large samples.

**Activities**

Each scholar has to undertake at least two of the following activities; prepare the report and present the report in the seminar.

1. Preparing a Research Proposal.
2. Review of research in a particular area based on the abstracts of survey of research in education.
3. Establishment of the reliability of any psychological test and its interpretation.
4. Preparing references in APA Style on two each on the following an analytical report regarding the variation in them: (a) Single author book (b) More than two authors book (c) Edited Book (d) Chapter in Edited Book (e) Journal article (f) Unpublished thesis/presentation/manuscript
5. Conducting a detailed survey on educational status of a village of not less than 50 households.
6. Any other activity that the course incharge recommends.

**Suggested Readings:**

- Flyvbjerg, Bent (2001). *Making Social Science Matter: Why Social Inquiry Fails and How it can Succeed Again*, UK: Cambridge University Press.
- Robson, C. (2002). *Real World Research*. 2<sup>nd</sup> Edition. Oxford:Blackbell.
- Kumar, Renjith (2009). *Research Methodology: A Step by Step Guide for Research*, Delhi: Pearson Education.
- Creemers, B. (2010). *Methodological Advances in Educational Effectiveness Research*. London: Routledge.
- Creswell, J.W. (2013). *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. 3<sup>rd</sup> edition. Thousand Oaks, CA:Sage.
- Mertens, D.M. (2015). *Research and Evaluation in Education and Psychology: Integrating Diversity with Quantitative, Qualitative and Mixed Methods*. Thousand Oaks, CA: Sage Publication.

# COMPUTER APPLICATIONS

Ph.D. – 102 (RCS - 103)

Credit - 4 (3+1)

Total Marks - 100

External - 60, Internal - 40

## Syllabus

### Unit I

#### Fundamental of Computer:

Characteristics of Computers, Evolution of computers, computer generations, Basic computer organization; System software, Application software, Application packages, I/O devices, computer memory, introduction to operating system and characteristics, Windows, Mac etc.

### Unit II

#### Computer Hardware basics and Software Installation:

PC Boot Process and BIOS, Description of Different parts of a Computer, personal computer configuration, performing installation of operating system and other application, Usage of relevant tools and recovery using various tools/software, Perform cabling, connecting, and configuring of a peer to peer network (Wi- Fi/Broadband), Use of identifying different Desktop Icons. My Computer, My Documents, Changing Desktop Backgrounds, Mouse Pointer, Screen Saver and Notepad, WordPad, MS Paint, Operating System Installations and Procedures/ Booting Procedures, Windows Configurations & Adding Device Drivers.

### Unit III

#### Introduction to Internet, WWW and Web Browsers:

Basic of Computer networks; LAN, WAN; Concept of Internet; Applications of Internet; connecting to internet; What is ISP; Knowing the Internet; Basics of internet connectivity related troubleshooting, World Wide Web; Web Browsing software(s), Search Engines; Understanding URL; Domain name; IP Address; Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration; Instant Messaging; Netiquettes. Using e- governance website, website for journal access, website for research applications: Shodhganga, Shodh Gangotri, ResearchGate, SWAYAM, NPTEL, UGC-CARE etc.

### Unit IV

#### ICT Tools for Documentation of Research Work:

Various format of e-research paper, e-book and e-document: .cbr, .cbz, .cb7, .cbr, .cbr, .djvu, .doc, .docx, .epub, .fb2, .html, .ibook, .cdr, .inf, .azw, .lit, .prc, .mobi, .exe, .pkg, .pdb, .txt, .pdb, .pdf, .ps, .tr2, .tr3, .oxps, .xps; Various useful Software for image to text, pdf to .doc/.docx, Voice to text/.docx, text to image, .pdf to jpeg/png, .doc/.docx to image and other type of conversion; E-document Conversion Tools Compatible with Multiple Formats, Plagiarism Checker software and its utilization.

## **Unit V**

### **Research Writing Tools and Software:**

General Purpose Software Package: REF-N-WRITE, Microsoft office: Word, Power Point, Excel; Software for Writing Your Dissertation: LaTeX, LyX, Scrivener; Referencing Tools and Reference Management Software: Zotero, Mendeley, Docear etc; Grammar Checkers and Sentence Correction Tools: MS Word Spelling & Grammar checker S/W: Grammarly Desktop Apps and Online Grammar checking sites; Image and Video editing software.

### **References**

1. Grotenhuis, Manfred te, and Matthijssen, Anneke. Basic SPSS Tutorial. United States, SAGE Publications, 2015.
2. Raubenheimer, Jacques. Mendeley: Crowd-sourced Reference and Citation Management in the Information Era. United Kingdom, True Insight Publishing, 2014.
3. Goel, Anita. Computer Fundamentals. India, Pearson Education, 2010.
4. Maidasani, Dinesh. Learning Computer Fundamentals, MS Office and Internet & Web Tech. India, Laxmi Publications, 2005.
5. Wishnietsky, Dan H. Internet Basics: An Educator's Guide to Traveling the Information Highway. United States, Phi Delta Kappa Educational Foundation, 1997.
6. McCormick, Keith, and Salcedo, Jesus. SPSS Statistics for Data Analysis and Visualization. Germany, Wiley, 2017.

# Research and Publication Ethics

Ph.D. - 103 - A

Credit - 2 (1+1)

Total Marks - 50

External - 30, Internal - 20

## Course structure

- The course comprises of six modules listed in table below. Each module has 4-5 units.

Modules	Unit title	Teaching hours
<b>Theory</b>		
RPE 01	Philosophy and Ethics	4
RPE 02	Scientific Conduct	4
RPE 03	Publication Ethics	7
<b>Practice</b>		
RPE 04	Open Access Publishing	4
RPE 05	Publication Misconduct	4
RPE 06	Databases and Research Metrics	7
	<b>Total</b>	<b>30</b>

## Syllabus in detail

### THEORY

- RPE 01: PHILOSOPHY AND ETHICS (3 hrs.)**
  - Introduction to philosophy: definition, nature and scope, concept, branches
  - Ethics: definition, moral philosophy, nature of moral judgements and reactions
- RPE 02: SCIENTIFIC CONDUCT (5hrs.)**
  - Ethics with respect to science and research
  - Intellectual honesty and research integrity
  - Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
  - Redundant publications: duplicate and overlapping publications, salami slicing
  - Selective reporting and misrepresentation of data
- RPE 03: PUBLICATION ETHICS (7 hrs.)**
  - Publication ethics: definition, introduction and importance
  - Best practices / standards setting initiatives and guidelines: COPE, WAME, etc.
  - Conflicts of interest
  - Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types
  - Violation of publication ethics, authorship and contributorship
  - Identification of publication misconduct, complaints and appeals
  - Predatory publishers and journals

### PRACTICE

- RPE 04: OPEN ACCESS PUBLISHING(4 hrs.)**

1. Open access publications and initiatives
  2. SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies
  3. Software tool to identify predatory publications developed by SPPU
  4. Journal finder / journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.
- **RPE 05: PUBLICATION MISCONDUCT (4hrs.)**
    - A. Group Discussions (2 hrs.)**
      1. Subject specific ethical issues, FFP, authorship
      2. Conflicts of interest
      3. Complaints and appeals: examples and fraud from India and abroad
    - B. Software tools (2 hrs.)**

Use of plagiarism software like Turnitin, Urkund and other open source software tools
  - **RPE 06: DATABASES AND RESEARCH METRICS (7hrs.)**
    - A. Databases (4 hrs.)**
      1. Indexing databases
      2. Citation databases: Web of Science, Scopus, etc.
    - B. Research Metrics (3 hrs.)**
      1. Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
      2. Metrics: h-index, g index, i10 index, altmetrics

## References

- Bird, A. (2006). *Philosophy of Science*. Routledge.
- MacIntyre, Alasdair (1967) *A Short History of Ethics*. London.
- P. Chaddah, (2018) *Ethics in Competitive Research: Do not get scooped; do not get plagiarized*, ISBN:978-9387480865
- National Academy of Sciences, National Academy of Engineering and Institute of Medicine. (2009). *On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition*. National Academies Press.
- Resnik, D. B. (2011). What is ethics in research & why is it important. *National Institute of Environmental Health Sciences*, 1–10. Retrieved from <https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm>
- Beall, J. (2012). Predatory publishers are corrupting open access. *Nature*, 489(7415), 179–179. <https://doi.org/10.1038/489179a>
- Indian National Science Academy (INSA), *Ethics in Science Education, Research and Governance*(2019), ISBN:978-81-939482-1-7. [http://www.insaindia.res.in/pdf/Ethics\\_Book.pdf](http://www.insaindia.res.in/pdf/Ethics_Book.pdf)



# TEACHER EDUCATION

## Ph.D. 103 - B (DSE – 2)

**Credit: 2(1+1)**  
**Maximum Marks – 50**  
**External – 30, Internal – 20**

### OBJECTIVES

- ❖ To help the students to understand teacher education as discipline
- ❖ To acquaint the students about the need and significance of teacher education.
- ❖ To acquaint the students about the agencies of the teacher education.
- ❖ To enable them to undertake studies in teacher education.
- ❖ To stimulate them to reform teacher education.
- ❖ To create a perspective in the students about the implications of education for solving the prevailing problems of teacher education in India.

### UNIT – I

#### TEACHER EDUCATION: Level of Knowledge – Theoretical

**12 Hrs**

- Teacher Education- Concept, Aims and objectives of Teacher Education at Primary, Secondary, Higher education levels,
- Analyzing emerging trends and issues- Emerging role and responsibilities of teachers in building modern India, Professionalism and accountability in Teacher education.

### UNIT-II

#### PRE-SERVICE AND IN SERVICE EDUCATION

**10 Hrs**

- Pre-service education: Different systems;
- In-service education: importance- Agencies of In-service education –Teacher education and teaching effectiveness; Innovative programmes in In-service Teacher Education.
- Agencies of Teacher Education: National Level: UGC, ICSSR, CASE, NCERT, NIEPA, CASE, IASE State level: DSERT, SCERT, SBTE, SIE, CTE with reference to teacher education.

### UNIT-III

#### RECENT TRENDS IN RESEARCH IN TEACHER EDUCATION

**8 Hrs**

- Teaching as a Profession, Professional development, Professional ethics for a teacher
- Professional Organizations for various levels and their roles –
- Areas of Research in Teacher Education in India;
- Teacher Evaluation- Criteria,
- Methods and Techniques of online education and examination in teacher education program

### REFERENCES:

1. Basu, A.N. (1947). Education in Modern India. Calcutta: Orient Book C.
2. Brunar, J.S. (1966). Towards a Theory of Instruction. Massachusetts: The Battanap Press.
3. Buch, M.B. & Palasane, M.M. (1947). Reading in In-service Education; S P University.

4. Chaurasia, G. (1967). *New Era in Teacher Education*. Delhi: Sterling Publication.
5. Chaurasia, G. (1977). *Innovations & Challenges in Teacher Education* New Delhi: Vikas Publication.
6. Chaurasia, G. (2000). *Teacher Education and Professional Organization*. Delhi: Authors Press.
7. DevGowda, A.C. (1973). *Teacher Education in India*. Bangalore: Book Bureau.
8. Ebel, R.L. (1956). (ED). *Teacher Education*, American Association of Colleges for Teacher Education. Queenta.
9. Jangira, N.K. (1984). *Teacher Training and Teacher Effectiveness: An Experiment in Teacher Education*. Delhi: National Publication House.
10. Mukherjee, S.N. (ED) (1968). *Evaluation of Teacher of India (Vol-I)*. Delhi; S. Chand & Co.
11. NCERT (1978). *Innovation in In-service Education and Training of Teacher's Practice & Theory* Paris: OECD.
12. NCTE. (1978 & 2005). *Teacher Education Curriculum: A Framework*. New Delhi: NCERT.
13. Sharma, S.P. (2003). *Teacher Education-Principles Theories and Practices*. New Delhi: Kanishka Publishers.
14. Tuckman, B.W. (1975). *Measuring Educational Outcome: Fundamental of Testing*. New York: Harcourt Brace Jovanovich.

**TRIBAL EDUCATION**  
**Paper - 104 (DSE - 1) - optional**

**Credit - 4 (3+1)**  
**Total Marks - 100**  
**External - 60, Internal - 40**

**TRIBAL SOCIETY OF INDIA**

**Unit I:** **14 Hrs**

- Tribal: Concept and definition of tribes in Indian Context.
- Geographical distribution of Tribes in India
- Characteristics, Classification of tribes: on the basis of Language, Culture, Tradition, Economy and Technology.

**Unit- II:** **15 hrs**

- Society: Concept, Social Groups (Primary and Secondary), Community and Social Institutions. Family, Marriage and Kinship in Tribal Society.
- Social Change: Concept, Responsible Factors and Agencies. Sanskritization among Indian tribes Cases of Gond, Bodo, Bhil , Baiga, Oraon.

**Unit- III:** **16 Hrs**

- Tribal's way of life, Occupations, Structure of Tribal Family, Perception of Illness and Cultural Practice of Diagnosis,
- Traditional and scientific knowledge of tribe.
- Food and Nutrition, impact of alcoholism.

**TRIBAL EDUCATION & STATUS**

**Unit-IV:** **15 Hrs**

- Historical Background of Indian Tribal
- Education and their present Status.Factors,
- Barrier, or Problems of Tribal Education in India and its remedies.

**Unit- V:** **15 Hrs**

- The Higher Education system of India and Tribal.
- The Educational Scheme of Tribes for Higher Education.
- Recommendation on Education of Tribals.

**References:**

- Mohanty, Namita (2013). Tribal Education Issues and Approaches, Satparkash Katla, New Delhi.
- Pani, P.K. (2014). Tribes and Tribal Problems, Classical Publishing Company, Karampura, New Delhi.
- Taneja, B.K. (2014). Changing Tribal Society in India issues and Challenges, - Abhijeet Publications, New Delhi.
- Bhowmick, P.K., Singh, K., & Rajak, M.P. (2016). Tribal Health in North East India, New Delhi.
- Loustaunan, M.O., and Sobo, E.J. (1997). The Cultural Context of Health, Illness and Medicine. – Westport, ct: Bergin and Garvey.

# LANGUAGE DEVELOPMENT THROUGH EDUCATIONAL TECHNOLOGY

## Paper - 104 (DSE - 1)- Optional

Credit - 4 (3+1)

Total Marks - 100

External - 60, Internal - 40

### Objectives:

- To understand the concept of E-modules.
- To explore research in the field of Indian Tribes.
- To inquire educational status of Tribal Students of India.
- To inquire the research studies on E-modules and Communication skills.
- To investigate educational process and latest development in tribal education.

### Unit 1: E-modules Development

- Meaning, Definition, Objectives of E-modules, Scope of E-modules in Research, Role of E-modules in education, Components of E-modules, E-modules and its application in education.

### Unit 2: Communication Skills

- Meaning, nature and scope of communication skills, Components of Communication skills, Types of Communication skills, Speaking- How to converse with people, How to communicate effectively, Importance of Communication skills in research, Communication skills and its uses in research.

### Unit 3: Tribal Education in India

- Tribes in India: Definition, Characteristics and Geographical Distribution in India, Current status of tribal education in India, Scope of tribal education in research, Govt. Plans for tribal education, Tribal educational process in India.

### Unit 4: Research studies related to E-modules & Communication skills

- E-modules and Communication skills uses in research, Definition of Listening, Reading, Writing and communicating, Barriers in the path of communication, Listening to conversation (Formal & Informal).

### Unit 5: Latest Development in Tribal Education

- Developmental status of tribal education in India, Analysis of tribal education, Education as a developmental tool for Tribes. Tribal development programmes in National perspective and appraisal of different development programmes.

**EDUCATIONAL PSYCHOLOGY**  
**Paper - 104 (DSE - 1) - Optional**

Credit - 4 (3+1)  
Total Marks - 100  
External - 60, Internal - 40

**Objectives: - On completion of the course, the Research Scholars will be able to:**

- Understand the dynamics of Individual development.
- Understand the dynamics of group behaviour.
- Understand the concept of personality and adjustment.
- Describe the dynamics of Social behaviour.
- Understand the Guidance programme.

**UNIT-I Educational Psychology and Development**

**14 Hrs**

- **Educational Psychology:** Concept, Need, Scope, approaches (Clinical, Differential and Psychoanalytical) and Methods (Observation, Experimental and questionnaire).
- **Adolescence Development:** Development related to cognitive, Conative and Affective domain emphasis on critical thinking and Human Emotions, Theories of Development (Freud, Erikson and Piaget)

**UNIT-II Personality and Adjustment:**

**15 Hrs**

- **Personality:** Trait and type approaches: Allport, Cattell, and Eysenck;. Psychodynamic and psychosocial approaches: Freud and Erikson. Behavioristic and social learning approaches: Skinner, Bandura and Mischel. Humanistic and phenomenological approaches: Rogers and Kelly.
- **Adjustment:** Factors influencing mental health and role of education for building good mental health of students and teachers. Adjustment issues related to Stress, Anxiety, Frustration and Aggression and their prevention and control.

**UNIT-III Dynamics of Social Development:**

**16 Hrs**

Group Dynamics: Social Loafing, Social Facilitation, Influence and Social Perception.  
Group processes- Group formation, group effectiveness and group dynamics. Attitude-

Nature and development. Measurement and theories of attitude change. Prejudice and Stereotypes, Interpersonal attraction.

**Unit –IV Learning process and Motivation**

**15 Hrs**

Theories and laws of learning. Motivation, theories and dynamics of motivation, Psychological factors affecting performance-viz. stress, anxiety, tension and aggression.. Individual differences and their impact on skill learning and performance. Socio-metrics, economics and politics issues in learning.

**Unit –V Guidance and Counseling:**

**15 Hrs**

Concepts, need, principle and areas of guidance. Techniques of guidance, Role playing, Career counseling, Case study and Interview. Counselling- Nature, Goals and principles of counseling. Role and functions of counselors and their professional training. Approaches to counseling- Directive, Non Directive, Behaviouristic, Gestalt and humanistic. Areas of counseling- Educational, vocational, personal, occupational guidance programme. Exceptional Children- Gifted, Retarded and Handicapped.

**Suggested Readings:**

- Barron Robert A. & Byrne Donn (2002). Social Psychology. New Delhi: Pearson Education.
- Barry and Johnson (1964). Classroom Group behaviour. New York: Macmillan.
- Bridges (1932). Emotional development in early infancy, Child development.
- Cronbach (1954). Educational Psychology. Harcourt Jovanovich, Inc.
- Crow, D. 1963). Educational Psychology. Urasia Publishing House.
- Echols, M.N. (1942). Mental Hygiene and the Teacher Educational Method.
- Ellis & Robert, S. (1965). Educational Psychology. D. VanNostrand Company, Inc.
- Feist, J. & Fiest, G. J. (2009). Theories of personality. New York: McGraw Hill.
- Feltham C., I. Horton, 2006, The SAGE Handbook of counselling and psychotherapy. New Delhi: Sage Publications
- Friedman, H. S. & Schustack, M. W. (2003). Personality: Classic theory and modern research (2nd Ed). Singapore: Pearson Education.
- Funder, D. C. (2007). The personality puzzle (4th Ed). New York: Norton College Books.
- Garrison (1960). Growth and Development: Longmans.
- Gelso, C.J., & Fretz, B.R. 1995, Counselling psychology. Bangalore: Prism Books Pvt. Ltd.
- Goldstein, E. B. 2008, Cognitive psychology, (2nd Ed.). Belmont: Wadsworth.

**Educational Technology**  
**Paper - 104 (DSE - 1) - Optional**

Credit - 4 (3+1)  
Total Marks - 100  
External - 60, Internal - 40

**Unit 1: Introduction of Educational Technology:**

**Hrs 14**

Meaning & Nature of Educational Technology, Define Technology of Education: Technology in Education, Assumption of Educational Technology, Factor Influencing the Application of Technology, Scope and Significance of Educational Technology.

**Unit 2: Objectives and Approaches, Forms of Educational Technology:**

**Hrs 15**

Objectives of Educational Technology, Approaches of Educational Technology, Hardware Approach, Software Approach, System Approach, Forms of Educational Technology: Teaching Technology, Instructional Technology, Behaviour Technology.

**Unit 3: Advantage & Limitations, uses of Educational Technology:**

**Hrs 16**

Advantage of Educational Technology, Limitations of Educational Technology  
Importance and Uses of Educational Technology, Socio-Academic Relevance of Educational Technology.

**Unit 4: Teaching Strategies, Methods & Techniques of Educational Technology: Hrs 15**

Meaning & Definition, Characteristics of Teaching Strategies, various Type of Teaching Strategies: Lecture Strategy, Demonstration Strategy, Questionnaire Strategy, Discussion Strategy, Heuristic Strategy, Project Strategy, Problem Solving Strategy, Teaching Method: Student & Teacher Centred Method.

**Unit 5: Information and Communication in Educational Technology:**

**Hrs 15**

Information and communication Technology: Meaning, Nature and Advantage.  
Components of Educational Technology: Software meaning and type (System Software, Application Software, Utility Software, Open source Software). Hardware Fundamentals (anatomy, Input devices, Output devices, Storage devices, Display devices), Computer Network (LAN, WAN, Internet).



# DIGITAL LITERACY

## Paper - 104 (DSC - 1) - Optional

Credit - 4 (3+1)

Total Marks - 100

External - 60, Internal - 40

### OBJECTIVES

After completion of the course, student teachers will be able to:

- ❖ know the applications of ICT in Education
- ❖ practice in usage of MS Windows and MS Office
- ❖ describe Flanders Interaction Analysis along with concept and types of evaluation
- ❖ demonstrate the use of ICT and its integration in education
- ❖ operate the usage of internet and its importance in teaching
- ❖ develop digital portfolios in their teaching subjects
- ❖ use effectively the ICT and the pedagogical strategies associated with the subject concepts
- ❖ practice the use of digital concepts and develops the digital lessons in the subject.

### CONTENT:

#### UNIT-1: Educational Technology

- Meaning, Definition, and Scope of Educational Technology
- Communication: Meaning, Cycle, and Barriers
- Interaction Analysis: Meaning, Definition, and Classification of interaction analysis system
- Flanders Interaction Analysis: Concept, Procedure and Its significance in Teaching Learning

#### UNIT-2: Trends in Educational Technology

- Team Teaching, Mobile Teaching, Simulated Teaching
- Computer learning, Laptop learning, I-Pod learning
- Brain Storming, Multi Media Teaching
- Smart Classroom: Concept, Equipment, Organization, Operation & its importance in teaching.

#### UNIT-3: ICT application in education

- ICT- Meaning, Definition, Need and importance, Merits and demerits
- Use of ICT in Teaching Learning Process
- Classification of the modes: searching for information and exchanging information
- Use of ICT tools for School Education

#### UNIT-4: Digital Literacy

- Digital Literacy: Concept and Definition
- Types of Literacy- Information Literacy, Computer Literacy, Digital Literacy, Media Literacy
- The Characteristics of Digital Literacy
- Challenges of Digital Literacy

#### UNIT-5: Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) Programme

- Concept, Objectives, and Function of PMGDISHA programme
- Essential Modules, their importance of PMGDISHA programme
- Use of PMGDISHA programme in developing the Digital literacy and Financial Transactions
- Implications of PMGDISHA programme in School Education

## References:

- Association of Colleges and Research Libraries, American Library Association. (2011). *Information literacy defined*. Available at <http://www.ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm>
- Aviram, A., & Eshet-Alkalai, Y. (2006). Towards a theory of digital literacy: Three scenarios for the next steps. *European Journal of Open, Distance and E-learning*. Retrieved from <http://www.eurodl.org/?p=archives&year=2006&halfyear=1&article=223>
- Ba, H., Tally, W., & Tsikalas, K. (2002). Investigating children's emerging digital literacies. *The Journal of Technology, Learning, and Assessment*, 1(4), 5-48.
- Buckingham, D. (2007). Digital media literacies: Rethinking media education in the age of the Internet. *Research in Comparative and International Education*, 2, 42-55.
- Emmanuel C. Lallana & Margaret N. Uy (2003), "The Information Age", *e-ASEAN Task Force*, Manila, Philippines.
- Eshet-Alkalai, Y. (2004). Digital literacy: A conceptual framework for survival skills in the digital era. *Journal of Educational Multimedia and Hypermedia*, 13, 93-106.
- Eshet-Alkalai, Y., & Chajut, E. (2009). Changes over time in digital literacy. *Cyber psychology & Behavior*, 12(6), 421-429.
- Florida International University, FIU Libraries. (2011) *Information literacy vision statement*
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# CURRICULUM DEVELOPMENT

Ph.D. - 104 (DSE-1)- Optional

**Credit: 4 (3+1)**  
**Maximum Marks – 100**  
**External – 60 + Internal -40**

## OBJECTIVES

- To acquaint the students with concepts of curriculum
- To enable them to apply the principles of curriculum development.
- Understand the necessity for curriculum change.
- To develop a futuristic vision about devising new curriculum designs.
- To analyze the importance of curriculum change.
- To develop the understand the necessity of curriculum evaluation.

### Unit – I

12 Hrs

#### INTRODUCTION TO CURRICULUM

- Meaning and concept of curriculum,
- Types: Tangible and hidden curriculum
- Role of society, culture, social change in India and its curricular implications.
- Principles of Curriculum construction

### Unit – II

18 Hrs

#### CURRICULUM DEVELOPMENT

- Curriculum Design: Concept & Criteria of Curriculum Development
- Components of Curriculum Design – ABC (Articulation, Balance and Continuity) of Curriculum development.
- Types of Curriculum Design: Subject-Centered, Activity-cum-Experience Centered, Undifferentiated and Differentiated, interdisciplinary and multidisciplinary curriculum-
- Curriculum Development: Stages: planning, designing, Implementation and evaluation.

### Unit – III

15 Hrs

#### CURRICULUM CHANGE

- Meaning & need for curriculum change.
- Factors affecting curriculum change
- Role of community, administrator, curriculum consultants, teachers & students in curriculum change.

### Unit – IV

15 Hrs

#### CURRICULUM EVALUATION

- Need for Curriculum Evaluation.
- Criteria for evaluating Curriculum - Tools for Evaluation:

- Construction and standardization of evaluative instruments.
- Curriculum research- need, scope and recent contributions.
- Functions of curriculum evaluation and forms of curriculum evaluation. Developing curriculum evaluation plan.

### **Practicum**

- Based on the curriculum development studies and area of research practicum will be designed by the teachers along with assignment and presentations

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