INDEX
DEPARTMENT OF ANTHROPOLOGY

Semester-III

BSC. (HONS.) ANTHROPOLOGY

Fundamentals of Human growth and development

DISCIPLINE SPECIFIC CORE COURSE -7 (DSC-7)
Fundamentals of Human growth and development

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Fundamentals of Human growth and development - DSC-7	04	03	Nil	01	10+2 with Science	NIL

Learning objectives

- Students will be able to learn about various stages and environmental factors involved in human growth and development which help them in understanding growth monitoring of a child.
- They will understand the role played by balance diet in leading a healthy life.

Learning outcomes

By studying this course, students will be able to

- Differentiate the term- growth, maturation and development.
- Understand the basic principles of human growth and development
- Comprehend the significance of growth studies

Syllabus of DSC-7

Unit 1: Introduction to Human growth and development (6 hours)

Concept of human growth, development, differentiation and maturation. Evolutionary perspective of human growth (including living primates and fossil hominid ancestors)

Unit 2 : Stages and process involved in growth and development (9 hours)

Prenatal (conception till birth) and postnatal (birth till senescence) periods of growth, physical, cognitive and psycho-social development from conception through adulthood,

patterns of normal growth curves, variation from normal growth (canalization, catch-up growth and catch-down growth), secular trend

Unit 3 : Factors and Methods related to growth and development (8 hours)

Bio-cultural factors (genetic, socio-cultural and ecological factors) influencing patterns of human growth and variation, methods and techniques to study growth, significance/ applicability of growth studies; Impact of life-changing health parameters on development of infants, children, adolescents and adults

Unit 4: Relevance of Nutrition in growth studies (7 hours)

Importance of Nutrition in various stages of growth and development, Balanced diet, Malnutrition, Assessment of Nutritional status

Unit 5: Role of body physique and composition in growth process (9 hours)

Human physique and body composition - models and techniques; bisexual and endogamous group differences; Somatotyping and human physique with reference to Sheldon, Parnell, Heath and Carter methods

Unit 6: Adaptation in growth and development (6 hours)

Impact of bio-cultural adaptation to environmental stresses on human growth. Homeostasis and thermoregulation

Practical (30 Hours)

Somatometry:

Stature, Body weight, Mid upper arm circumference, Minimum waist circumference, Maximum hip circumference, Upper extremity length, Lower extremity length, Biacromial breadth, Bicristal breadth),

Assessment of chronological age,

Percentile, z-score, height for age, weight for age, BMI for age

Obesity assessment

General adiposity indices: BMI, body fat %, Conicity index,

Regional adiposity indices: WC, WHR, WHtR

Assessment of body composition with skinfold thickness and bioelectric impedance

References

Growth, maturation & physical activity (2004) Malina, Robert M; Bouchard, Claude, Bar-Or, Oded. Human Kinetics.

Human growth and development by Cameron Noel (2002). St. Louis, Academic Press.

Patterns of human growth by Bogin, Barry (1999). Cambridge University Press.

Human biology: An introduction to human evolution, variation, growth & adaptability by Harrison, GA; Tanner, JM; Pilbeam, DR; Baker PT (1988). Oxford, England, Oxford University Press.

Proceeding on Human Physical Growth and Maturation by eds. Johnson, FE, Roche, AF, Susanne, C, (1980). Plenum Publishing Corporation.

Applied body Composition Assessment (2009) Heyward, VH; Wagner DR. Human Kinetic.

ANTHROPOLOGICAL THEORIES

DISCIPLINE SPECIFIC CORE COURSE -8 (DSC-8) – Anthropological Theories

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Anthropological theories- DSC-8	**04**	**03**	**Nil**	**01**	10+2	**NIL**

Course Objective

- This is an introductory course on the main theoretical approaches which historically and traditionally guided anthropological research and understanding of society and culture.
- The course would involve theory as well as practical.
- The practical will skill the students to apply the approaches critically to study of actual social issues and problems.

Course Learning Outcomes

- The students will be able to explain the major theoretical paradigms in anthropology and link it with the social, political and economic contexts in which they have emerged.
- They should also be able to explain clearly how these ideas have contributed to the process, structure, pattern and search for meanings by human beings.

Syllabus of DSC-8

Unit 1 (15 Hours)

Anthropological Paradigms, Nature of Anthropological Knowledge, Interface with evolutionary theory and colonialism, changing perspectives on Evolutionism, Diffusionism and Culture area theories.

Unit 2 (10 Hours)

Durkheim and social integration, Functionalism and Structural-functionalism and British Social Anthropology; Culture and Psychology

Unit 3 (10 Hours)

Structuralism: Claude Levi-Strauss and Edmund Leach

Unit 4 (10 Hours)

Symbolic and Interpretative approaches; Decolonization and Antistructure, and Contemporary anthropology

Practical (30 Hours)

Practical would focus upon developing skills wherein following exercises will be undertaken by the students so as to enable them to connect the anthropological theories to the empirical world of living.

1. Identify a topic relating to contemporary issue and formulate research questions and clearly identify the theoretical perspectives from which they are derived.
2. Identification of variables of a study.
3. Various types of hypothesis ; Formulation of hypothesis; hypothesis testing and exploratory research
4. Identification of universe and unit of study with justifications.
5. Choice of appropriate research technique and method in the context of theoretical framework. Data collection and analysis

References

Applebaum H.A. (1987) Perspectives in Cultural Anthropology. Albany: State University of New York.
Barnard A. (2000). History and Theory in Anthropology. Cambridge: Cambridge University.
Bernard, H. R. (2017). Research methods in anthropology: Qualitative and quantitative approaches. Rowman & Littlefield.
Mark Moberg (2013). Engaging Anthropological Theory : London and NY: Routledge McGee
Pelto, P. J., & Pelto, G. H. (1978). Anthropological research: The structure of inquiry. Cambridge University Press.
R.J. and Warms R.L. (1996) Anthropological Theories: An Introductory History.

Additional Readings

Geertz, Clifford. 1973. The Interpretation of Cultures. New York: Basic Books

Moore M. and Sanders T. (2006). Anthropology in Theory: Issues in Epistemology, Malden, MA: Blackwell Publishing.

Teaching Learning Process

The students will be encouraged to reflect and apply the ideas introduced to them. Case studies and ethnographies will be read and students will be taught to how to analyze the theoretical perspectives used therein. Wherever possible documentaries and short ethnographic movies will also be shown and discussed in the class

Assessment Methods

The candidates will be assessed both on the basis of their understanding of theory and tutorial writing skills. Other than the end term examination, students will also be accessed through quizzes, class participation in debates on theoretical approaches. Their ability to construct hypothesis, think systemically and apply a theoretical perspective to draw a research design

will be tested in the practical. The internal assessment will also form the part of total overall assessment.

Keywords: Evolutionism, Diffusionism, Durkheim and social integration, Functionalism and Structural- functionalism and British Social Anthropology Durkheim and social integration, Functionalism and Structural-functionalism and British Social Anthropology, Symbolic and Interpretative approaches

Indian Prehistory

DISCIPLINE SPECIFIC CORE COURSE -9 (DSC-9) – Indian Prehistory

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Indian Prehistory-DSC-9	04	03	Nil	01	10+2	NIL

Learning Objectives

The learning objectives of this course are as follows:

- The course aims to understand the evolutionary perspective of human prehistoric society in India with the help of archaeological cultural remains.
- To learn tool typology and its classification for the reconstruction of prehistoric societies.

Learning Outcomes

By studying this course, students will be able to:

- Understand the landscape of Indian archaeological sites and their relevance in studying prehistoric Indian societies.
- Identify the tools, appreciate the tool typology and classify it appropriately

Syllabus of DSC-9

Unit-1: Understanding culture (12 Hours)

Technique of tool manufacture and estimation of their relative efficiency; Classification of tools: primary and combination fabrication techniques; Typology and cultural nomenclature

Unit-2: Methods of climatic reconstruction (8 Hours)

palynology, paleontology, soil pH estimation.

Unit-3: Prehistoric India (10 Hours)

Pleistocene chronology of India: A critical assessment

Unit-4: Character, distribution and interpretation of habitat and economy of (15 Hours)

Lower Palaeolithic; Middle Palaeolithic; Upper Palaeolithic; Mesolithic culture; Art, ritual and belief

Practical (30 Hours)

Identification of tools:

(a) Handaxe varieties, chopper/chopping tools

(b) Cleaver varieties

(c) Side scraper varieties

(d) Knives

(e) Burins

Identification of lithic technology:

(f) End scrapers

(g) Borers

(h) Microlithic tools

(i) Bone tools

References

Renfrew Colin and Bahn Paul, Archaeology: Theories, Methods and Practice. New York:Thames & Hudson, 6th Edition, 2012.

Fagan Brian M. and Nadia Durrani, In the Beginning: An Introduction to Archaeology, London: Routledge, 14th Edition 2014.

Chakrabarati, Dilip K. India - An Archaeological History: Paleolithic Beginnings to Early History. Oxford: Oxford University Press, 2009.

Additional Resources:

Allchin, Bridget and Allchin, Raymond F. The Rise of Civilization in India and Pakistan. Cambridge: Cambridge University Press, 2003.

Odell, G.H. Stone Tools: Theoretical Insights into Human Prehistory, New York: Plenum press, 1996.

Moloney and Shott, M.J. Lithic Analysis at the Millennium, New York: Routledge, 2016.

Teaching Learning Process

The process of learning will involve acquisition of domain knowledge and understanding of skills required for conducting research in Indian archaeology. Process will involve lectures,

assignments, class-room discussions, practicals and appropriate inference of results and practical file preparation.

Assessment Methods

This theoretical understanding of the student will be assessed using time-constrained examination. The assessment of the practical will be based on the conducting the laboratory-based experiments, inference of results and practical file preparation.

Keywords

Geochronology, India archaeology, Cave paintings

Palaeoanthropology

DISCIPLINE SPECIFIC ELECTIVE COURSE -1 (DSE-1) – Palaeoanthropology

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Palaeoanthropology - DSE-1	**04**	**03**	**Nil**	**01**	**10+2 with Science**	**NIL**

Learning Objectives

The learning objectives of this course are as follows:

- To understand the fundamentals of palaeoanthropology
- To understand the evolutionary process, assessment of skeletal variability of fossil remains, and modern humans.
- To learn the role of palaeodemography and paleopathology in studying human origins

Learning Outcomes

- Student should understand the fundamental of palaeoanthropology
- Should understand the evolutionary journey of early to modern humans
- Student should learn the role of palaeodemography and paleopathology in studying human origins

Syllabus of

DSE-1 Unit 1

(08 Hours)

Dating methods, geological time scale, taphonomy and interpretation of the paleontological and archaeological records, taxonomic and chronological problems of fossils records.

Unit 2 (08 Hours)

Primate speciation and extinctions: adaptive primate radiation

Unit 3 (10 Hours)

Evolutionary biology: Human origins: Development, distribution and fossilized evidence of Australopithecines, Paranthropus (Zinjanthropus), Homo habilis, Homo erectus, Archaic H.

sapiens.

Unit 4 (07 Hours)

Primate and Non-Primate Models for Early Hominid Behaviour; hominization process- Evolution of hominid-human bipedalism

Unit 5 (06 Hours)

Palaeodemography- reconstruction of population patterns from skeletal analysis, determination of demographic variables in prehistoric populations and post-Neolithic population growth.

Unit 6 (06 Hours)

Palaeopathology- bioarchaeological approach of disease; effects of agriculture, urbanization and slavery on health and disease; colonization and disease with special emphasis on the New World.

Practical (30 Hours)

1. Comparative primate osteology

2. Description and identification of the disarticulated skeleton of non-human primates

3. Identification and description of fossil casts

References

CS Larson (2016). Essentials of Physical Anthropology. W. W. Norton & Company. [Unit-1: Page- 165-190; Unit-2: Page-124-143; Unit-3: Page-223-230, 234-240, 253- 268, 274-291]

Craig Stanford et al. (2013). Biological Anthropology. Pearson, New York. [Unit-4: Page-197-220; Unit-5: Page-1-11; Unit-6: Page-318-330]

Tattersall I. (2009). The Fossil Trail: How We Know What We Think We Know about Human Evolution. New York: Oxford University Press.

Additional Resources:

Waldron T. (2008): Palaeopathology. Cambridge University Press

Cela-conde CJ and Frisancho J. (2007). Human Evolution: Trails from the past. Ayala Oxford University Press.

Barnes E. Diseases and Human Evolution. (2005). University of New Mexico Press.

Pinhasi R and Mays S (2008). Advances in Human Palaeopathology. Chichester: John Wiley & Sons, Inc. (PM).

Hoppa RD and Vaupel JW. (2002). Paleodemography: Age Distributions from Skeletal Samples. Cambridge University Press.

Lansen CS, Matter RM and Gebo DL. (1998). Human Origin: The fossil Record.

Teaching Learning Process

The process of learning will involve acquisition of subject knowledge and understanding of skills required for a paleoanthropologist. Process will involve lectures, class-room discussion, assignments and practicals.

Assessment Methods

This theoretical understanding of the student will be assessed using time-constrained examination. The assessment of the practical will be based on assessing the fossil casts.

Keywords

palaeoanthropology, paleopathology, anthropology, and evolution

Anthropology of Tourism

DISCIPLINE SPECIFIC ELECTIVE COURSE -2 (DSE-2) – Anthropology of Tourism

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Anthropology of Tourism - DSE-2	04	03	Nil	01	10+2	NIL

Learning Objectives

- Tourism is an important industry in India, valued and promoted by most of the states. Anthropologists have a close association to tourism, with an understanding of both the guest as well as the host community.
- The anthropology of tourism introduces the various aspects of tourism and anthropological approaches to it. It looks at the impact of tourism on the host community, its economy, culture, identity and ecology as well as how the experience of a culture can be transformative for the tourists also.
- Some of the key issues dealt in this paper are cultural aspects of tourism economy, cultural promotion and cultural preservation and its impact on authenticity and commodification of culture, fair and its management, ecotourism and sustainability.
- Types of tourism as well as well as leisure, culture learning, communication and promotion are explored in this paper.

Learning Outcomes:

The students should be able to

- explain the various aspects of tourism and the relationship between culture and tourism economy.
- place anthropology of tourism in relationship to other sub-disciplines within anthropology and allied disciplines like tourism management.
- identify those aspects of culture which can draw in the tourists, as well as allow the communities to express itself and promote their culture.
- use their skills to identify the best practices for sustainable ecotourism, mutually beneficial for the host as well the guest.

UNIT 1: Tourism and Leisure: Theoretical overview (10 Hours)

Anthropology of Tourism: Historical roots, objectives and scope. Interconnections between tourism history and the rise of the socio-cultural study of tourism; Concept of leisure and recreation.

UNIT 2: Types of Tourism (12 Hours)

Pilgrimage, medical tourism, education and tourism, recreational visits, heritage tourism, nature visits, wildlife tourism, visiting relatives, fairs and festival in tribal and rural India., Tourism industry in India : Recent trends and challenges.

UNIT 3: Tourism and Consuming Culture (13 Hours)

Tourism and cross-cultural communication and interaction; role of symbolism, semiotics, and the imagination in tourism; tourism and the commodification of culture or cultural degradation, Issues of staged authenticity

UNIT 4: Society, Tourism and Sustainability (10 Hours)

Ecotourism and sustainable development; tourism policy, applied aspects of anthropology in tourism development and planning

Practical (30 Hours)

1. Identification of three important tourist destinations including heritage, historical, religious, educational (Museum) and recreation spots and understand the historical, cultural, economic, religious and ecological aspects of tourism.

2. Case studies of any two ethnic fairs (frequented by tourists) to understand the representation of culture and culture as an industry. Case studies should focus upon the cultural creators (local people) and cultural consumers (visitors) to understand concepts like souvenir, commodification and cross- cultural communication.

References

Chambers E. (2000). Native Tours: The Anthropology of Travel and Tourism. Prospect Heights: Waveland.

Crick M. (1995). The Anthropologist as Tourist: An Identity in Question. In Lanfant MF, Allcock JB, Bruner EM (eds.)International Tourism: Identity and Change. London: Sage. pp. 205-223.

Dann GMS, Nash D and Pearce PL. (1988). Methodology in Tourism Research. Annals of Tourism Research. 15:1-28.

Gmelch SB. (2004). Tourists and Tourism: A Reader. Long Grove: Waveland.

Graburn NHH. (1977). Tourism: The Sacred Journey. Hosts and Guests: The Anthropology of Tourism. Valene L. Smith, ed. Philadelphia: University of Pennsylvania Press. Pp. 33-47.

Dann G. (2002). The Tourist as a Metaphor of the Social World. Wallingford: CAB International.

Nash D. (1996). Anthropology of Tourism. New York: Pergamon

Additional Resources:

Picard M and Wood R. (1997). Tourism, Ethnicity, and the State in Asian and Pacific Societies. University of Hawaii Press. 88

Crick M. (1994). Anthropology and the Study of Tourism: Theoretical and Personal Reflections. In Crick M (eds.). Resplendent Sites, Discordant Voices: Sri Lankans and International Tourism. Chur, Switzerland: Harwood Publishers.

Wood R. (1997). Tourism and the State: Ethnic Options and the Construction of Otherness. In Picard and Wood Tourism, Ethnicity and the State in Asian and Pacific Societies. University of Hawaii Press

Teaching Learning Process: The students will be encouraged to reflect and apply the ideas introduced to them in the class. Case studies and ethnographies about tourist places will be analysed and linked with similar well-acquainted cases. Wherever possible documentaries films will also be screened and discussed. The students will be encouraged to speak on cultural emblems and tourist souvenirs and how they help create the cultural experiences of the tourists.

Assessment Methods: The candidates will be assessed both on the basis of their understanding of theory and practical. Other than the end term examination, students will also be accessed through presentations, class participation in debates on their ability to work with the concepts and apply them in analysing actual tourist places. They would also be encouraged to design heritage walks, especially in the walled city area or other thematical walks within the city. The internal assessment will also form the part of total overall assessment.

Keywords: Tourist and traveller, Leisure Pilgrimage, Health tourisms, Ecotourism, Heritage, Culture industry, Commodification of Culture. Cross cultural communication.

Forensic Anthropology

DISCIPLINE SPECIFIC ELECTIVE COURSE -3 (DSE-3) – Forensic Anthropology

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Forensic Anthropology - DSE-3	04	03	Nil	01	10+2 with Science	NIL

Learning Objectives

- To understand the basic tenets and applications of forensic anthropology
- To learn the methods and techniques involved in solving the criminal cases
- To appreciate the recent developments in the field of forensic anthropology

Learning Outcomes

- Student should be able to identify and collect the biological materials found at crime scenes
- Student should be able to use the methods and techniques in forensic anthropology
- Student should have the understanding of current knowledge of latest developments in forensic anthropology

Syllabus of

DSE-3 Unit 1

Introduction to Forensic Anthropology: Definition, Brief History, Scope, Applications and relationship with other sciences

Unit 2

Basic Human Skeletal Biology, Identification of Human and Non-Human Skeletal Remains, Ancestry, age, sex and stature estimation from bones.

Unit 3

Personal Identification, Complete and Partial Identification, Methods of Identification in Living Persons: Somatometry, Somatoscopy, Occupational Marks, Scars, Bite Marks, Tattoo Marks, hair, fingerprints, footprints, lip prints, nails, handwriting, deformities.

Unit 4

Serology: Identification and Individualization of bloodstains, urine, semen and saliva strains.

Unit 5

Individualization: Forensic Odontology-Tooth Structure and Growth, Bite Marks, Facial Reconstruction. DNA Profiling.

Practical (30 Hours)

1. Study of human long bones. Estimation of age, sex and stature from bones.

2. Somatometric and Somatoscopic Observation on living persons.

3. Identification of bloodstain, urine, semen and saliva.

4. Examination of Fingerprints and Handwriting.

References

A M Christensen et al. (2014). Forensic Anthropology: Current methods and Practice. Elsevier, New York. [Unit-1: Page-1-10; Unit-2: Page- 25-50; 199-216, 243-274]

ARW Jackson and JM Jackson (2011). Forensic Science, 3rd edition. Pearson, New York. [Unit-3: Page-61-65; 107-126; 254-260]

Bass W.M. (1971). Human Osteology: A Laboratory and Field manual of the Human Skeleton. Columbia: Special Publications Missouri Archaeological Society.

Black S. and Ferguson E. (2011). Forensic Anthropology 2000 to 2010. CRC Press,

London. Byers, S. N. (2008). Forensic Anthropology. Boston: Pearson Education

LTD.

Gunn A. (2009) Essential Forensic Biology (2nd ed). Chichester: Wiley-Blackwell. [Unit-4: Page-45- 82; Unit-5: Page-85-97]

Modi, R. B. J. P. (2013). A Textbook of Medical Jurisprudence and Toxicology.

Elsevier. Reddy V. R. (1985). Dental Anthropology, Inter-India Publication, New

Delhi.

Spencer, C. (2004). Genetic Testimony: A Guide to Forensic DNA Profiling, Pearson, New Delhi.

Vats Y., Dhall J.K. and Kapoor A.K. (2011). Gender Variation in Morphological Patterns of Lip Prints among some North Indian Population. J. Forensic Odontology, 4: 11-15.

Wilkinson, C. (2004). Forensic facial reconstruction. Cambridge University

Press. Klepinger LL (2006). Fundamentals of Forensic Anthropology. Wiley-

Liss Publications

Forensic Anthropology Laboratory Manual 4Th Edition 2016 Edition by STEVEN N. BYERS, T&F INDIA.

Forensic Anthropology A Comprehensive Introduction 2Ed (Hb 2017) by LANGLEY N.R., TAYLOR & FRANCIS.

Additional Resources:

Modi, R. B. J. P. (2013). A Textbook of Medical Jurisprudence and Toxicology. Elsevier. 6. Reddy V. R. (1985). Dental Anthropology, Inter-India Publication, New Delhi.

Spencer, C. (2004). Genetic Testimony: A Guide to Forensic DNA Profiling, Pearson,

New Delhi. Wilkinson, C. (2004). Forensic facial reconstruction. Cambridge University

Press.

Black S. and Ferguson E. (2011). Forensic Anthropology 2000 to 2010. CRC Press, London.

Teaching Learning Process

The process of learning will involve the acquisition of subject knowledge and understanding of the skills required for a forensic anthropologist. The learning process will involve lectures, submission of assignments, classroom discussions, reliably conducting the experiments and inferring the results.

Assessment Methods

The theoretical understanding of the student will be assessed using time constrained examination. The assessment of the practicals will be based on conducting the experiment and presenting the results in appropriate manner.

Keywords

forensic, personal identification, DNA profiling, fingerprints

Environmental Anthropology

DISCIPLINE SPECIFIC ELECTIVE COURSE -4 (DSE-4) – Environmental Anthropology

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Environmental Anthropology - DSE-4	04	03	Nil	01	10+2	NIL

Learning Objectives:

The objective of the paper is to understand about the importance of environment, the problems due to environmental degradations, etc

Learning Outcomes:

By studying the paper, the students will be able to:

- understand the nature and scope of studying environmental anthropology, basic concepts in it etc.
- know the importance of traditional ecological knowledge in conserving environment
- analyze the problems of contemporary environmental issues in the society.

Syllabus of

DSE-4 Unit 1

(13 Hours)

Concepts and Approaches: Environmental Determinism and Possibilism, Ecosystem, Cultural Ecology, Deep Ecology and Political ecology

Unit 2 (12 Hours)

Environment and Women: Nature and Culture debate, Eco-Feminism; Indigenous Knowledge and Gender

Unit 3 (10 Hours)

Issues of Climate Change in Anthropocene, Mobilization of Resource, Green Ecology & the idea of sustainability

Unit 4 (10 Hours)

Community response to recent environmental challenges: Mining, Dam, and other mega projects; resettlement and rehabilitation issues

Practical (30 Hours)

1. Prepare an evaluative study/ a project based on any contemporary environmental issues in India by employing various sources viz. books, journals, magazines, government reports newspaper articles, etc.

2. Presentation of the project and group discussion

References

Ellen, Roy, Peter Parkes, Alan Bicker (ed). 2000. Indigenous Environmental Knowledge and its Transformation: Critical Anthropological perspectives. Harwood Academic Publishers.

Descola, P., and Gisli P. (eds) 1997. Nature and Society: Anthropological Perspectives. London: Routledge

Dove, M. R., and Carol C. (eds) 2008. Environmental Anthropology: A historical reader, Blackwell Publication

Hardesty, D. 1977. Ecological Anthropology. John Wiley. New York

Inglis, Julian, T(ed). (1993). Traditional Ecological Knowledge: Concepts and Cases. Canada. International Program on Traditional Ecological Knowledge and International Development Research Centre

Orlove, B. 1980. Ecological Anthropology. Annual Review of Anthropology. Vol.9.pp.235-73

Mathur, Hari Mohan. 2005. Managing Resettlement in India: Approaches, Issues and Experiences. OUP

Merchant, Carolyn. 1994. Key Concepts in Critical Ecology. Humanity Press. New Jersey

Ramakrishnan, PS., 2001 (2015). Ecology and Sustainable Development: Working with Knowledge systems.New Delhi. National Book Trust, India

Schulkowski, H. 2006. Human Ecology: Biocultural Adaptation in Human Communities. Springer

Suggested Readings

Cohen, Yehudi A. 1968. Man in Adaptation: The cultural Present. Chicago: Aldine

Pub. Co. Harris, M. 1971. Culture, Man and Nature, New York: Thomas Y

Cormbell.

Kopnina, H. and Eleanor Shoreman-Ouimet. 2011. Environmental Anthropology Today, London: Routledge.

Palmer, Joy A (ed). 2004. Fifty Great Thinkers on the Environment. Routledge. New York

Mukherjee Neela.1997. Participatory Appraisal of Natural Resources. New Delhi. Concept Publishing House Company.

Rappaport, Roy A. 1967. Pigs for the Ancestors: Rituals in the Ecology of a New Guinea People. New Haven: Yale University Press.

Steward, J. 1955. Theory of Culture Change, Illinois: University of Illinois Press.

Teaching Learning Process

Classroom teachings

Presentations and group

discussion Practical classes

Assessment Methods:

Assignment, Theory and practical examinations (including practical records)

Keywords: Environment, Ecology, Sustainable Development, Resource, Political ecology

POOL OF GENERIC ELECTIVE (GE) COURSES FOR ODD SEMESTERS

Forensic and Criminal investigations

GENERIC ELECTIVE -1 (GE-1)
Forensic and Criminal investigations

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Forensic and Criminal investigations – GE-1	04	03	Nil	01	10+2 with Science	NIL

Course Objectives:

- Give exposure of Forensic Science to students which focuses on the investigation process of a crime.
- Enhance understanding of forensic applications and criminal investigations by teaching and research.
- Develop skills in forensic identification and problem-solving methods.
- Keep up to date knowledge about all recent developments and emerging trends in Forensic science and criminal investigation.

Course Learning Outcomes:

- Understand the aim, concept and significance of Forensic Science and Criminal Investigation.
- To make aware about recent techniques and developments of Forensic Science and Criminal Investigation.

Unit 1: Forensic Science, Crime Scene Management and criminal investigation (10Hours)

Introduction, history, development, laws and branches of Forensic Science.

Organizational set-up of Forensic science laboratories.

Crime scene protection, isolation, documentation, sketching, field notes and photography.

Definition, concept, types and scope of crime, various control and prevention methods of crime.

Criminology, criminal anthropology and criminal law

Unit 2: Forensic Ballistics and Explosives (5 Hours)

History, background, classification and characteristics of Firearms

Internal, External, Terminal (wound) ballistics

Classification, synthesis and characteristics of explosives.

Examination and identification of firearms and explosives evidences.

Unit 3: Forensic Chemistry and toxicology (10 Hours)

Introduction, sampling, presumptive, screening and analytical techniques in Forensic Chemistry.

Definition, classification and extraction of poisons.

Toxicological techniques used in poisoning cases.

Classification of drugs, Field and laboratory tests of drugs of abuse.

Unit 4: Questioned Documents and fingerprint examination (10 Hours)

Classification of forensic documents, importance of natural variation and disguised writing

Class and individual characteristics of handwriting and documents examination.

History and classification of fingerprints, Conventional and modern methods of developing latent fingerprint.

Automated Fingerprint Identification System (AFIS).

Unit 5: Forensic anthropology, Serology and DNA profiling (10 Hours)

Personal identification of living and non- living individual through various anthropological techniques.

Forensic morphometric techniques of skeleton remains, Human and non-human identification.

Sex determination, stature and age estimation from skeleton remains

History, biochemistry and genetics of ABO, Rh, MN and other blood systems. Blood pattern analysis and blood stains ageing.

DNA profiling and its application in criminal and civil investigations.

Practical (30 Hours)

1. Descriptive study of organizational structure of a forensic science laboratory.
2. Interpretation of crime scene notes, photos, sketches, crime scene reconstruction and mock crime scene investigation.
3. Linkage of suspected bullet and cartridge case with the class and individual characteristics of firearms.
4. TLC and spot test for different toxic and drugs substances
5. Forensic identification of class and individual characteristics of handwriting
6. Examination of passports and currency notes
7. Various powder and chemical methods used for latent fingerprints.
8. Ridge characteristics, counting, and fingerprint comparison
9. Morphometric examination of skeleton remains
10. Sex determination, age and stature estimation from skeleton remains.
11. Examination of blood groups from fresh and dried blood stains
12. Preliminary and confirmatory tests for blood stains.

References

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The Code of Criminal Procedure (1973) Amendment Act, (2001); Universal Law Publishing Co., 2002.

Rattan Lal & DhirajLal; The Indian Penal Code, 28th Ed. Wadhwa & Co. Nagpur, 2002.

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Feigl, F; Spot Test in Inorganic Analysis, Elsevier Publ. New Delhi, 2002

Sharma, B.R.; Firearms in Criminal Investigation & Trials, 4th Ed, Universal Law Publishing Co Pvt Ltd, New Delhi, 2011.

Hilton, O; Scientific Examination of Questioned Documents. Revised Edition, Elsevier, New York, 1982.
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Eveleth, P.B. & Tanner, J.M; Worldwide Variation in Human Growth, Cambridge University Press, London, 1976.
Seigel, J.A, Sukoo, R.J, & Knupfer, G.L; Encyclopaedia of Forensic Science, Academic Press, London, 2000.
Pickering, R. & Bachman D; The use of Forensic Anthropology, CRC Press, Costa Rica, 2009.
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Cummins, H., & Midlo, C. (1961). Finger Prints, Palms and Soles. New York: Dover Publications.

Teaching Learning Process:

1. Class room teaching
2. Presentation and assignment
3. Practical classes
4. Workshops

Assessment Methods: Theory and practical examination (including practical records)

Keywords: Forensic, Crime scene, Fingerprint, Anthropology, Serology and DNA Profiling

GENERIC ELECTIVE -2 (GE-2)

Anthropology of Sustainable Development

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Anthropology of Sustainable Development - GE-2	04	03	Nil	01	10+2	NIL

Course Objectives:
The objective of the paper is to understand the discourse around the idea of sustainable environment along with relevant issues and emerging challenges in managing the planetary crisis and the problems due to environmental degradations.

Course Learning Outcomes:
By studying the paper, the students will be able to:

- Understand the nature and scope of sustainable development, basic concepts in it.
- Know the importance of traditional ecological knowledge in sustainable development
- Contemporary issues and challenges in sustainable development and environmental degradation, biodiversity and conservation.

Unit 1 (10 Hours)
Notion of Sustainable Development, Genesis and Approaches; Economy, Equity and Environment: Idea of Triple Bottom-line

Unit 2 (15 Hours)
United Nation's Sustainable Development Goals, Interconnections and Integration, Cultural diversity and Execution of SDG: Ethnographic Cases, Frameworks of Assessment

Unit 3 (10 Hours)
Issues of planetary Crisis and idea of sustainable livelihood, Alternative and Sustainable use of natural resources: water, energy, mines and materials

Unit 4 (10 Hours)
Environmental Issue: Biodiversity, Indigenous Knowledge, Traditional Practices associated with sustainable nature

Practical (30 Hours)
Prepare an evaluative study/ a project based on any contemporary issue in India by employing

various sources viz. books, journals, magazines, government reports newspaper articles, etc.

1. Presentation of the project and group discussion

References

- Brightman, Marc. and Lewis, Jerome. (2021). Anthropology of Sustainability: Beyond development and progress. Palgrave Macmillan.
- Carroll, Bryce. (2017). An Introduction to Sustainable Development. Larsen & Keller Education.
- Corsi, Patrick. (2017). Going Past Limits to Growth: A Report to the Club of Rome EU-Chapter. John Willey & Sons Inc.
- Elliott, Jennifer A. (2013). An introduction to sustainable development. New York: Routledge.
- Eversole, Robyn. (2018). Anthropology for Development: From Theory to Practice. Routledge.
- Meadows, Donella H; Meadows, Dennis L; Randers, Jorgen; and William, W. Behrens III. (1972). The Limits to growth: A report for the Club of Rome's project on the predicament of mankind. New York: Universe Books.
- Sachs, Jeffrey. D. (2015). The age of sustainable development. New York. Columbia University Press

Teaching Learning Process
Classroom teachings
Presentations and group discussion
Practical classes

Assessment Methods
Assignment, Theory and practical examinations (including practical records)

Keywords

Sustainable development, natural resources, livelihood, biodiversity, Economy

GENERIC ELECTIVE -3 (GE-3)

Biodiversity and Indigenous Knowledge

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Biodiversity and Indigenous Knowledge – GE-3	04	03	Nil	01	10+2	NIL

Course Objective

- The course will help the students in understanding how indigenous knowledge and biodiversity are complementary phenomena essential to human development.
- Students will recognize indigenous knowledge as an important national resource and understand the collective knowledge of biodiversity and its use.

Course Learning Outcomes

- Students will learn basic concepts of biodiversity and indigenous knowledge along with the rich traditional resources in management and conservation of biological diversity.
- The course will help students to understand concepts pertaining to conservation of biodiversity and protection of indigenous knowledge including the indigenous management strategies of farmers.
- They will also learn policies and laws relating to biodiversity conservation including protection of intellectual property rights relating to indigenous knowledge.

Unit 1 (10 Hours)

Biodiversity: basic concept, UN Convention on biodiversity, health implications of biological diversity; conservation of biological diversity- policies and law.

Unit 2 (10 Hours)

Human-animal interface- interface between human and animal world; Zoonotic diseases- types, etiology and prevention, biodiversity and genetic resources.

Unit 3 (12 Hours)

Indigenous Knowledge: basic concept, critique of western scientific knowledge, historical context of the emergence of indigenous knowledge, contemporary relevance of indigenous knowledge, indigenous knowledge in biodiversity conservation.

Unit 4 (13 Hours)

Problems of Indigenous Knowledge: issues pertaining to transfer of indigenous knowledge, debates for making indigenous knowledge universal, politics of indigenous knowledge, notion of identity and property; Intellectual Property Rights related to biodiversity and indigenous knowledge, protection of plant varieties.

Practical (30 Hours)

Project Report on Indian Cases pertaining to Indigenous Knowledge, Intellectual Property Rights and Biodiversity

References

Antweiler, C. (2004). Local Knowledge Theory and Methods: An Urban Model from Indonesia. In Investigating Local Knowledge: New Directions, New Approaches (eds.) Alan Bicker, Paul Sillitoe & John Pottier. Ashgate. 1-34

Ellen, R. (2003). Variation and Uniformity in the Construction of Biological Knowledge across Cultures. In Nature Across Cultures: Views of Nature and Environment I Non Western Cultures (eds.) H. Selin, Great Britain: Kluwer Academic Press.

Eldredge, N. (2002). What Is Biodiversity? In Life on Earth: An Encyclopedia of Biodiversity, Ecology, and Evolution Volume 1 A–G. ABC-CLIO, Inc. Santa Barbara, California. 1-30

Gadgil, M., Berkes, F & Folke, C. (1993). Indigenous Knowledge for Biodiversity Conservation. AMBIO, Springer, 22 (2/3): 152-156

Leveque, C. & Mounolou, J. (2003). Brief History of a Concept: Why be concerned by Biological Diversity? In Biodiversity. John Wiley & Sons Ltd. 5-12

Leveque, C. & Mounolou, J. (2003). The Dynamics of Biological Diversity and the Consequences of Human Activities. In Biodiversity. John Wiley & Sons Ltd. 131-164

Leveque, C. & Mounolou, J. (2003). The Dynamics of Biological Diversity and Implications for Human Health. In Biodiversity. John Wiley & Sons Ltd. 165-184

Leveque, C. & Mounolou, J. (2003). Genetic Resources and Biotechnology. In Biodiversity. John Wiley & Sons Ltd. 185-206

Leveque, C. & Mounolou, J. (2003). The Conservation of Biodiversity. In Biodiversity. John Wiley & Sons Ltd. 225-248

Mandal, M. (2009). Internal Displacement in India: Status, Condition & Prospects of Return. Refugee Watch, 33: 33-47

Marselle, M. R. (2021). Pathways linking biodiversity to human health: A conceptual framework. Environment International, Elsevier. 150: 106420

Murray Li, T. (2007). Articulating Indigenous Identity in Indonesia: Resource Politics and Tribal Slot. In Environmental Anthropology: A Historical Reader (eds.) Michael Dove & Carol Carpenter. Blackwell.

Palsson, G. (2007). Bio-value: Appropriating Genomes. In Anthropology and the New Genetics. Cambridge University Press. ¬¬

Posey, D. (2008). Indigenous Management of Tropical Forest Ecosystem: The Case of the Kayapo Indians of the Brazilian Amazon. In Environmental Anthropology: A Historical Reader (eds.) Michael Dove & Carol Carpenter. Blackwell.

Sillitoe, P. (1988). The Development of Indigenous knowledge: A New Applied Anthropology. Current Anthropology 19 (2):

United Nations, (1992). Convention on Biological Diversity (1992). 1-17

Wadehra, B.L. (2012). Protection of Plant Varieties and Farmers' Rights. In Law Relating to Intellectual Property 5 (eds.) Universal Law Publishing Co. New Delhi. 517-528

Vayda, A. P., Walters, B.B. & Setyawati, I. (2004). Doing and Knowing: Questions about Studies of Local Knowledge. In Investigating Local Knowledge: New Directions, New Approaches (eds.) Alan Bicker, Paul Sillitoe & John Pottier. Ashgate. 35-58.

Teaching Learning Process
Lectures and Discussions
Seminars and Presentations

Assessment Methods:
Practical assignments/ project reports; theory, and practical examination at the end of term.

Keywords:
Indigenous Knowledge, Biodiversity, Intellectual Property Rights, Scientific Knowledge

Health Systems, Promotion and Management

GENERIC ELECTIVE -4 (GE-4)
Health Systems, Promotion and Management

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Health Systems, Promotion and Management – GE-4	04	03	Nil	01	10+2	NIL

Course Objectives

- To understand basic idea of health systems, health promotion
- To assess the health care management strategies
- To understand the public health value of health promotion in different health systems

Course Learning Outcomes

The students will learn the basic concepts of health system research, creatively design health promotion strategies and understand various challenges of health care management.

Unit 1 (10 Hours)

Introduction to the basic concepts of health systems, health promotions and health management

Unit 2 (10 Hours)

Models, Contexts and Agents of health promotion; practice framework of health promotion: lifestyle, diet, and physical activity

Unit 3 (12 Hours)

Health system of (India vs International), health system framework: private and state functioning, health system spending and financing

Unit 4 (13 Hours)

Health care institutes/centre management: health care resource, clinical and technological challenges, cost containment, hospital waste management, health care emergency management

Practical (30 Hours)

Project report based on activity related health promotion, or data collection related to health systems or management

References

Josep Figueras, Martin McKee, Jennifer Cain &; Suszy Lessof. Health Systems in Transition: Learning from Experience. World Health Organization, 2003.

Bruce R. Schatz, Richard B. Berlin Jr. (auth.). Healthcare Infrastructure: Health Systems for Individuals and Populations [1 ed.]. Springer-Verlag London, 2011

Pruss, E. Giroult, Philip Rushbrook. Safe management of wastes from health-care activities. World Health Organization, 1999

Michael J. Reilly, David S. Markenson. Health Care Emergency Management: Principles and Practice [1 ed.], 2010

Teaching Learning Process

The process of learning will involve acquisition of domain knowledge and understanding of skills required for conducting research in health systems, promotion and management. Process will involve lectures and presentations and report submission.

Assessment Methods

Theoretical understanding of the student will be assessed using time-constrained examination. Practical examination will be based on project report prepared by the students.

Keywords

Health, Promotion, Health system, health management

GENERIC ELECTIVE -5 (GE-5)
Anthropology and Fieldwork

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Anthropology and Fieldwork – GE-5	04	03	Nil	01	10+2	NIL

Course Objectives

- The objective of the course is to introduce the students to the technique of fieldwork, a highly sophisticated qualitative research method developed in the discipline over a century.
- The students shall learn the innovative ways of designing and doing fieldwork in different anthropological settings.

Course Learning Outcomes

- The students will learn how to design and undertake fieldwork using anthropological tools of research.
- They will also learn the intellectual trajectory of the field work tradition affecting various disciplines.

Unit 1 (10 Hours)

Fieldwork Tradition in Anthropology:

The Beginning: Reports of travellers, administrators and missionaries; Invention of the 'non western others' and the colonial agenda

Unit 2 (12 Hours)

Designing Field Research:

Conceiving the universe of study; Identifying techniques of data collection; Pre-testing and Pilot study; Community immersion and researchers' identity

Unit 3 (10 Hours)

The Changing notion of Anthropological Field:

Anthropological field in the era of globalisation; Mobility and interconnection: multi-sited ethnography

Unit 4 (13 Hours)

Data Analysis and Report Writing:

Qualitative and thematic analysis, content analysis; Analysis of metaphors and narratives; Language of representation and persuasion

Practical

The students shall prepare a project report using fieldwork as a method of data collection. Practical exercises will include task such as identification of units and universal study, designing tools of field research and to pre-test it for ensuring reliability and validity.

References

Madan & Beteille. (1975). Encounter and Experience: Personal Accounts of Fieldwork. University Press of Hawaii.

Brewer, D. John. (2000). Ethnography. McGraw Hill Companies.

Malinowski, B. (1922). Argonauts of Western Pacific: An Account of Native Enterprise and Adventure in the Archipelagos of Melanesian New Guinea. London: Routledge & Kegan Paul Ltd.

Oakley, J. (2012). Anthropological Practice: Fieldwork and Ethnographic Method. Routledge.

Spradley, J. P. (2016). Participant observation. Waveland Press.

Evans- Pritchard, E.E. (1994). Social Anthropology. New Delhi: Universal Book Stall

Srivastava, V. K. Edited (2005). Methodology and Fieldwork. New Delhi: Qxford University Press.

Patnaik, S. M. (2011). Culture, Identity and Development: An Account of Team Ethnography among the Bhil of Jhabau. Jaipur: Rawat Publications.

Teaching Learning Process

Lectures and Discussion

Seminars and presentation

Assessment Methods

Class participation and presentation of field based projects. Written assignment to test their reflexive understanding of the relevant themes. Practical examination and Theory examination.

Keywords

Fieldwork, universe of the study, research design, data analysis, report writing

GENERIC ELECTIVE -6 (GE-6)

Genetic Research in Anthropology

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Genetic Research in Anthropology – GE-6	04	03	Nil	01	10+2 with Science	NIL

Course Objectives

To introduce human genetics through anthropological perspectives where impetus will be laid on building an understanding of biochemical and molecular markers and their relevance in anthropology.

The course focuses on application of anthropological genetics in mendelian populations and molecular basis of complex diseases.

The course also focuses on aspects of field work, data collection, ethical, legal and social issues in genetic research in anthropology.

Course Learning Outcomes

The students will be trained to use biochemical markers with respect to disease profile.

The students can be better equipped to understand the importance of mendelian populations in genetic research that can be applied to disease genetics.

The students will be skilled with basic laboratory techniques for molecular markers.

The students will be better equipped to comprehend fieldwork and data collection along with an understanding of ethical and legal aspects of genetic research.

Unit 1 (08 Hours)

Basic concepts

History and relevance of genetic research in anthropology, evolution of genetic markers as a tool in human research, concept of Hardy-Weinberg Equilibrium principle.

Unit 2 (12 Hours)

Methods of genetic research in anthropology

Twin studies, genetic linkage studies, pedigree analysis, candidate gene studies, cohort studies, cross-sectional studies, hypothesis and technology driven research

Unit 3 (08 Hours)

Data collection in human genetic studies

Field work and data collection strategies, quantitative and qualitative data collection in field

Unit 4 (08 Hours)

Techniques in human genetics

Agglutination, electrophoresis, PCR, sequencing techniques

Unit 5 (09 Hours)

Ethical, legal and social issues in genetic research

Ethical guidelines and practices in genetic research, legal and social issues in genetic research, Indian national guidelines for collaborative research in genetics.

Practical

1. Pedigree analysis
2. ABO blood group
3. DNA extraction
4. Identification of genetic mutation through specific technique

References

Speicher, M. R., Motulsky, A. G., & Antonarakis, S. E. (Eds.). (2010). Vogel and Motulsky's human genetics. Berlin, Heidelberg: Springer Berlin Heidelberg.

Crawford, M. H. (Ed.). (2007). Anthropological genetics: theory, methods and applications. Cambridge University Press.

Mange, E. J., & Mange, A. P. (1999). Basic human genetics. Sinauer Associates Inc.,U.S.

Reich, D., Thangaraj, K., Patterson, N., Price, A. L., & Singh, L. (2009). Reconstructing Indian population history. Nature, 461(7263), 489-494.

DePristo, M. A. (2010). The $1,000 genome: The revolution in DNA sequencing and the new era of personalized medicine. The American Journal of Human Genetics, 87(6), 742.

Jaworski, E., Routh, A., Head, S. R., Ordoukhanian, P., & Salomon, D. R. (2018). Next Generation Sequencing: Methods and Protocols. Springer New York.

Indian Council of Medical Research. (2017). National ethical guidelines for biomedical and health research involving human participants. National Ethics Guidelines for Biomedical and Health Research involving Human Participants.

Kumar, M., Sandhu, H., & Roshan, R. (2020). Indian Council of Medical Research's International Collaboration & Partnerships; Health Ministry's Screening Committee: Facts, figures & procedures. The Indian Journal of Medical Research, 151(6), 550.

Teaching Learning Process

Theoretical concepts will be covered through classroom/online lectures and presentations. Hands-on training on various laboratory techniques pertaining to biochemical and molecular techniques will be provided in the scheduled practical classes.

Assessment Methods

Assessment of theoretical and practical knowledge of students will be done through regular assignments, class presentations, and scheduled examinations.

Keywords

Anthropological genetic research, pedigree analysis, fieldwork and data collection, PCR and sequencing techniques