List of Vocational Courses for Model Curriculum

Sl no.	Vocational Courses
1.	Education In Early Childhood
2.	Psychological Testing
3.	Applied Ethics- Medical Ethics and Laws
4.	Applied Ethics-Cyber Ethics
5.	Applied Ethics- Media Ethics and Laws
6.	Social Impact Assessment Study
7.	Cyber Law
8.	Introduction to Preschool education
9.	Geriatric Care and Education
10.	Education for Adolescence and Family Life
11.	Office Automation Tools
12.	Multimedia and Animation
13.	Introduction to Web Design
14.	Data Analysis using Spread sheet

EDUCATION IN EARLY CHILDHOOD

(For Psychology students in Summer vacation after first year)

Course Outcomes:

The completion of this course will result in understanding of fundamental learning processes and mechanisms involved during early childhood years that has important repercussion on cognitive, linguistic, and psychosocial maturity of a child. Since it is important for both parents and teachers to understand their role in early stimulation without burdening the young mind, this course is meant for all students in general and aspiring preschool professionals in particular.

Unit-I: Introduction to Early Childhood Education

- Meaning, significance and objectives of Early Childhood Education (ECE); Issues Influencing the Practice of Early Childhood Education, Understanding child's rights to recognize young children as participants in their own development to create responsive environments
- Significance of Play; Programme planning and evaluation in early childhood education

Learning Outcome: The knowledge regarding background and concept of ECE will be acquired along with child right perspective.

Unit –II: Role of family and teacher in childhood

- Role of parents: Critical years of learning of a child; preparing enriched environment for infants and toddlers; children with disabilities; culturally appropriate practices.
- Role of Teachers: Preschool years and goals of preschool, school readiness and holistic development of a child; children with special needs and inclusive classroom

Learning Outcome: Students will be clear about the role and contribution of family and teachers during childhood.

Unit-III: Assessment and use of Technology for children

- Assessment and Its Purpose; Developmentally appropriate classroom assessment, reporting to and communicating with Parents and Families, Types and Methods of Assessment, Assessment for School Readiness; Purposes of Observation.
- Children of the Net Generation: Technological Integration in Educational Settings; Digital Literacy, Supporting Children's Technology Use ; Developmentally Appropriate Technology Use for Young Children

Learning Outcome: Students will understand the role and contribution of assessment and technology during childhood.

Unit IV : Practical (Any two)

(i) Conduct a case study of a child from Anganwadi / pre-school regarding her participation in classroom learning activities.
(ii)Visit a preschool and write a detailed report on its use of early stimulation learning aids.
(iii)Visit a preschool for special children and prepare a report on its teaching-learning practices.
(iv)Write a report on technology used in a preschool for classroom activities of children.

Text Books:

- ✓ *Fundamentals of Early Childhood Education, 9th Edition, G. S Morrison, and Mary Jean Woke, L. Griffin, Pearson Education, 2021.*
- ✓ *Introduction to Early Childhood Education: Preschool Through Primary Grades, by Jo Ann Brewer, Sixth Edition, Pearson New International Edition, 2014*

  https://api.pageplace.de/preview/DT0400.9781292052113_A24582025/preview-9781292052113_A24582025.pdf

- ✓ *Early Childhood Education: An Introduction,: R.Kapoor, R.Soni & K.K. Vasishtha, 2021*
  - o *https://ncert.nic.in/dee/pdf/Earlychildhood.pdf . NCERT, New Delhi*

Reference:

- ✓ National Early Childhood Care and Education (ECCE) Curriculum Framework, Ministry of Women and Child Development, Govt of India, 2023

  https://wcd.nic.in/sites/default/files/national_ecce_curr_framework_final_03022014%20%282%29_1.pdf

PSYCHOLOGICAL TESTING

(For Psychology students in Summer Vacation after second year)

Course Outcomes:

To equip students with the theoretical knowledge and practical skills necessary for conducting psychological assessments across diverse contexts, including intelligence, personality, and specialized domains, thereby preparing them for professional practice in clinical, educational, and organizational settings.

Unit 1: Introduction

Nature and use of psychological tests - Definition of a test - Types of tests - Uses of testing - Who may obtain tests, Standardized procedures in test administration - Procedures of test administration - Influence of examiner - Background and motivation of examinee, The Origins of psychological testing.

Learning Outcomes: Students will be able to

Understand the theoretical foundations, origin, types and practical applications of psychological assessment in various domains, including intelligence, personality, and specialized areas.

Unit 2: Intelligence Testing

*The students are required to understand the processes of testing, use of manual to administer, record the response and interpret the result of any **two** of the following Tests.*
Malins Intelligence Scale for Indian Children (MISIC) **OR** Seguin Form Board Test

&

 Bhatia's Battery Performance Tests of Intelligence **OR** Wechsler Adult Intelligence Scale-Fourth Edition (WAIS-IV) India

Learning Outcomes: Students will be able to

Learn the assessment of human abilities, administer tests following standardized procedures, understand the integration of data in evaluating, scoring and interpretation of behaviour accurately and Develop effective communication skills for conveying assessment findings while maintaining confidentiality and sensitivity.

Unit 3: Personality Testing

*The students are required to understand the processes of testing, use of manual to administer record the response and interpret the result of any of the following **two** Tests*

Inventories: The Personality Inventory Brief Form (PID-5-BF), **OR** NEO FFI

Projective Tests: Sentence Completion Test, **OR** the Rorschach Ink Blot Test

Learning Outcomes: Students will be able to

Learn the assessment of human personality, administer tests following standardized procedures, understand the integration of data in evaluating, scoring and interpretation of behaviour accurately and Develop effective communication skills for conveying assessment findings while maintaining confidentiality and sensitivity.

Unit 4: Psychometric Tests in other domains

*The students are required to understand the processes of testing, use of manual to administer record the response and interpret the result of any of the following **two** Tests.*

- General Health Questionnaire
- Job Satisfaction Scale
- Psychological Capital (PsyCap)
- The Multidimensional Scale of Perceived Social Support

Learning Objectives: Students will be able to

Learn the assessment of human abilities, administer tests following standardized procedures, understand the integration of data in evaluating, scoring and interpretation of behaviour accurately and Develop effective communication skills for conveying assessment findings while maintaining confidentiality and sensitivity.

Text Books

- ✓ *Singh, A. K. (2010). Tests, measurements and Research Methods in Behavioral Sciences. Bharathi Bhawan.*
- ✓ *Gregory, R.J (2015). Psychological Testing: History Principles and Applications (7th ed.).Pearson Education Limited*

Applied Ethics- Media Ethics and Laws

Introduction:

This course on media ethics and laws would provide students with a comprehensive understanding of the ethical principles, legal regulations, and professional standards that govern the practice of journalism and media production. Students would have a comprehensive understanding of the ethical principles, legal regulations, and professional standards that govern the practice of journalism and media production. They would be equipped with the knowledge and skills needed to navigate ethical dilemmas, uphold professional integrity, and contribute to responsible media practices.

Course Outcome:

This course introduces ethical issues relevant to mass media and laws as well as practices in the Indian Context. It can help the students understand the roles, responsibilities, and challenges of media. It may help them to be employable in Media and the profession of written and electronic Journalism

Learning Outcome:

- Unit 1 will help students gain knowledge of the ethical Principles relevant to mass media and the person who works for the welfare of people.
- Units 2 and 3 will help to analyze ethical as well as legal Concerning media.
- Unit 4 may help with practical issues that are common to the media.
  All the units are important to enable a learner to handle the media, secure employability, and be a responsible journalist.

Unit-I

Decision Making and Judging: Introduction to general ethical theories, making them relevant to Media Persons and Media: Virtue Ethics and Aristotelian Golden Mean, Duty Ethics or Categorical Imperatives) Bock's Model, Utilitarianism, Pragmatism, Phronesis, and Welfare vs. Truth and Neutrality.

Unit-II

Professional Ethics as Relevant to Media: Key Concepts; Reasons, Motivation, Obligations for Media; Journalism ethics: Truth-telling, Ethical news values, Impartiality, and objectivity reporting; Status of Media for Constitution of India: Roles and Responsibilities of Media for the Country and People, Fundamental Rights, Directive Principles and Freedom of Media in a Democracy. Working Journalists Act, Copyright Act, Right to Information Parliamentary Privileges for Media and Freedom versus Contempt of Court, Official Secrets Act, Privacy Sedition laws and Defamation.

UNIT III

Ethical Overview of Broadcasting: Law, Press Council of India, Prasar Bharati Act, Cable TV Network (Regulation) Act, Advertising Code, Cinematography Act 1952, and Film Censorship Acts. Morals and Laws in Dealing with Crime. Journalist Investigation, Loyalty: the Potter Box, Layers of conflicting loyalties, Advertising Ethics: Persuasion theory and its positive and negative impacts, the TARES Test, Special audiences.

UNIT- IV

Code of Ethics for Media: Accuracy, immediacy, reliability, & accessibility, Media Bias Selective Editing, Eyewash Censorship, Privacy issues (Discretion), Violence, Hate speech, Fake news and post-truth, Trial by media, Women and Children in media, Facing the challenges for Media Freedom from Moral Legal, Govt., Political and Private Companies, Capitalism, & the Marketplace.

Books Recommended:

- ✓ *Christians, Clifford et al. Media Ethics: Cases and Moral Reasoning. Longman, 2008. 2. Frost, Chris. Media Ethics and Self-Regulation.Pearson, 2000.*
- ✓ *Gordon, A. David. Controversies in Media Ethics. Longman, 2011.*
- ✓ *Leslie, Larry. Mass Communication Ethics: Decision Making in Postmodern Culture. Houghton Mifflin Company, 2003.*
- ✓ *Development of Media and Media Law – Mittika Singal Bhushan, Aadi Publications, 2014.*
- ✓ *Media Law and Ethics – M. Neelamalar, Prentice Hall India Learning Private Limited, 2009.*
- ✓ *Press Laws and Ethics of Journalism - P.K. Ravindranath, Authors Press, 2004.*
- ✓ *Journalism Ethics: Arguments and cases for the twenty-first century - Roger Patching and Martin Hirst, Routledge, 2013.*
- ✓ *Journalism Ethics and Regulation (Longman Practical Journalism) - Chris Frost, Third Edition, Longman, 2011*

References:

- ✓ Brady, C., 2010. *Did the Media Fail to Sound Alarm Bells Before the Financial Crisis? The* Irish Times, 6 March 2010, pp.15.
- ✓ Chibnall, S. (1973) "The Production of Knowledge by Crime Reporters" in Cohen, S. & Young, J: the Manufacture of News: Social Problems, Deviance, and the Mass Media.
- ✓ O'Connell, M. (1999) "Is Irish Public Opinion Towards Crime Distorted by Media Bias?"
- ✓ E-Resources: https://www.irishtimes.com/opinion/did-the-media-fail-to-sound-alarm-bells-before-the-f financial-crisis-1.633555
- ✓ Reynolds, P. "Crime in Ireland" [address by RTÉ Crime Correspondent to Ceifin]. www.ceifin.com/resources/paper/PaulReynolds_CrimeCorrespondentRTE.pdf
- ✓ www.mediaethics.com www.poynter.org www.mediaethicsjournal.com www.cjr.org
- ✓ www.mediaethics.com

✓ www.poynter.org
✓ www.mediaethicsjournal.com www.cjr.org

Sample Questions: 1 for Part- I Objective; Part- II Very Short Type (in 50 Words); Par-III Short Type (in 250 Words); Par-IV Long Type (in 800 Words);

Unit – I

1. Who says duty for duty's sake?

2. How ethical theories are related to media persons?

3. What is the golden mean of Aristotle? Explain briefly.

4. How pragmatism is different from utilitarianism? Elaborate.

Unit II

1. Copyright act established in _____ year?

2. Write down the Fundamental Rights.

3. What are the Key Concepts for Media Journalism Ethics?

4. How far ethics is justifiable in the context of professional ethics from your perspective?

Unit III

1. Cinematography Act established in _____ year?

2. What is the Prasar Bharati Act?

3. Explain the Ethical Overview of Broadcasting.

4. Explain: Persuasion theory and its positive and negative impacts,

Unit IV

1. what is the Code of Ethics for Media?

2. What is the ultimate aim of Media ethics?

3. What are the challenges for Media Ethics?

4. What is Capitalism?

Applied Ethics-Cyber Ethics

Introduction:

This course on cyber ethics will introduce as well as examine the ethical principles, values, and responsibilities that guide individuals, organizations, and societies in the use of digital technologies and online platforms. Students will surely have an understanding of the ethical principles, values, and responsibilities relevant to the use of digital technologies and online platforms. They would be equipped with the knowledge and skills needed to navigate ethical dilemmas, promote ethical behavior, and contribute to the responsible use of technology in society.

Course Outcome:

Cyber Ethics course generally aims to equip students with the knowledge and skills to understand, analyze, and navigate ethical issues in the digital realm. understanding Ethical Frameworks applicable to cyberspace, Identifying Ethical Issues, Ethical Decision Making, etc.

Learning Outcomes:

- **Unit** 1. This Cyber Ethics Course will help develop Ethical Awareness and Critical Thinking.
- **Unit** 2. It will help with ethical Decision Making, with awareness of Legal and Regulatory Compliances.
- **Unit** 3. It may amplify the capability for Risk Assessment and Management with AI
- **Unit** 4. It may help in tackling Digital Citizenship, Ethical Leadership

Unit 1

Introduction to Ethics and Cyber Ethics: Overview of General Ethics: utilitarianism, deontology, virtue ethics, etc., Overview of Cyber Ethics, Historical Context and Development, Importance of Ethical Behavior in Cyberspace; Ethical Foundations in Cyberspace, Moral and Legal Frameworks, Principles of Cyber Ethics (e.g., Privacy, Security, Transparency, Accountability); Privacy and Data Protection: Understanding Privacy in the Digital Age, Data Collection, Consent, and Control, Ethical Issues in Data Handling and Sharing, Ethical Decision-Making in Digital Environments

Unit 2

Cybersecurity and Risk Management: Ethical and non-Ethical Hacking and Responsible Disclosure; Balancing Security Needs with Ethical Considerations; Digital Citizenship and Online Behavior; Rights and Responsibilities of Digital Citizens- Cyberbullying and Online Harassment, Maintaining Civility and Respect in Online Interactions; Intellectual Property and Copyright, Understanding Intellectual Property Rights, Ethical Use of Digital Content, Fair Use, Creative Commons, and Open Access

Unit 3

Cybercrime and Law Enforcement: Types of Cybercrime (e.g., Hacking, Fraud, Identity Theft), Ethical Considerations in Law Enforcement and Prosecution, Legal and Ethical Implications of Cybercrime Investigations; Social Media and Digital Influence, Ethics of Social Media Use, Manipulation and Persuasion Techniques, Addressing Issues of Fake News and Misinformation; Emerging Technologies and Ethical Challenges, Artificial Intelligence and Machine Learning Ethics, Internet of Things (IoT) and Privacy Concerns.

Unit 4:

Digital Divide and Access Equity: Ethical Considerations in Bridging the Digital Divide; Ensuring Equitable Access to Technology and Information; Addressing Socioeconomic Disparities in Digital Literacy; Professional Ethics in Technology, Ethical Codes of Conduct for IT Professionals, Responsibilities of Tech Companies and Developers, Ethical Considerations in Tech Innovation and Entrepreneurship; Future Directions in Cyber Ethics, Ethical Challenges of Emerging Technologies, Ethical Leadership and Advocacy in Cyberspace, Hacking: Legal vs. Moral. Personal Reflections and Action Plans.

Recommended Textbook:

- ✓ *"Understanding Cyber Ethics: From Personal Responsibility to Public Policy" by Kenneth Einar Himma.*
- ✓ *"Cyber Ethics: Morality and Law in Cyberspace" by Richard A. Spinello.*
- ✓ *"Cyber Ethics: Principles for Navigating the Ethical Minefield of the Digital Age" by H. T. Wilson.*
- ✓ *"Ethics in a Digital World: Guiding Students Through Society's Complexities" Author: Richard M. Luechtefeld Publisher: Rowman & Littlefield Publishers ISBN-13: 978-1475805731*

Reference Books:

- ✓ "The Cyber Effect: A Pioneering Cyberpsychologist Explains How Human Behavior Changes Online" by Mary Aiken.
- ✓ "The Digital Person: Technology and Privacy in the Information Age" by Daniel J. Solove.
- ✓ "Digital Ethics: Rethinking Responsibility in the Technological Age" by Deborah G. Johnson.

E-Resources:

- ✓ *Ethics in Tech - Online Resource Center: Website: ethicsintech.com*
- ✓ *CyberEthics Lab - Online Platform: Website: cyberethicslab.org*
- ✓ *Cyber Ethics Toolkit - Online Resource: Website: cyberethics.gmu.edu*
- ✓ *Cybersecurity and Ethics - Webinar Series: Platform: YouTube Channel: Cybersecurity and Ethics Initiative*

Sample Questions: 1 for Part- I Objective; Part- II Very Short Type (in 50 Words); Par-III Short Type (in 250 Words); Par-IV Long Type (in 800 Words);

Unit I

1. Cyber ethics deals with _____.

2. What is utilitarianism?

3. What are the three maxims of Kant?

4 Elaborate on Cyberethics.

Unit II

1. Write down one demerit in cyber ethics.

2. Difference between ethical & non-ethical hacking.

3. What are the rights and responsibilities of online harassment?

4. Elaborate the ethical use of digital content and fair use.

Unit III

1. Hacking is related to ___ crime.

2. Explain types of cyber crimes.

3. Explain the legal and ethical implications of cybercrime investigations.

4. Elaborate on AI and machine learning ethics.

Unit IV

1. Professional ethics comes under ___ ethics.

2. Write two responsibilities of an IT company.

3. What are the ethical challenges of emerging technology?

4. How ethics can be practiced in the professional field?

Applied Ethics - Medical Ethics

Introduction:

This course on medical ethics will explore the ethical principles, dilemmas, and controversies arising in the practice of medicine and healthcare. Students will have a preliminary understanding of the ethical principles, dilemmas, and controversies relevant to the practice of medicine and healthcare. They would be equipped with the knowledge and skills needed to navigate ethical challenges, promote patient-centered care, and uphold professional integrity in their future careers in healthcare.

Course Description:

This course provides an in-depth exploration of ethical principles and dilemmas in the field of healthcare. Through case studies, discussions, and theoretical frameworks, students will examine foundational ethical principles, professional responsibilities, and moral decision-making processes in medical practice. Topics include patient autonomy, confidentiality, end-of-life care, reproductive ethics, and healthcare disparities.

Course Outcomes:

This Medical Ethics Course aims to equip students with the knowledge, skills, and ethical values necessary for ethical decision-making and compassionate care in healthcare settings. It encourages critical reflection on ethical dilemmas, promotes sensitivity to diverse patient perspectives, and fosters a commitment to upholding ethical standards and social justice in healthcare practice.

Learning Outcomes:

- Unit 1 explores ethical issues and dilemmas encountered in various areas of healthcare practice.
- Unit 2 Here a student is supposed to examine the role of healthcare professionals in upholding ethical standards and promoting patient welfare.
- Unit 3 It helps to develop critical thinking skills and ethical reasoning abilities in analyzing and resolving moral conflicts.
- Unit 4 helps to foster empathy, compassion, and cultural sensitivity in providing patient-centered care.

Unit 1

Introduction to Medical Ethics: An Overview of Ethical Theories and Principles in Healthcare; History and Contemporary Relevance of Medical Ethics; the Nuremberg Code, the Declaration of Helsinki, Ethical Principles in medical research involving human subjects; Institutional review boards (IRBs), Informed Consent, and research integrity; Healthcare Disparities and Social Justice; Professional codes of ethics and standards for healthcare professionals; Ethical obligations in inter professional collaboration, conflict resolution, and self-regulation; Strategies for addressing healthcare inequities and promoting social justice in healthcare

delivery; Professionalism and Ethical Responsibilities; Ethical considerations in emerging technologies, such as artificial intelligence (AI), genetic testing, and telemedicine; Ethical challenges posed by public health emergencies, pandemics, and resource allocation.

Unit 2

Patient Care: Patient Autonomy and Informed Consent; Understanding the Principle of Autonomy and its Application in Medical Decision-making; Informed Consent Process, Capacity Assessment, and Patient-centered Communication; Confidentiality and Privacy; Importance of Patient Confidentiality and Privacy Rights; Ethical Considerations in sharing patient information, including electronic health records

Unit-3

Ethics for Reproductive Care: Ethical considerations in reproductive technologies, such as in vitro fertilization (IVF) and surrogacy; Abortion ethics, maternal-fetal conflict, and reproductive rights; Research Ethics and Human Subjects Protection

Unit 4

End-of-Life Care and Advance Directives: Ethical issues in end-of-life decision-making, euthanasia, and physician-assisted suicide; Advance care planning, living wills, and surrogate decision-making; Dignity of the Patient. Cultural competency, humility, and ethical engagement in cross-cultural healthcare contexts.

Recommended Books:

- ✓ *"Principles of Biomedical Ethics" by Tom L. Beauchamp and James F. Childress*
- ✓ *"Medical Ethics: A Very Short Introduction" by Tony Hope*
- ✓ *"Ethics and Law for the Health Professions" by Ian Kerridge, Michael Lowe, and Cameron Stewart*
- ✓ *"The Oxford Handbook of Bioethics" edited by Bonnie Steinbock.*
- ✓ *"The Ethics of Care: Personal, Political, and Global" by Virginia*
- ✓ *"Ethics of Care: Critical Advances in International Perspective" edited by Daniel Engster and Maurice Hamington*
- ✓ *"The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research.*
- ✓ *"Physician-Assisted Death" by Quill and Byock*
- ✓ *"The Ethics of Organ Transplantation" by Matas and Sutherl et al.*
- ✓ *"Euthanasia and Physician-Assisted Suicide: For and Against" by Gerald Dworkin and R. G. Frey*
- ✓ *"The Case Against Assisted Suicide: For the Right to End-of-Life Care" by Kathleen Foley and Herbert Hendin*
- ✓ *"The Right to Die: Understanding Euthanasia" by Derek Humphry*

E-Resources:

- ✓ *https://peh-med.biomedcentral.com*
- ✓ *https://www.wma.net/wp-content/uploads/2016/11/Ethics_manual_3rd_Nov2015_en.pdf*
- ✓ *https://njms.rutgers.edu/education/Mini-Medical-School/documents/5-%20Medical%20Ethics.pdf*
- ✓ *https://repository.library.georgetown.edu/bitstream/handle/10822/556224/se0027.pdf*

Social Impact Assessment Study

   Social impact assessment has been one of the important tools to assess any impact on society or community due to any action or intervention. In 1970s Social impact assessment (SIA) study was emerged as a remedy to the failure of Environmental Impact Assessment (EIA). SIA is now a mandatory provision for many governments and institutions throughout the world before undertaking any social intervention programmes. According to the International Association for Impact Assessment, Social impact assessment includes the processes of analysing, monitoring and managing the intended and unintended social consequences, of planned interventions and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment. Now-a-days, SIA is widely used throughout the world in a number of fields starting from natural resource management to disaster preparedness to peace-building and so on.

Course outcomes:
- The students will familiarize with the meaning, features, need and significance of Social impact assessment study.
- They will understand various components of social impact assessment study.
- They will be acquainted with the importance of community participation in SIA.
- They will get an idea of different types of methodologies and approaches of SIA.
- They will get practical experience of conducting SIA study.
- After completing the course, the students can get employment in different SIA study conducting agencies.

Unit-I: Introducing Social Impact Assessment (SIA)
- Social Impact Assessment: Meaning and Features
- Emergence of SIA
- Need for social impact assessment
- Significance of SIA

Learning outcome:
- After reading this unit, the students can get a fundamental idea of the meaning, features, evolution, need and significance of social impact assessment.

Unit- II: Components of SIA
- Basic components of SIA- Demographic, socio-cultural, economic, political, health, psychological, and Environmental
- Cost-benefit analysis (CBA)
- Community participation
- Ethical consideration

Learning outcome:
- This unit will help students to visualize basic components of SIA in a holistic way. It will also make them understand why community participation is highly necessary for SIA study considering the ethical aspects.

Unit-III: Methodologies and Approaches
- Methodology: Integrated socio-economic impact methodology, Battelle social indicators model, Social and Economic Assessment Model (SEAM), Community Level Impact Projection Systems (CLIPS), SIMPACT,
- Participatory and technical approach,
- Risk and social impact assessment (RSIA) approach
- Phases and tasks of SIA

Learning outcome:
- After going through this unit the students will get basic ideas of different types of methodologies and approaches used in SIA study along with stages and tasks of SIA study.

Unit-IV: Practical aspects
In this unit different practical sessions will be conducted to evaluate the effectiveness of SIA teaching. The students will be assigned to write some case studies of social impact assessment. They will be asked to design different tools of SIA like interview schedule, check list etc and conduct SIA study of a village/tribal/urban settlement and write report on it.

Learning outcome:
- This unit aims to give practical orientation to the students by experiencing them designing data collection tools, writing case studies, doing fieldworks or survey and writing field reports.

Lesson Plans:

Unit	Thrust area	Teaching methods	Total number of classes required	References
I	Social Impact Assessment: Meaning and Features, Emergence of SIA, Need for social impact assessment, Significance of SIA	Lecture and tutorial class	15	Burdge, R. J., & Vanclay, F. (1996). Social impact assessment: a contribution to the state of the art series. Impact Assessment, 14(1), 59-86.
II	Components of SIA- Environmental, Demographic, social, cultural, heritage, economic, political, health and wellbeing, psychological, women and children, Cost-benefit analysis, Community participation,	Lecture and tutorial class	15	1. Burdge, R. J., & Robertson, R. A. (1990). Social impact assessment and the public involvement process. Environmental Impact Assessment Review, 10(1-2), 81-90. 2. Vanclay, F., Esteves, A. M., Aucamp, I., & Franks, D. (2015). Social Impact Assessment: Guidance for assessing and managing the

	Ethical consideration in SIA			social impacts of projects. International Association for Impact Assessment.
III	Methodologies and Approaches of SIA: Integrated socio-economic impact methodology, Battelle social indicators model, Social and Economic Assessment Model (SEAM), Community Level Impact Projection Systems (CLIPS), SIMPACT, Participatory and technical approach, Risk and social impact assessment (RSIA) approach, Phases and tasks of SIA	Lecture and tutorial class	15	Carley, M. J., & Bustelo, E. (2019). *Social impact assessment and monitoring: a guide to the literature*. Routledge. Chapter- 5
IV	Practical aspects: Case study writing, Designing tools and doing fieldwork/survey and writing report	Fieldwork/ Survey and report writing	15	Mathur, H. M. (2016). *Assessing the social impact of development projects*. New Delhi: Springer.

Text Books:

- ✓ *Mathur, H. M. (2016). Assessing the social impact of development projects. New Delhi: Springer.*
- ✓ *Sinha, A. K., Thakur, R., & Khatri, A. (Eds.). (2022). Social Impact Assessment in India: Learning from the Field. SAGE Publishing India.*

References:

- ✓ *Burdge, R. J. (2003). The practice of social impact assessment background. Impact Assessment and Project Appraisal, 21(2), 84-88.*
- ✓ *Burdge, R. J., & Robertson, R. A. (1990). Social impact assessment and the public involvement process. Environmental Impact Assessment Review, 10(1-2), 81-90.*
- ✓ *Burdge, R. J., & Vanclay, F. (1996). Social impact assessment: a contribution to the state of the art series. Impact Assessment, 14(1), 59-86.*
- ✓ *Carley, M. J., & Bustelo, E. (2019). Social impact assessment and monitoring: a guide to the literature. Routledge.*

✓ *Dendena, B., & Corsi, S. (2015). The Environmental and Social Impact Assessment: a further step towards an integrated assessment process. Journal of cleaner production, 108, 965-977.*
✓ *Terrapon-Pfaff, J., Fink, T., Viebahn, P., & Jamea, E. M. (2017). Determining significance in social impact assessments (SIA) by applying both technical and participatory approaches: Methodology development and application in a case study of the concentrated solar power plant NOORO I in Morocco. Environmental Impact Assessment Review, 66, 138-150.*
✓ *Vanclay, F., Esteves, A. M., Aucamp, I., & Franks, D. (2015). Social Impact Assessment: Guidance for assessing and managing the social impacts of projects.*

e-Resources:

1. Mathur, H. M. (2011). Social impact assessment: a tool for planning better resettlement. *Social Change*, *41*(4), 97-120. https://journals.sagepub.com/doi/abs/10.1177/004908571104100105

2. eGyankosh, Socio-economic impact analysis. https://egyankosh.ac.in/bitstream/123456789/70644/1/Unit-3.pdf
3. eGyankosh, Cost-benefit analysis. https://egyankosh.ac.in/bitstream/123456789/6882/3/Unit-5.pdf

Sample Question

Answer all questions of the given Part-I, II, III & IV

Part-I

I. Answer all questions of the following.   Marks   1×12=12

Q. SIMPACT was introduced by _____.

Part-II

2. Write any eight questions within two or three sentences each.   Marks   8×2=16

Q. What is social impact?

Part-III   Marks   8×3=24

3. Answer any eight questions within 75 words each.
Q. Describe the emergence of social impact assessment study.

Part-IV

Marks   7×4=28

4. Answer all of the following with 500 words each.

Q. Discuss the significance of Risk and social impact assessment (RSIA) approach in SIA.

Introduction to Pre-School Education

Course Outcomes (COs)

On completion of the course, the students will be able to:

- Describe need and importance of early childhood care and education
- State different   policies, programmes and curriculum frameworks on ECCE
- Critically analyse the relevance of different methods and strategies of planning and management of ECCE
- Explain role of teacher in collaboration with school and community
- Reflect on different models and strategies of professional development of teachers at foundational stage
- Prepare exemplar holistic report card for children at ECCE

Unit 1:Meaning Nature and Significance of Early Childhood Care and Education
Learning Outcomes

- ✓ *Understand the concept of ECCE*
- Definition and objectives of holistic ECCE
- Significance of ECCE and foundational learning for holistic development
- Rationale for extending ECCE to 8 years for smooth transaction

Unit 2: Policies and Programmes and on ECCE
Learning Outcomes

- ✓ *State different policies, program on ECCE*
- Integrated Child Development Services (ICDS)
- National Policy on Education 1986 and PoA 1992 and on ECCE

- National Education Policy 2020 on Foundational Learning, National Curriculum Framework for Foundational Stage (NCF-FS) 2022
- NIPUN BHARAT 2021, Nutritional support, Immunization

Unit 3: Planning and Management of ECCE Curriculum
Learning Outcomes
✓ *Analyse the principles of balanced and contextualized ECCE curriculum*
- Principles of planning a balanced and contextualized ECCE curriculum.
- Long-term and short-term objectives and planning.
- Toy based Pedagogy
- Maintaining an appropriate and inclusive classroom environment.

Unit 4: Role of Teachers for ECCE
Learning Outcomes
✓ *Prepare a report on Holistic assessment of ECCE level*
- Partnership with parents and family care and learning of children.
- Professional development of ECCE teachers.
- Issues of ECCE Teachers- autonomy, interaction with parents, community and authority. Issues relating to administration, management and academics
- Holistic assessment and report card
- Foundational stage/ Preparatory stage under NEP-2020

Sample Question

1. What is meant by ECCE?[1 Mark]
2. Mention the two functions of ICDS.[2 Marks] [With in 50 Words]
3. Describe the foundational level as per the National Educational Policy (NEP-2020) [3 Marks] [Within 300 words]
4. Explain NIPUN BHARAT- 2021 with suitable example. [8 marks] [Within 500 words]

Practicum

A case study on unique practices of Anganwardi/ Balwardi/Pre-school Education Institution.

Mode of Course Transaction:

Seminar, TeamTeaching,Dialogue, Peer-Teaching, PeerGroupDiscussion,Collaborative and Cooperative Learning, Field Trip and visit to ECCE Center, Lecture Method, Self-Learning.

References and Suggested Books

✓ *Bhatnagar, R (2005). Little steps. New Delhi: National Council for Education and Training,*
✓ *Kaul, V, et al. (2014). Readiness for school: Impact of early childhood education quality. New Delhi: CECCED, AUD.*

- ✓ *Kaul, V.(2010). Early childhood education program. New Delhi: National Council for Educational Researcher and Training.*
- ✓ *MHRD (1986). National Policy on Education 1986, New Delhi*
- ✓ *MHRD (2020). National Education Policy 2020, New Delhi, Government of India*
- ✓ *Mina Swaminathan (1998). The First Five Years: A Critical Perspective on Early Childhood Care and Education in India.*
- ✓ *National Steering Committee for NCF (2022). National Curriculum Framework for Foundational Stage 2022, New Delhi*
- ✓ *NCERT (2006). Position paper on early childhood care and education. New Delhi: National Focus group, NCERT.*
- ✓ *NCTE(2009). National Curriculum Framework for Teacher Education Towards Preparing Professional and Humane Teacher, New Delhi, NCTE.*
- ✓ *Swaminathan, M. and Daniel, P. (2004). Play activities for child development: A guide to preschool teachers. New Delhi: National Book Trust.*
- ✓ *WHO (2006). Child growth standards-methods and development, World Health Organization.*

Geriatric Care and Education

Course Outcomes (COs):

On completion of this course, the learners will be able to:
- Understand the stages of growth and development.
- Differentiate the characteristics of growth during adolescence.
- Know the objectives of Sex Education.
- Acquire skills to adopt a good family life.
- Grasp the role of parents and teachers to ensure good family life.

UNIT I Adolescence Education

LO: Mention the characteristics of growth during adolescence.
LO: Know the scope of sex education.
- Stages of growth and development, Characteristics of growth and development during adolescence, Drug abuse: problems and issues
- Sex –education- meaning, objectives, need and scope
- Methods of dissemination of sex education, course content of sex education, Role of teacher

UNIT II Adolescence and Adulthood

LO: Grasp the difference between Adolescence and Adulthood.
- Adolescence development.
- Adolescence developmental theories.
- Young Adulthood.

- Middle Adulthood.
- Late Adulthood.

UNIT III Family Life Education

LO: Understand the need of family life education.
- Family life Education –meaning, objectives, need and scope
- Essential elements of good family life. Importance and need of good family life education
- Role of education for good family life, role of teachers, role of parents and community, counselling for good family life.

UNIT IV Marital Life
LO: Identify the factors of Marital conflict.
- Marriage- Basic concepts, types and function
- Marital role
- Marital conflicts
- Marriage counseling

Sample Questions
1. What is the age range of Adolescence period? (1 Mark)
2. Mention any two objectives of Sex Education. (2 Mark, Within 50 words)
3. Define the role of education for good family life. (5 Mark, Within 300 words)
4. Describe different types of marriages with suitable examples. (8 Mark, Within 500-800 words)

Mode of Course Transaction: Team Teaching, Dialogue, Peer-Teaching, Peer Group Discussion, Collaborative and Cooperative Learning, Field Trip, Self-Learning.

Suggested Activities (Any one)
1. Review and analysis of the work done by Govt. and Non-Govt. Organizations.
2. Writing report on Adolescent's behaviour in different Socio-economic settings.
3. Conducting a survey in a community.

References Books

- ✓ *Adolescence Reproductive Health (ARH Manual) (UNFPA/ UNICEF)*
- ✓ *Online Courses Swayam-2*

Education for Adolescence and Family Life

Course Outcomes (COs):

On completion of this course, the learners will be able to:

- Understand the stages of growth and development.
- Differentiate the characteristics of growth during adolescence.
- Know the objectives of Sex Education.
- Acquire skills to adopt a good family life.
- Grasp the role of parents and teachers to ensure good family life.

UNIT I Adolescence Education

LO: Mention the characteristics of growth during adolescence.
LO: Know the scope of sex education.

- Stages of growth and development, Characteristics of growth and development during adolescence, Drug abuse: problems and issues
- Sex –education- meaning, objectives, need and scope
- Methods of dissemination of sex education, course content of sex education, Role of teacher

UNIT II Adolescence and Adulthood

LO: Grasp the difference between Adolescence and Adulthood.

- Adolescence development.
- Adolescence developmental theories.

- Young Adulthood.
- Middle Adulthood.
- Late Adulthood.

UNIT III Family Life Education

LO: Understand the need of family life education.

- Family life Education –meaning, objectives, need and scope
- Essential elements of good family life. Importance and need of good family life education
- Role of education for good family life, role of teachers, role of parents and community, counselling for good family life.

UNIT IV Marital Life

LO: Identify the factors of Marital conflict.

- Marriage- Basic concepts, types and function
- Marital role
- Marital conflicts
- Marriage counseling

Sample Questions

5. What is the age range of Adolescence period? (1 Mark)
6. Mention any two objectives of Sex Education. (2 Mark, Within 50 words)
7. Define the role of education for good family life. (5 Mark, Within 300 words)
8. Describe different types of marriages with suitable examples. (8 Mark, Within 500-800 words)

Mode of Course Transaction: Team Teaching, Dialogue, Peer-Teaching, Peer Group Discussion, Collaborative and Cooperative Learning, Field Trip, Self-Learning.

Suggested Activities (Any one)

4. Review and analysis of the work done by Govt. and Non-Govt. Organizations.
5. Writing report on Adolescent's behaviour in different Socio-economic settings.
6. Conducting a survey in a community.

References Books

- ✓ *Adolescence Reproductive Health (ARH Manual) (UNFPA/ UNICEF)*
- ✓ *Online Courses Swayam-2*

Office Automation Tools

Course Objectives:

The course introduces the students to document processing, presentation software and data handling. The basic features and skills of creating, editing, inserting tables, graphics as well as presentation tools along with spreadsheet data handling are covered.

Learning Outcomes:

Upon completion of this course, students will be able to:
- Create and refine documents using text formatting, tables and graphics.
- Use mail merge.
- Create macros and templates in documents.
- Create presentations with transitions, animations and other advanced presentation features

UNIT-1:

Document Processing Basics: Creating, opening and saving a document, text formatting, header and footer, creating and editing of tables, importing graphics, insert picture, using word processor's drawing features, text in drawing.

UNIT-2:

Advanced Features: Creating macros, watermarks, templates, reviewing documents, comparing and combining documents, protection of documents-using passwords. Mail merge concept, main document, data sources, merging data source and main document.

UNIT-3:

Presentation Tools: Creating presentations, using blank presentation option, using design template option, adding slides, deleting a slide, importing images from the outside world, deleting a slide, numbering a slide, saving presentation transition and animations, adding notes to slides, customize slideshows.

UNIT-4:

Data Handling using spreadsheets: Working with spreadsheets, formatting the sheets, Relative, Absolute and mixed referencing, mathematical and statistical functions, nested functions. **Charts:** Data visualization using built-in charts.

Text Book:

- ✓ *LibreOffice 6.0 Writer Guide. Friends of OpenDocument, Inc., 2018.*

Lab: Office Automation Tools

1. Create a professional resume using a word processor. Include the following elements in your resume: Your personal information (name, contact details, Photo), A section for your education background, A section for your work experience, Proper text formatting (e.g., font type, size, bold, italics), Utilize headers and footers to include your name and page numbers

2. Create a report for a company's quarterly sales performance. Use a word processor to: Insert a table to organize the sales data (e.g., sales figures by region), Format the table with appropriate borders and shading, Include a header with the report title, Insert a footer with the current date and page numbers, Import a company logo or relevant graphics to enhance the report's visual appeal.

3. As part of a project presentation, you need to create a slide deck using a presentation software. Your presentation should include: Text slides summarizing key project milestones and objectives, Use of bullet points to highlight important information, Incorporate relevant graphics or images to complement your content, Utilize the software's drawing features to annotate diagrams or charts, Ensure consistent formatting and design throughout the presentation.

4. Prepare a newsletter for your organization using a word processor. Your newsletter should feature: Multiple columns for easier readability, Insertion of images or clipart to accompany articles, Incorporate text boxes for quotes or side notes, Include hyperlinks to external websites or email addresses for more information, Utilize header and footer sections for consistency and branding.

5. Create a standardized template for project proposals in your organization. Develop a template using a word processor that includes: Customized headers and footers with organization logo and document title, Watermark feature to indicate the document status (e.g., draft, final), Protection of the document using a password to prevent unauthorized editing, Reviewing feature enabled to track changes and comments from multiple reviewers, Utilize macros to automate repetitive tasks (e.g., inserting common sections or formatting).

6. Create a presentation for an upcoming sales of a company. Use presentation software to: Choose a suitable design template from the software's library, Add slides to cover key topics such as company overview, product/service offerings, and client testimonials, Import images or graphics from external sources to enhance the visual appeal of the presentation, Customize slide numbering to maintain a coherent structure throughout the presentation, Save the presentation with transition effects and animations to make it engaging for the audience.

7. Prepare a training presentation for new employees on company policies and procedures. Use presentation software to: Start with a blank presentation and organize

slides to cover various policy topics such as code of conduct, safety protocols, and HR guidelines, Utilize a design template that reflects the professional and informative nature of the training material, Import relevant images or diagrams to illustrate key points and make the presentation visually engaging, Customize slide transitions to ensure smooth progression between topics and maintain audience interest, Add speaker notes to each slide to provide trainers with additional information and guidance during the presentation.

8. Organize sales data for the past quarter into a spreadsheet and create a summary report for management. Use spreadsheet software to: Create a new spreadsheet and format the sheet to include relevant column headers for sales data categories such as date, product name, quantity sold, and total revenue, Enter the sales data for each day of the quarter and use relative referencing to calculate the total revenue for each product, Apply appropriate formatting to the cells to enhance readability and make important data stand out, Use mathematical functions such as SUM and AVERAGE to calculate the total revenue and average sales quantity for the quarter, Create a nested function to identify the best-selling product based on total revenue, and present the summary report using built-in charts for visual representation of sales trends.

9. Analyze sales data for a marketing campaign and identify the most effective advertising channels for driving sales. Use spreadsheet software to: Import sales data into a new spreadsheet and format the sheet to include columns for advertising channel, sales revenue, and conversion rate, Use relative referencing to calculate the conversion rate for each advertising channel based on the number of sales and leads generated, Apply conditional formatting to highlight advertising channels with high conversion rates or low sales revenue for further analysis, Utilize nested functions to calculate the total sales revenue and average conversion rate across all advertising channels, Generate charts such as line graphs or scatter plots to visualize the relationship between advertising spend, conversion rate, and sales revenue, helping you identify the most cost-effective advertising channels for the marketing campaign.

Multimedia and Animation

Course Objectives:

To learn the use of various tools and techniques to create multimedia and animation. This will give an opportunity to the students to use their creativity for developing interesting multimedia and animated objects which can be used for advertising and gaming industry.

Learning Outcomes:

Upon completion of this course, students will be able to:
- Understand the tools and techniques used for multimedia creations
- Create different graphics
- Add audio visual effects
- Learn the use of animation tools

UNIT-1:

Introduction: Definition Multimedia and uses, applications, Hardware and Software requirements, multimedia presentation and authoring tools, LAN and multimedia, multimedia servers and database: vector graphics, 3-D graphics program, animation techniques, shading, anti-aliasing, morphing: video on demand.

UNIT-2:

Text and Graphics: Uses of text in multimedia, families and faces of fonts, outline fonts, bitmap fonts, International characters sets and hypertext digital font techniques. Graphics-Introduction, types, color and color models, color palettes, vector drawing, 3-D drawing and rendering, making still images, editing and capturing images

UNIT-3:

Audio and Video: Digital representation of sound, MIDI audio, MIDI vs. Digital Audio, Audio file formats, Adding sound to your multimedia project, Audio software and hardware, Video basic, how video works, broadcast video standard, Analog video, Digital video, shooting and editing video, video compression and file formats.

UNIT-4:

Animation and Multimedia Authoring: Introduction, principles, types and uses, cell animation, computer animations, morphing, Animation software compression techniques: need and types of compression- lossy and lossless, CODECs, authoring basic, types of authoring tools.
Multimedia on the Web: Introduction, Bandwidth, text on the web- Dynamic and embedded font technology, Audio and video on the web, buffering and streaming, webcasting, video conferencing.

Text Books:

- ✓ *Multimedia: Making it work by Tay Vughan, TataMcGraw-Hill*

✓ *Computer Graphics and Multimedia by A. P. Godse, Technical Publication*
✓ *Multimedia: An Introduction, Villamil and Molina, PHI*
✓ *Sound and Video, Lozano. Multimedia, PHI*

Lab: Multimedia and Animation

1. Using Inkscape, create a vector graphic logo for a fictional company, incorporating text and geometric shapes.
2. Develop a multimedia presentation using LibreOffice Impress, including text slides, images, audio clips, and simple animations.
3. Edit a digital photograph using GIMP, applying basic adjustments such as cropping, color correction, and retouching.
4. Record and edit a short audio clip using Audacity, adding effects like echo or noise reduction to enhance the sound.
5. Shoot a short video using a smartphone or digital camera, then edit it using Shotcut or OpenShot video editor.
6. Create a motion graphics animation using Synfig Studio, incorporating vector graphics, text, and simple effects.
7. Design a 3D character model using MakeHuman, then animate it using Blender's rigging and animation tools.
8. Create an interactive multimedia quiz using H5P, incorporating text, images, audio, and video elements with interactive questions.
9. Enhance the promotional image to make it more visually appealing using GIMP. Use the Levels tool to adjust the brightness and contrast, apply the Sharpen filter to enhance the sharpness and clarity of important details, use Crop tool to remove any unnecessary elements or empty space from the edges of the image, experiment with the Color Balance tool to adjust the color tones, Add text overlays using the Text tool to convey essential information about the event, such as the date, time, and location. Incorporate visual effects and filters, such as blurs or gradients, to create depth and visual interest in specific areas of the image. Use the Export function to save the edited image in a web-friendly format (e.g., JPEG or PNG) suitable for online promotion and distribution.
10. Design a simple 3D model using Blender, then render it to create a still image or animation sequence. Create a multimedia presentation for a marketing campaign. Use the open-source software Blender to: Incorporate vector graphics and 3-D graphics to enhance the visual appeal of the presentation. Apply animation techniques such as morphing and shading to create dynamic transitions between slides. Utilize anti-aliasing to smooth out jagged edges and improve the overall image quality. Export the presentation as a video file compatible with video-on-demand platforms for distribution.
11. Produce an audio podcast for an online radio show. Use the open-source software Audacity to: Record and edit digital audio tracks, including voiceovers, music, and sound effects for the podcast. Convert MIDI audio files to digital audio format and

synchronize them with other audio elements in the podcast. Export the final podcast episode in popular audio file formats suitable for streaming and downloading on the web.

12. Develop an animated short film for a film festival. Use the open-source software Synfig Studio to: Create cell animations and computer-generated animations to bring characters and scenes to life in the short film. Experiment with morphing techniques to seamlessly transition between different character poses and facial expressions. Apply compression techniques to optimize the file size of the animated short film without sacrificing visual quality. Export the final animated short film in standard video file formats for submission to the film festival.

Introduction to Web Design

Course Objectives:

- To learn the fundamentals of web designing.
- To learn front-end web designing.
- To design and develop standard and interactive web pages.

Course Outcomes:

Upon completion of this course, students will be able to:
- Understand Internet, Internet Protocols, and World Wide Web
- Understand HTML and its tags
- Learn the design and development of web pages
- Learn the styles and layouts of web pages using CSS

UNIT-1:

- Introduction to the Internet, Internet Protocols, World Wide Web (WWW): Introduction, History, HTTP and HTTP methods, Web Browser, Web Server and their examples, Web page, working principles of WWW. Web Development: Introduction, Front-end and Back-end Development Technologies. Concepts of Client-Server communication.
- Introduction to HTML: Introduction, History, Characteristics, Advantages and Disadvantages of HTML, HTML Editors, Understanding elements in HTML, Container and empty elements, Basic Tags and Attributes: <!DOCTYPE>, <HTML>, <HEAD>, <TITLE>, <BODY>, <P>, Attributes of the basic tags. Creating a Simple HTML Web Page, running a web page in the browser.

UNIT-2:

- Working with HTML Tags: Headings, Break, Horizontal Line. Formatting Text with HTML Elements: Italic, Bold, Small, Subscript, Superscript and changing background color. Adding Comments in HTML. Working with Hyperlink, List, Table, Image, Video, and Frames in HTML.
- Creating Forms in HTML: Form Tag and its attributes. Creating Text box, Password box, Text area, Drop-down list, Checkbox, Radio button, Email, Color picker, Date-Time picker, Submit and Reset buttons.

UNIT-3:

Cascading Style Sheets (CSS): Introduction, Benefits of using CSS, Understanding the Syntax, CSS Selectors, Using CSS: External, Internal Inline CSS. Comments in CSS,
Basic CSS Properties: Color, Background, Text, Font, List, Display. CSS Box Model: Introduction, working with Margin, Border, and Padding. Working with CSS Navigation Bar and Drop-Downs.

UNIT-4:

- JavaScript: Introduction, Features, Benefits, Creating Simple JavaScript. Using JavaScript in HTML: Using in the Head, Body and as external script file. Exploring Popup Boxes: alert, confirm, prompt box. Display Possibilities: inner HTML, document.write(), window.alert(), console.log().
- Programming using JavaScript: Introduction to Data types, Variables, Operators, Expressions (Arithmetic, String, Logical), Comments. Control Statements: Selection Statements, Loops, Jump Statements. Functions in JavaScript: built-in and user defined, Invoking a function, scope of a function, global vs local variables. Introduction to DOM, Event handling and Form validation in JavaScript.

Lab: Introduction to Web Design

1. Create a Web Page to display "Hello HTML".
   - Display the same using different headings: h1 to h6
   - Apply bold, italic formats
   - Change text color, background of the page
2. Create a Web Page to display the list of Fruits using both ordered and unordered lists. Recreate the lists using images of the same items.
3. Use the web page created in Question Number 2. When the user clicks on the image of a Fruit, it should open a new page that contains an image of the Fruit along with its benefits (use multiple paragraphs, and make sure the image is aligned properly).
4. Create a web page that displays details of the Fruits in Tabular format. Use serial no., name, color, taste, price/kg.
5. Create a Web Page that displays a video file (record/create a video of your own).
   - Apply various controls such as paly, pause, volume.
   - Apply autoplay, muted and both.
   - Display a Youtube Video in your Web Page.
6. Design a Student registration form to collect various data about a Student which includes Name, Age, Gender (M, F, O), Mobile No., Email ID, Stream (Science/Arts/Commerce in drop-drown), Choice for participating in NCC, NSS, YRC (use check box), and two buttons for reset and submit respectively. Display the form at the center of the page with proper alignment of each item in the form.

7. Use the web page created in Question no. 4. Use CSS and apply various styling to the text, colors to each row of the table, styling to borders and background color of the table.

8. Create a Web page with a Horizontal Navigation bar containing four items such as Home, College, Students, Teachers. The first item should be active, by default. The background color of the item changes when the user moves the mouse over it.

9. Create a Web Page that asks the user to enter the number of Students, and then iteratively ask the details of each Student and display them in a list, using JavaScript.

10. Modify the above program (Q. 9) to display the details in a tabular format, dynamically using JavaScript.

11. Create a Web Page with two text fields and four buttons to perform arithmetic operations such as Addition, Subtraction, Multiplication and Division. The user has to enter numbers in the text fields and press any of the above buttons. The JavaScript program should perform corresponding operations and display the result in the same page. [NOTE: Use different functions for each operation]

12. Use JavaScript and validate the form data in the Student registration Page (created in Q. no. 6). When the user clicks the submit button, the program has to validate that every field contains valid data. [NOTE: validate name, age, gender, email, mobile number]

13. Write a JavaScript program to ask the user to enter a number
    a. Find factorial
    b. Find sum of numbers from one to that number
    c. Find number of prime numbers present from one to that number

14. Write a JavaScript program to demonstrate the use of mouse and keyboard events.

Data Analysis using Spread sheet

Course Objectives:

The objective is to enhance the knowledge of statistics and enable students to make sense of data by analyzing and visualizing it using spreadsheets, interpreting the results and gaining insights.

Learning Outcomes:

Upon completion of this course, students will be able to:
- Learn the use different functions in spreadsheets
- Do data analysis using basic and advanced statistical functions
- Learn the use of tools for visualization
- Do complex level data analysis

UNIT-1:

Data Handling: Spreadsheet concepts, Managing worksheets, Formatting cells, Entering data, Handling operators in formula, Cell referencing and naming of cells and cell ranges, Sorting, Multilayer sorting, Data validation, Find and Replace, Paste special, Filter and advanced filter, Formatting as table, Pivot tables, Formulae vs functions, Cell formulae vs Array formulae. Mathematical functions, Statistical functions, Logical functions, Date and Time functions, Lookup and reference: Hlookup, and Vlookup, Index and Match functions, Text functions. What–if-analysis: Goal-seek, Data tables, Scenario manager.

UNIT-2:

Data Analysis: Explore a data model: its content, and its structure, using the Power Pivot add-in. Learning DAX formula language. Create calculated fields and calculated measure for each cell, filter context for calculation, and explore several advanced DAX functions. Cube formulas to retrieve data from data model.

UNIT-3:

Data Visualization: Different types of charts including Pivot charts: Column, Line, Pie, Bar, Scatter charts. Fine tuning of charts: Chart Elements, Chart Styles, Chart Filters, Box Plot.

UNIT-4:

Utilities and Protection: What-if scenarios, goal-seek, solver, data validation, creating a dropdown list from a range of cells, data filtering and sorting, calculations using linked sheets, detective tools. Passwords and digital signatures in Spreadsheets

Books:

- ✓ Mali, L., Libre Office 5.1 Writer, Calc: Math Formula Book - Vol 1. Notion Press
- ✓ Libre Office 7.0 Calc Guide.
- ✓ Goldmeier, J., Advanced Excel Essentials, Apress, 2014

✓ *Schmuller, J., Statistical Analysis with Excel for Dummies, 4th Edition, Wiley India*

Lab: Data Analysis using Spread sheet

1. You are given a dataset containing sales data for a retail company. Perform the following tasks using spreadsheet software: Format the cells in the "Sales Amount" column as currency with two decimal places. Use the SUM function to calculate the total sales amount for the dataset.

2. You are managing inventory data for a retail store. Use mathematical functions to calculate the total value of the inventory based on the unit price and quantity of each item in stock.

3. Analyze the sales performance data for a company over the past year. Use statistical functions to calculate the mean, median, and standard deviation of monthly sales figures to identify trends and fluctuations.

4. Create a spreadsheet to track student attendance. Use logical functions to automatically mark students as "Present" or "Absent" based on their attendance record, considering specific criteria such as late arrivals or early departures.

5. Develop a project timeline for a software development project. Use date and time functions to calculate project milestones, deadlines, and durations based on the start date and estimated completion times for each task.

6. Analyze student performance data. Use the provided dataset and perform the following actions: Create a pivot table to summarize the average scores for each subject across different classes. Apply data validation to restrict entries in the "Grade" column to only A, B, C, D, or F.

7. Utilize DAX formula language to calculate the total revenue generated by each product category. Apply filter context to analyze revenue trends over different time periods.

8. Create a pivot chart to visualize the sales performance of different product categories over the last quarter. Customize the chart elements and styles to enhance clarity and visual appeal.

9. Use the provided dataset to create a column, line, pie, box plot chart to analyze the distribution of student scores across multiple subjects.

10. Implement what-if scenarios to analyze the impact of changes in interest rates on loan repayments. Use the solver tool to find the optimal solution for minimizing loan payments.

11. Set up data validation to create a dropdown list of employee names from a range of cells. Apply password protection to restrict access to sensitive financial data stored in the spread sheet.