



**NEW COURSE CURRICULUM FRAMEWORK FOR
4 - YEAR BACHELOR'S DEGREE PROGRAMME
(4 – Year UG Degree in Education Honours)**

**4th Year Course Curriculum
(7th & 8th Semester's)
(Honours without Research)**

SUBJECT : EDUCATION
COOCH BEHAR PANCHANAN BARMA
UNIVERSITY

SEMESTER – VII.

Course - Major - 13.

Paper Name: Research Methodology and Ethics.

Paper Code: EDC-MAJ – 13.

(6 Credit)

Course Objectives:

- To introduce the fundamental concepts, nature, and types of educational research, alongside the mechanics of identifying research problems and reviewing literature.
- To provide a comprehensive understanding of various research designs (quantitative, qualitative, and mixed methods) and systematic sampling techniques.
- To familiarize students with different types of educational data, the construction of data collection instruments, and the methods used to establish tool reliability and validity.
- To sensitize students to the core principles of research integrity, institutional ethical clearance frameworks, and publication ethics while highlighting standard academic misconduct.
- To impart hands-on training in developing data collection tools, piloting instruments, transcribing/coding qualitative data, and evaluating the credibility of academic journals.

Course Outcomes:

Upon completing this course, students will be able to design and execute educational research by selecting appropriate methodologies, sampling strategies, and validated data collection tools. They will master literature reviews, qualitative coding, and journal audits while strictly adhering to ethical standards, ensuring informed consent, and actively avoiding academic misconduct like plagiarism, fabrication, and falsification.

Course Contents:

Unit -I: Fundamentals of Educational Research (1 Credit)

- Understanding the Basics: Meaning, Nature & Scope of Educational Research, Fundamental vs. Applied and Action Research
- Problem Formulation: Criteria of selecting a good Research Problem, Identifying variables, defining hypotheses, and constructing research questions.
- Review of Literature: Identifying credible academic sources, library search techniques, and structuring literature reviews.

Unit - II: Research Design and Sampling (1 Credit)

- Research Design: Exploring experimental, quasi-experimental, descriptive, and historical designs.
- Qualitative & Mixed Methods: Case studies, ethnography, and grounded theory approaches.
- Sampling Techniques: Population, Sample and Sampling (Probability & Non-Probability), Determining sample sizes.

Unit - III: Research Data (1 Credit)

- Qualitative and Quantitative data: Concept, Nature and Sources
- Data Collection Tools: Designing questionnaires, rating scales, observation schedules, and interview protocols.
- Parameters of Good Research tools: Methods of Establishing Validity, Reliability and Objectivity of Quantitative and Qualitative Tools

Unit - IV: Ethics in Educational Research (1 Credit)

- Research Integrity & Participant Rights: Operational definitions of Falsification, Fabrication, and Plagiarism (FFP). Protocols for informed consent, participant confidentiality, and protecting vulnerable student populations.
- Institutional Frameworks: Role of Institutional Review Boards (IRB) and ethical clearance processes. Managing academic conflicts of interest.

- Publication Ethics & Misconduct: Identifying and avoiding predatory journals, and redundant publications; Committee on Publication Ethics (COPE) and other initiatives.

Unit - V: Practicum (2 Credits)

- Developing a quantitative or qualitative tool and administering the developed tool to a small pilot sample
- Submit a report after investigating journals using indexing databases (such as UGC - CARE list or Scopus) to differentiate between credible peer-reviewed avenues and-predatory or eloped journals.
- Preparation of a Research Proposal with Review of Related literature.

Suggested Books:

- Aggarwal, J. C. Educational Research: An Introduction. New Delhi: Arya Book Depot.
- Best, J. W., & Kahn, J. V. Research in Education. New York: Pearson Education.
- Committee on Publication Ethics (COPE). Code of Conduct and Best Practice Guidelines for Journal Editors. (Available open-access online).
- Creswell, J. W., & Creswell, J. D. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Thousand Oaks: SAGE Publications.
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. How to Design and Evaluate Research in Education. New York: McGraw-Hill.
- Kerlinger, F. N. Foundations of Behavioral Research. New York: Holt, Rinehart & Winston.
- Koul, Lokesh. Methodology of Educational Research. New Delhi: Vikas Publishing House.
- হালদার, দেবকুমার., চক্রবর্তী, মারিষা. ও ঘোষ, প্রবীর. (২০২৬). শিক্ষায় গবেষণা পদ্ধতি, আহেলি পাবলিশার্স, কলকাতা
- পাল, দেবশিস. (২০১৫). গবেষণা পদ্ধতি ও রাশিবিজ্ঞানের কৌশল, রীতা বুকএজেন্সি, কলকাতা
- চট্টোপাধ্যায়, মিহিরকুমার. ও পাণ্ডে, প্রণয়. (২০২৫). শিক্ষাগত গবেষণা, রীতা পাবলিকেশন, কলকাতা

SEMESTER – VII
Course - Major - 14.

Paper Name : Statistics in Educational Research

Paper Code: EDC-MAJ – 14.

(6 Credit)

Course Objectives:

- To introduce the fundamental concept, scope, and importance of statistics in education, and clarify the distinction between statistics and parameters.
- To provide systematic knowledge on organizing raw educational data into frequency distributions and representing them accurately through geometric graphs.
- To enable students to calculate, apply, and interpret measures of central tendency and variability within the context of educational testing.
- To familiarize students with the properties, characteristics, and structural deviations (skewness and kurtosis) of the Normal Probability Curve (NPC).
- To develop an understanding of the concepts of hypothesis testing, standard significance tests (t-test and F-test), and correlation.
- To train students in the concept and computation of derived linear and non-linear standard scores (Z-scores, T-scores, and percentiles).
- To cultivate hands-on, non-computerized skills in manual data organization, graph plotting on physical paper, rank correlation tracking, and compiling normative student performance profiles.

Course Outcomes:

Upon completing this course, students will manually organize raw educational data into frequency distributions and construct scale-accurate mathematical graphs. They will compute measures of central tendency, variability, and standard scores (Z, T, percentiles) for performance profiling. Additionally, students will apply Normal Probability Curve properties to evaluate distribution divergence and execute significance tests (t-test, F-test) alongside correlation techniques for hypothesis testing.

Course Contents:

Unit-I: Educational Statistics (1 Credit)

- Basic of Educational Statistics: Concept, Scope, Need and Importance of Educational Statistics. Difference between Statistics and Parameters.
- Organization and Tabulation of Data : Grouped and ungrouped frequency distribution tables, class intervals, and tallies.
- Graphical Representation of Data: Construction and interpretation of histograms, frequency polygons, pie charts, and Ogives.

Unit-II: Descriptive Statistics (1 Credit)

- Meaning of Central Tendency: Calculation and application of Mean, Median, and Mode in educational testing.
- Measure of Variability: Range, Quartile Deviation, Mean Deviation, Variance and Standard Deviation
- NPC (Normal Probability Curve): Properties & Characteristics, Skewness, Kurtosis, Percentile and Percentile Rank

Unit-III: Inferential Statistics (1 Credit)

- Hypothesis Testing: Introduction to null and alternative hypotheses, Type I and Type II errors.
- Significance Tests: Degrees of freedom, t-test (for dependent and independent means), and F-test/ANOVA.
- Concept of Correlation: Pearson Product-Moment Correlation, Spearman's Rank-Order Correlation, and Biserial / Point-biserial correlation, Interpretation of Co-efficient of Correlation

Unit-IV: Standard Scores (1 Credit)

- Standard Score
- Z-Score & T-Score
- Percentiles, and Sigma Scaling.

Unit V: Practicum (2 Credits)

- Data Organization & Manual Graph Plotting: Transforming a large raw dataset (e.g., test marks of 50 school students) into a grouped frequency distribution table and drawing precise, scale-accurate Histograms, Frequency Polygons, and Ogives on graph papers.
- Correlation Tracking: Setting up ranking matrices to calculate Spearman's Rank-Order Correlation Coefficient for a small class batch, handling tied ranks manually, and plotting scatter plots on graph paper.
- Score Norming: Manually converting a set of raw classroom scores into relative Percentile Ranks, Z-Scores, and T-Scores to create a student performance profile.

Suggested Books:

- Garrett, H. E. *Statistics in Psychology and Education*. New York: David McKay Co.
- Ferguson, G. A., & Takane, Y. *Statistical Analysis in Psychology and Education*. New York: McGraw-Hill.
- Guilford, J. P., & Fruchter, B. *Fundamental Statistics in Psychology and Education*. New York: McGraw-Hill.
- Mangal, S. K. *Statistics in Psychology and Education*. New Delhi: PHI Learning.
- Kurtz, A. K., & Mayo, S. T. *Statistical Methods in Education and Psychology*. New Delhi: Narosa Publishing House.
- Sivakumar, M. *Statistical Methods in Educational Research*. New Delhi: Sage India.
- Bhattacharyya, Dibyendu. *Siksha Parisankhyan* (শিক্ষা পরিসংখ্যান). Kolkata: Rita Publications.
- Das, N. G. *Parishankhyan Paddhati* (পরিসংখ্যান পদ্ধতি - ১ম ও ২য় খণ্ড). Kolkata: M. Das & Co.
- Mallick, Amal Kumar. *Monovidya o Siksaye Parisankhyan* (মনোবিদ্যা ও শিক্ষায় পরিসংখ্যান). Kolkata: West Bengal State Book Board (পশ্চিমবঙ্গ রাজ্য পুস্তক পর্ষদ).
- Pal, Debasish. *Sikshatattve Gaveshana o Parisankhyan* (শিক্ষাতত্ত্বে গবেষণা ও পরিসংখ্যান). Kolkata: Rita Publications.

SEMESTER – VII
Course - Major - 15.

Paper Name : Environmental Education

Paper Code: EDC-MAJ – 15.

(6 Credit)

Course Objectives:

- To comprehend the multidisciplinary nature, scope, and significance of environmental education in the context of sustainable living.
- To analyse the intricate relationship between human life, cultural ethics, and the natural environment.
- To evaluate the causes and consequences of major environmental problems (pollution and resource depletion) and assess remedial strategies.
- To develop a sense of environmental responsibility and awareness through educational frameworks and conservation movements.
- To apply theoretical knowledge to real-world scenarios through field-based research, surveys, and community engagement.

Course Outcomes:

Upon completing this course, students will be able to analyse the multidisciplinary nature of environmental education, cultural ethics, and sustainable development principles. They will evaluate the causes, remedies, and educational frameworks associated with pollution, resource depletion, and historical conservation movements. Furthermore, students will apply this knowledge through field-based ecosystems research, local environmental surveys, and community-oriented sustainability awareness activities.

Course Contents:

Unit - I: Introduction to Environmental Education (1 Credit)

- Environmental Education - Meaning, Nature, Scope and Significance
- Components of Environmental Education
- Environmental values, Role of information technology in environment.

Unit - II: Environment and Human Life (1 Credit)

- Environmental Ethics: Role of cultures and religious activities in environmental conservation in India.
- Different Types of Environmental Pollutions (Air, Water, Soil & Noise) and their Effects
- Role of Education for Conservation of Environment through Sustainable Practices.

Unit - III: Environmental Awareness (1 Credit)

- Educational Agencies for promoting environmental awareness and conservation strategies
- Environmental movements - Chipko Movement, Narmada Bachao Andolan, Silent Valley Movement.
- Imparting Environmental Awareness through Co-curricular activities

Unit - IV: Seminar Presentation (2 Credits)

- Students will have to prepare two (2) seminar papers from this syllabus and present the same in their respective institution.

Unit - V: Project/ Assignment (1 Credit)

- Conduct an Environmental Survey on a local environmental issue and prepare a report.
- Undertake a Field-Based Environmental visit to study an ecosystem, biodiversity site, or environmental management practice and submit an observation report.
- Plan and implement an environmental awareness or conservation activity or sustainable development and present the project outcomes.

Suggested Books:

- ErachBarucha (2004) Text book of Environmental Studies for Undergraduate courses (Prepared for University Grants Commission) Universities Press.
 - PurnimaSamarth (2018). Environmental studies Kalyani Publishers, Ludhiana
 - Odum, E.P., Odum, H.T. & Andrews, J. (1971) Fundamentals of Ecology. Philadelphia: Saunders.
 - Pepper, I.L., Gerba, C.P. &Brusseu, M.L. (2011). Environmental and Pollution Science. Academic Press.
 - Raven, P.H., Hassenzahl, D.M. & Berg, L.R. (2012) Environment. 8th edition. John Wiley & Sons.
 - Singh, J.S., Singh, S.P. and Gupta, S.R. (2014) Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi.
 - Sengupta, R. (2003) Ecology and economics: An approach to sustainable development. OUP.
 - Wilson, E. O. (2006) The Creation: An appeal to save life on earth. New York: Norton.
 - Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll (2006) Principles of Conservation Biology. Sunderland: Sinauer Associates
 - পরিবেশ ও জনসংখ্যা শিক্ষা - ড. সুবীর নাগ ও শিঞ্জিনি নাগ, রীতাপাবলিকেশন
 - পরিবেশ শিক্ষা - চৌধুরি, গিরি ও সাঁতরা, সাঁতরাপাবলিকেশন
 - পরিবেশ বিজ্ঞান -ড. বিনয় বর্মণ ও সুদীপ সাহানা, কনসেপ্টপাবলিকেশনকোম্পানিপ্রা. লি.
 - পরিবেশ বিদ্যা জিজ্ঞাসা- ড. জ্যোতির্ময় সেন ও ড.সমীরেন্দ্র সরকার, কল্যাণীপাবলিশার্স
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SEMESTER – VII

Course - Major - 16.

Paper Name : Inclusive Education

Paper Code: EDC-MAJ – 16.

(6 Credit)

Course Objectives:

- Students will gain knowledge about different aspects of Inclusive Education. Students will be able to differentiate between the terminologies related to inclusion.
- Students will understand about the different types of special needs and related educational interventions.
- Students will be able to apply the strategies of Inclusive Education wherever needed.
- Students will be able to create the desired environment needed for successful inclusion.

Course Outcomes:

After the Successful Completion of the Course, Students will be able to:

- Explain the concept of Inclusive Education
- Design Inclusive teaching-learning strategies.
- Evaluate policies and legislative provisions supporting inclusion.

Course Contents:

Unit - I: Introduction to Inclusive Education (1 Credit)

- Integration, Mainstreaming, Inclusion - Meaning and Characteristics
- Inclusive Education - Meaning, Principles, Need, Barriers
- Concept of Disability, Impairment and Handicap

Unit - II: Children with Diverse Needs(1 Credit)

- Meaning and Types of Children with Diverse Needs
- Intellectually Disability, Sensory Impairment, Learning Disability and Autism Spectrum Disorder – Meaning, Identification and Educational Intervention
- Gifted and Talented Learner, Linguistic Diversity and Cultural Diversity – Meaning, Identification and Educational Intervention

Unit - III: Strategies of Inclusive Education (1 Credit)

- Universal Design for Learning (UDL)
- Cooperative, Collaborative and Peer-tutoring
- Assessment and Evaluation of Inclusive Classroom

Unit - IV: Policies, Legislation and Support Services (1 Credit)

- Constitutional Provisions for Inclusive Education and PWD Act (1995)
- International Initiatives – Salamanca Statement (1994) and UN Convention on the Rights of Persons with Disabilities (UNCRPD)
- Support Services and Community Participation

Unit – V: Practicum (2 Credits)

- Visit an educational institution and prepare a checklist regarding Physical Accessibility/ Facilities (ramps, railings, wheel chair, accessible toilets, classroom seating, etc.) for Inclusive practices.
- Prepare a short report based on your observations or interact with teacher regarding challenges and strategies of inclusion.
- Case study of a student with Special Needs.

Suggested Books:

- Mete, Jayanta, Biswas, Prarthita, & Pandey, Pranay. Creating an Inclusive School, Rita Book Agency
 - Chowdhury, Piku. Creating Inclusive School, Rita Book Agency
 - Uddin, Md Jamal. Creating Inclusive School, Aaheli Publishers
 - Mangal, S. K. & Mandal, Shubhra. Creating Inclusive School, PHI
 - Loreman, Deppeler and Harvey- Inclusive Education, Allwenand Unwin Australia.
 - Corbett Jenny (2001). Supporting Inclusive Education, Routledge Falmer.
 - Felicity Armstrong and Michele Moore (2004). Action Research for Inclusive Education, Routledge Falmer.
 - Mike Adams and Sally Brown (2006). Towards Inclusive Learning in Higher Education, Routledge.
 - Peter Mittler (2000). Working towards Inclusive Education, David Fulton Publishers.
 - Nind, Shechy and Simms, Inclusive Education -Learners and Learning Context, David Fulton Pub.
 - Premavathy and Mittal. (2006). Integrated and Inclusive Education, RC 1.
 - Advani, Lal. And Chadha, Anupriya (2003). You and Your Special Child, New Delhi: UBS Publishers' Distributors Pvt. Ltd.
 - Sharma, Kaushal and Mahapatra (2007). Emerging Trends in Inclusive Education', Delhi, IVY Pub.
 - Renuka, P. and Bai, Suneetha, G. Inclusive of Exceptional Children in Mainstream Schools and teacher education: Global Trends in Teacher Education.
 - চক্রবর্তী, প্রণবকুমার, ব্যানার্জী, দেবশ্রী, ও দেবনাথ, দেবব্রত. সর্বসমাবিষ্ট শিক্ষা, রীতা পাবলিকেশন, কলকাতা
 - চক্রবর্তী, উর্মি. অন্তর্ভুক্তিমূলক শিক্ষা, আহেলি পাবলিশার্স, কলকাতা
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SEMESTER – VII

Course – Minor - 5.

Paper Name : Value and Peace Education

Paper Code: EDC-MIN – 5.

(6 Credit)

Course Objectives:

- Students will gain knowledge about different aspects of Value and Peace Education.
- Students will understand about the different types of values by NCERT and enshrined in Indian constitution. Students will also understand to the role of different organizations to promoting peace.
- Students will be able to understand the contributions of peace leaders.
- Students will be able to create the desired environment needed for successful inculcation of values and promoting peace.

Course Outcomes:

After the Successful Completion of the Course, Students will be able to:

- Understand the concept and Nature of Value and Value Education.
- Understand the values enshrined in the Indian Constitution
- Analyse the role of school, society and family to facilitate the development of values among the children.
- Describe the Concept, need and nature of Peace and Peace Education.
- Elaborate the Relevance of Peace Education in National and International contexts
- Illustrate the challenges and role of different organisations in promoting Peace Education

Course Contents:

Unit - I: Introduction to Value Education (1 Credit)

- Concept, nature and scope of Value and Value Education
- Classification of values as proposed by NCERT
- Values enshrined in the Indian Constitution

Unit - II: Value Education and Society (1 Credit)

- Value Education through Co-curricular activities
- Role of Family and School to inculcate the values among the pupils
- Values in a Pluralistic society

Unit - III: Introduction to Peace Education (1 Credit)

- Concept, nature and need of Peace and Peace Education
- Peace as human value
- Relevance of Peace Education in National and International contexts.

Unit - IV: Peace Education and Sustainable Development (1 Credit)

- Role of Education in promoting Peace and Contributions of Peace Leaders (R.N. Tagore and Nelson Mandela)
- Role of National and International organizations for promoting Peace Education (Mahatma Gandhi Institute for Peace and Sustainable Development and UNESCO)
- Global Citizenship and Sustainable Development

Unit-V: Practicum

- Survey on Peace, tolerance, social harmony among students.
- Organize a Peace awareness campaign/ seminar/ workshop.
- Design educational materials (poster, brochure, short videos, social media content, etc.) on peace education.

Suggested Books:

- Aggarwal, J.C. (2010). Education for Values, Environment and Human Rights. New Delhi: Shipra Publications
 - Biswas, D. & Bhattacharyya, A. (2022). Transforming Mind through Value Education. Agartala: Naya Pustak Mahal
 - Chakrabarty, M. (1997). Value education: Changing Perspective. New Delhi: Krishna Publishers Distribution.
 - Chitakra, M.G. (2007). Education and Human Values. New Delhi APH Publishing Corporation.
 - Diwahar, R. R., & Agarwal, M. (Ed). (1984). Peace education. New Delhi: Gandhi Marg.
 - Fountain, S. (1999) Peace Education in UNICEF, Working Paper, Education Section, Programme Division, UNICEF.
 - Mishra, L (2009). Peace education-Framework for Teachers. New Delhi: APH Publishing Corporation.
 - Panda. P.K. (2017). Value Education. Guwahati: Nivedita Book Distributors.
 - Singh, S.P. (2011). Education for World Peace. New Delhi: Discovery Publishing House.
 - Suryanarayana. N.V.S. (2017). Education and Human Value. Guwahati: Nivedita Book Distributors.
 - ড. প্রদীপ্ত রঞ্জন রায় ও প্রনয় পাণ্ডে। শান্তি ও মূল্যবোধের শিক্ষা, রীতা পাবলিকেশন।
 - ড. বিনায়ক চন্দ। শান্তি ও মূল্যবোধের শিক্ষা, কলকাতা: আহেলী পাবলিশার্স।
 - বেরা, এস.কে, ব্যানার্জী, এম, ড. ভট্টাচার্য, কে.। শান্তি ও মূল্যবোধের শিক্ষা, গুনগুন পাবলিশিং হাউস।
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8th Semester

SEMESTER – VIII.
Course – MAJOR – 17.
Paper Name : Teacher Education
Paper Code: EDC-MAJ – 17.
(6 Credit)

Course Objectives:

- To understand the basic concept of teacher education.
- To explain the historical perspective and development of teacher education in India.
- To enable the students to understand the Role of the different agencies in teacher education.
- To identify and discuss the major problems and structural challenges currently facing the teacher education system.
- To identify professional ethics and the traits of a good teacher.
- To apply skills in lesson planning, behaviour management, and timetable design.

Course Outcomes:

Upon completing this course, students will critically evaluate the historical evolution, regulatory bodies, and contemporary policy dynamics of Indian teacher education. They will internalize core professional ethics and attributes of effective educators. Furthermore, students will demonstrate hands-on administrative and pedagogical competence by successfully designing institutional timetables, formulating lesson plans, and applying classroom behaviour management strategies.

Course Contents:

Unit – I: Basic concept of Teacher Education (1 Credit)

- Teacher Education-Concept, Scope, Aims and Objectives
- Teacher Training Vs Teacher Education
- Need and Significance of Teacher Education in 21st Century

Unit – II: Development of Teacher Education (1 Credit)

- Historical Development of Teacher Education in India (Pre-Independent India and Post-Independent India)
- National Curriculum Framework for Teacher Education (NCFTE) - 2009 and NEP 2020: A Paradigm Shift in Teacher Education
- Challenges in Teacher Education in India and their Remedies

Unit – III: Role of Different Agencies in Teacher Education (1 Credit)

- UNESCO & Education International (EI) – Aims and Functions
- UGC & NCTE – Aims and Functions
- NCERT & SCERT – Aims and Functions

Unit – IV: Teaching as a Profession (1 Credit)

- Concept of Profession and Professionalism - Professional Ethics, Professional Ethics for Teachers
- Teaching as a Noble Profession, Characteristics of a Good Teacher
- Teacher's Roles and Responsibilities in the Modern Society

Unit – V: Practicum (2 Credits)

- Conducting a survey on professional ethics and teacher accountability
- Lesson Planning and Instruction
- Preparing School Time Tables – Analyse and design class schedules.

Suggested Books:

- Aggarwal, J.C. (2004). Teacher and Education in a Developing Society. New Delhi: Vikash Publishing House Pvt. Ltd.
 - Mukherjee, S.N. (1968). Education of Teachers in India, Vol.-I and II. New Delhi: S. Chand and Company.
 - Rajput, J.S. and Walia, K. (2002). Teacher Education in India. New Delhi: Sterling Publishers Pvt. Ltd.
 - Teacher Education Pre- Independence Period. Arnab Chowdhury & Jayanta Mete,
 - Teacher Education Post- Independence Period. Arnab Chowdhury & Jayanta Mete.
 - Teacher Education Modern Period. Arnab Chowdhury & Jayanta Mete. University of Kalyani .
 - Sharma, S. P. (2004). Teacher Education in India. New Delhi: Vikash Publications.
 - Mohan, R. (2016). Teacher Education. New Delhi: PHI
 - ভট্টাচার্য, দিব্যেন্দু(২০১৮). শিক্ষক শিক্ষণ ও শিক্ষা পদ্ধতি, আলপনা পাবলিশার্স
 - সরকার, বিজন (২০২১). শিখন ও শিক্ষণ, আহেলি পাবলিশার্স
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SEMESTER – VIII.
Course – MAJOR – 18.

Paper Name : ICT and AI in Education

Paper Code: EDC-MAJ – 18.

(6 Credit)

Course Objectives

- To introduce students to the concept, nature and importance of Information and Communication Technology (ICT) and its strategic scope in modern teaching, learning, and assessment.
- To develop critical awareness regarding digital safety, cyber security, data privacy, and ethical digital citizenship.
- To familiarize students with technology integration models (TPACK/TIM) and build functional competence in cloud-based productivity suites and Open Educational Resources (OER).
- To provide a conceptual understanding of Artificial Intelligence, Machine Learning, and Cognitive Frameworks
- To equip students with practical skills in using Generative AI tools for automated lesson planning, material design, and content generation.
- To cultivate field-based analytical skills through practical research on school readiness, digital safety campaigns, and platform evaluation.

Course Outcomes

Upon successful completion of this course, students will be able to integrate ICT, AI, and digital collaboration frameworks like TPCK into educational pedagogy. They will safely manage online privacy, analyze machine learning structures, and utilize generative AI tools to design unbiased, copyright-compliant multimedia lesson plans while executing fieldwork to evaluate school digital readiness.

Course Contents

UNIT - I: Foundations of ICT, Digital Literacy & Collaboration (1 Credit)

- Conceptual Framework: Meaning, nature, and importance of ICT in education; distinction between Educational Technology and ICT; scope in teaching, learning, and assessment.
- Digital Literacy, Safety & Privacy: Fundamentals of safe internet usage; understanding cyber security, cyber-bullying, data protection, and managing online identity/privacy.
- Digital Collaboration & Communication: Mechanisms of collaborative learning: effective use of Online Discussion Forums, group assignments, and peer review strategies.

UNIT- II: ICT in Teaching-Learning & Assessment (1 Credit)

- Integrating ICT in Education: Technological Pedagogical Content Knowledge (TPCK) and the Technology Integration Matrix (TIM); Practical application of Google Workspace tools (Google Classroom, Slides, Forms, Sheets, etc.).
- E-Learning Systems & Open Resources: E-learning concepts, methods, and media; Learning Management Systems (LMS), MOOCs (with a specific focus on the Indian context, e.g., SWAYAM), and Open Educational Resources (OER).
- Emerging Technologies in Education: Meaning, importance, tools, and use cases of Augmented Reality (AR), Virtual Reality (VR), Mixed Reality (MR), Gamification in Education, and Cloud Computing.

Unit - III: Fundamentals of Artificial Intelligence (1 Credit)

- Basics of AI: Definition, scope, historical overview, and key milestones; Differentiating Artificial Intelligence from human intelligence.
- Core AI Domains: Machine Learning (ML):-Concept, nature, and types (Supervised, Unsupervised, Reinforcement learning), Natural Language Processing (NLP)- Concept and core stages (Lexical, Syntactic, Semantic, and Pragmatic Analysis).
- Cognitive Frameworks & Perspectives: Computational thinking and problem-solving frameworks; Myths vs. Reality—understanding what AI can and cannot do.

Unit - IV: AI-Powered Learning Environments (1 Credit)

- AI in Classroom Application: Implementing personalized learning pathways and Intelligent Tutoring Systems (ITS) to foster student problem-solving skills.
- Lesson Planning & Content Generation: Utilizing Generative AI to design interactive, customized lesson plans; Creating digital content (stories, quizzes, and multimedia) using tools like Canva and AI-driven animation platforms.
- Ethics & Governance in AI: Addressing fairness, bias, and transparency in AI-generated contents; Navigating copyright, plagiarism, and authorship in the age of Generative AI.

Unit - V: Practicum (2 Credits)

- School-Based Digital Readiness Survey: Assessing an educational institution's current technological infrastructure and digital literacy gaps.
- Cyber Safety & Ethical AI Awareness Campaign: Designing and executing an awareness initiative for students focusing on safe internet usage and ethical AI practices.
- Comparative Evaluation of Online Educational Platforms: Reviewing and benchmarking various LMS, MOOC platforms, or AI tools based on pedagogical effectiveness.

Suggested Books :

- **Bhaskar, S.** *Artificial Intelligence and Ethics in Contemporary Education*. New Delhi: Discovery Publishing House.
 - **Luckin, R.** *Machine Learning and Human Intelligence: The Future of Education in the 21st Century*. London: UCL IOE Press.
 - **Madhavan, K., & Srinivasan, V.** *Digital Learning and MOOCs in India: Challenges and Opportunities*. New Delhi: Oxford University Press.
 - **Mangal, S. K., & Mangal, U.** *Essentials of Educational Technology*. New Delhi: PHI Learning.
 - **Mishra, P., & Koehler, M. J.** *Technological Pedagogical Content Knowledge: A Framework for Teacher Knowledge*. Teachers College Record.
 - **Russell, S., & Norvig, P.** *Artificial Intelligence: A Modern Approach*. New York: Pearson.
 - **Selwyn, N.** *Education and Technology: Key Issues and Debates*. London: Bloomsbury Publishing.
 - **Singh, PP., & Sharma, S.** *Cyber Security and Digital Literacy in School Education*. New Delhi: Dynamic Publishers.
 - **UNESCO.** *Guidance for Generative AI in Education and Research*. Paris: UNESCO.
 - **Bhattacharyya, Dibyendu.** *Sikshaye Tothto-o-Jogajog Projukti* (শিক্ষায় তথ্য ও যোগাযোগ প্রযুক্তি). Kolkata: Rita Publications.
 - **Costa, Santosh.** *Sikshaye Kritrim Buddhimatta: Sikshar Challenge ebong Sujog* (শিক্ষায় কৃত্রিম বুদ্ধিমত্তা: শিক্ষার চ্যালেঞ্জ এবং সুযোগ). Kolkata: Rita Publications.
 - **Mondal, Jayanta.** *Siksha o Gaveshanaye Kritrim Buddhimatta* (শিক্ষা ও গবেষণায় কৃত্রিম বুদ্ধিমত্তা). Kolkata: Progressive Publishers.
 - **Pal, Debasish, & Sahana, J.** *Sikshaye Tothto Projukti-o-E-Learning* (শিক্ষায় তথ্য প্রযুক্তি ও ই-লার্নিং). Kolkata: Rita Publications.
 - **Sarkar, Bijan.** *Siksha Projuktivigyan* (শিক্ষা প্রযুক্তিবিজ্ঞান). Kolkata: Ahana Publishers
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SEMESTER – VIII.
Course – MAJOR – 19.
Paper Name : Comparative Education
Paper Code: EDC-MAJ – 19.
(6 Credit)

Course Objectives

- To introduce the concept, scope, and historical evolution of comparative education
- To explain the factors of comparative education in shaping national education systems
- To enable a structural and curricular comparison of India with the U.K., U.S.A; and Japan
- To analyze global trends in equity, teacher education, and digital integration
- To build practical research skills through field works and comparative analysis.

Course Outcomes

The course will enable students to understand the foundations and factors of comparative education. They will be able to critically compare the education systems of different countries, while evaluating global trends in equity, teacher education, and digital learning

Course Contents

Unit 1: Introduction to Comparative Education (1 credit)

- Concept & Scope- Meaning, aims, nature, scope, and significance of comparative education
- Historical Development- Origin of comparative education, ancient, medieval, and modern evolution of comparative education during ancient, medieval, and modern times
- Methods of Inquiry- Philosophical, Sociological, and Psychological methods of studying comparative education

Unit-2; Factors of Comparative Education (1 credit)

- Natural Factors- Social, Historical, Geographical, Linguistic factors,
- Spiritual Factors- Religious and Philosophical factors,
- Secular Factors-Humanism, Socialism, Nationalism, and Democracy

Unit-3: Cross-National Educational Systems (1 credit)

- Comparative analysis of Educational systems: (with reference to aims, structure, curriculum, methods of teaching and evaluation, and administration)-
 - (i) Between India and the U.K.
 - (ii) Between India and the U.S.A.
 - (iii) Between India and Japan

Unit-IV: Contemporary Issues and Global Trends (1 credit)

- Equity and Access- Comparative approaches to inclusive education and gender parity.
- Quality and Teacher Education - Global standards for teacher preparation, recruitment, and professional development
- Digital Integration - Comparative impacts of ICT in education, EdTech, and Open & Distance learning (ODL)

Unit-V: Practicum (2 credits)

- Choose any one school subject and perform comparative A analysis of its curriculum between India and Japan
- Visit a local school to evaluate how the status of digital integration in line with global trends
- Comparative analysis of school infrastructures between a rural and an urban school.

Suggested Books

- Bereday, George (1964). Comparative Method o in Education. Holt, Rinehart and Winston.
 - Hans, Nicholas (1994). Comparative Education: A Study of Educational Factors and Traditions
 - Kandle, I. L. (1933). Studies in Comparative Education. George G. Harrap
 - Aggarwal, J.C. (2013). Comparative Education. Shipra Publications
 - Sharma, R.N. (2008). Comparative Education. Act Atlantic Publishers
 - পাল, দেবাশিষ (2020), তুলনামূলক শিক্ষা, রীতা পাবলিকেশন
 - মুখোপাধ্যায়,দেবী(2010), তুলনামূলক শিক্ষা, পশ্চিমবঙ্গ রাজ্য পুস্তক পর্বৎ
 - চক্রবর্তী,দেবাশিষ(2016), তুলনামূলক শিক্ষা ও শিক্ষাব্যবস্থা। ক্লাসিক বুকস
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SEMESTER – VIII.
Course – MINOR – 6.

Paper Name : Mental Health and Hygiene

Paper Code: EDC- MIN – 6.

(6 Credit)

Course Objectives:

- Students will gain knowledge about different aspects of Mental Health and Hygiene.
- Students will understand about the mental health problems, their symptoms, causes, and classification systems (ICD-11/DSM-5).
- Students will be able to understand the mental health promotion strategies, preventive approaches, and relevant national/international policies and programs.
- Students will be able to create the awareness of stress, coping mechanisms, and techniques for maintaining psychological well-being.
- Students will be able to equip with practical skills in self-management and relaxation techniques, identifying personal stressors and coping mechanisms, and organizing mental health awareness campaigns among school students and community.

Course Outcome:

On completion of this course students will be able to:

- Acquaint with the basic concepts, meaning, nature and differences of mental health and hygiene; understand various dimensions of mental health and recognize indicators of positive mental health.
- Understand the biological, psychological, and socio-cultural determinants of mental health across the life span.
- Develop knowledge of mental health problems, their symptoms, causes, and classification systems (ICD-11/DSM-5).
- Familiarize with mental health promotion strategies, preventive approaches, and relevant national/international policies and programs.
- Create awareness of stress, coping mechanisms, and techniques for maintaining psychological well-being.
- Equip with practical skills in self-management and relaxation techniques, identifying personal stressors and coping mechanisms, and organizing mental health awareness campaigns among school students and community.

Course Contents:

Unit - I: Introduction to Mental Health and Hygiene (1 Credit)

- Concept, nature and scope of mental health and hygiene, the difference between mental health and hygiene.
- Dimensions of mental health; indicators of positive mental health (WHO model).
- Common myths and misconceptions about mental illness.

Unit - II: Determinants of Mental Health (1 Credit)

- Biological determinants: genetics, and neurochemistry.
- Psychological determinants: personality, coping styles, and early life.
- Socio-cultural determinants: family, culture, and peer relationship.

Unit - III: Mental Health Problems and their Prevention (1 Credit)

- Classification of mental disorder: ICD-11 and DSM-V.
- Psychotic disorders, stress-related disorders, mood disorders: types, causes and effects on daily life.
- Prevention and Early intervention strategies, role of counselling and guidance services.

Unit - IV: Promotion of Mental Health and Hygiene and Policy (1 Credit)

- Life Skills: Self-awareness, healthy lifestyle practices; work-life balance and time management skills.
- Resilience building, Academic stress and cyber bullying - Role of teachers in students' mental health.
- National and international policies/programmes (National Mental Health Programme, Mental Healthcare Act 2017, WHO initiatives)

Unit - V: Practicum (2 Credits)

- Conduct a seminar/ workshop on Stress management and Relaxation techniques (Deep breathing, muscle relaxation, guided imagery, and meditation).
- Mental health awareness campaign: poster, short video, and workshop for educational institutions and community.
- Conduct a mental health awareness survey among students/community members.

Suggested Books:

- B. Kuppaswamy. Mental Hygiene, Konark Publishers Pvt. Ltd., New Delhi
 - S. K. Mangal. Mental Health and Hygiene, PHI Learning Pvt. Ltd., New Delhi
 - S. K. Mangal. Educational Psychology, PHI Learning Pvt. Ltd., New Delhi
 - S. S. Chauhan. Advanced Educational Psychology, Vikas Publishing House Pvt. Ltd., New Delhi
 - R. A. Sharma. Psychology in Education, Surjeet Publications, New Delhi
 - B. Bhatnagar & Meenakshi Bhatnagar. Educational Psychology, R. Lal Book Depot, Meerut
 - R. R. Singh. Guidance and Counselling in Education, Ashish Publishing House, New Delhi
 - J. C. Aggarwal. Child Psychology, Shipra Publications, New Delhi
 - J. C. Aggarwal. Educational Psychology, Shipra Publications, New Delhi
 - R. C. Tripathi. Psychology of Adjustment, Atlantic Publishers & Distributors, New Delhi
 - K. K. Srivastava. Mental Health Education, Kaniska Publishers, New Delhi
 - R. Kothari. Mental Health and Positive Psychology, Aavishkar Publishers, Jaipur
 - D. Ghatge. Educational Psychology and Mental Health, Neelkamal Publications Pvt. Ltd.
 - B. N. Dash. Guidance and Mental Health, Dominant Publishers & Distributors, New Delhi
 - চক্রবর্তী, প্রণবকুমার ও সেনগুপ্ত, মধুমালা. সংগতিবিধানের মনোবিজ্ঞান, রীতা পাবলিকেশন, কলকাতা
 - বসাক, দে ও বোস. সংগতিবিধানের মনস্তত্ত্ব, রীতা বুক এজেন্সি, কলকাতা
 - চন্দ, বিনায়ক. নির্দেশনা ও পরামর্শদান, আহেলি পাবলিশার্স, কলকাতা
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