# Appendix-LXXI Resolution No. 18 [18-1(18-1-3)] UNIVERSITY OF DELHI

# **B.SC. (H) ANTHROPOLOGY**

# (SEMESTER-I)

based on

Undergraduate Curriculum Framework 2022 (UGCF)

(Effective from Academic Year 2022-23)



University of Delhi

B.Sc. (H) Anthropology

DSC-1: Introduction to Biological Anthropology

Course Title	Nature of the Course	Total Credits	Components		Eligibility	
			L	Т	Р	Criteria/
Introduction	DSC-1	4	3	0	1	Class XII
to Biological						Pass
Anthropology						

#### Contents of the course and reference is in Annexure-I

DSC-2: Society and Cultural: Concept and Approaches

Course Title	Nature of the Course	Total Credits	Components			Eligibility
			L	Т	р	Criteria/
Society and Cultural: Concept and Approaches	DSC-2	4	3	0	1	Class XII Pass

## Contents of the course and reference is in Annexure-II

DSC-3: Introduction to Archaeological Anthropology

Course Title	Nature of the Course	Total Credits	Components			Eligibility
			L	Т	Р	Criteria/
Introduction to Archaeological Anthropology	DSC-3	4	3	0	1	Class XII Pass

# Contents of the course and reference is in Annexure-III

# **UNIVERSITY OF DELHI**

# GENERIC ELECTIVE COURSE IN B.SC. (H) ANTHROPOLOGY

# (SEMESTER-I) based on

# Undergraduate Curriculum Framework 2022 (UGCF)

(Effective from Academic Year 2022-23)



University of Delhi

#### Generic Elective Course in B.Sc. (H) Anthropology

Course Title	Nature of the	Total Credits	Components			Contents of the
12	Course		L	Ť	Р	course and reference is in
Forensic and Criminal Investigations	GE-1	4	3	0	1	Annexure-IV
Anthropology of Sustainable Development	GE-2	4	3	0	1	Annexure-V
Biodiversity and Indigenous Knowledge	GE-3	4	3	0	1	Annexure-VI
Health Systems, Promotion and Management	GE-4	4	3	0	1	Annexure-VII
Anthropology and Fieldwork	GE-5	4	3	0	1	Annexure-VIII
Genetic Research in Anthropology	GE-6	4	3	0	1	Annexure-IX

# Semester I

# DSC Paper 1: Introduction to Biological Anthropology [Total Course Credits: 4; Theory-3 credits; Practical-1 credit] (Teaching hours required: Theory, 45 hours; Practical, 30 hours)

# **Course Objectives**

- 1. In order to acquaint the students with the fundamental concepts of Biological Anthropology
- 2. To introduce the student a foundational understanding of human variation and evolution of human and non-human primates

# **Course Learning Outcomes**

The students will comprehensively learn the scope and focal theme of biological anthropology along with its implications. They will also learn the emergence of mankind in the context of human evolution and variation. Further, this paper will help them in learning the role of evolutionary forces in bio-cultural human adaptations in the context of changing environment.

## Unit-1: History, Concepts, Aims and Scope

- 1. History and development of Biological Anthropology
- 2. Basic concepts of human evolution and variation
- 3. Scope and relationship of biological anthropology with other disciplines

## **Unit-2: Theories of Evolution**

- 1. Pre-Darwinian Theories of Evolution
- 2. Darwinism and Synthetic theory of evolution

## **Unit-3: The primates**

- 1. Classification and characteristics of living primates, Primate radiation
- 2. Primate Locomotion, Comparative anatomy and behaviour of human and non-human primates
- 3. Significance of non-human primate study in biological anthropology

# **Unit-4: Human Variation and Concept of Race**

- 1. Traditional and modern methods of studying human variation
- 2. Racial Classification of Mankind
- 3. Indian Racial classifications: Risley, Guha and Sarkar
- 4. UNESCO statement on Race and Current understanding of Race

# **Practicals**

# Somatometry

- 1. Height/ Stature; Sitting height; Body weight
- 2. Maximum Head Length; Maximum Head Breadth; Minimum Frontal Breadth; Maximum Bizygomatic Breadth; Bigonial Breadth; Head Circumference
- 3. Physiognomic Facial Height; Morphological Facial Height; Physiognomic Upper Facial Height; Morphological Upper Facial Height
- 4. Nasal Height; Nasal Length; Nasal Breadth; Cephalic Index; Nasal

# Index Somatoscopy

- 1. Head form; Facial form; Nose form; Eye form; Hair form
- 2. Skin colour; Hair Colour; Eye Colour

# References

- 1. Campbell, G. (2016). The Ethnology of India. Wentworth Press.
- Ember, C, R., Ember, M. Peregrine, P.N (2015). Anthropology (Twelfth Edition). Pearson Education Inc. Boston, USA [Unit-1: Chapter-1 and 2; Unit-2; Chapter -3 and 4; Unit-3: Chapter-5 and 6]
- 3. Eugenia Shanklin (1993). Anthropology and Race: The Explanation of Differences. Cengage Learning: 1 edition [Unit-4].
- Jurmain R., Kilogre L., Trevathan W., Ciochon R.L. (2012). Introduction to Physical Anthropology. Wadsworth Publications, USA. [Unit-1: Page-3-23; Unit-2: Page 25-113; Unit-3: Page-143-225].
- 5. Statement of Race: Annotated Elaboration and Exposition of the Four Statements on Race (1972). Issued by UNESCO. Oxford University Press. 14.
- 6. Trudy R. Turner (2005). Biological Anthropology and Ethics: From Repatriation of Genetic Identity. State University of New York Press [Unit-3; Page 27-64].
- 7. Winfried Henke and Ian Tattersall (Eds.) (2007). Handbook of Paleoanthropology (Volume II). Springer.
- 8. Winfried Henke and Ian Tattersall (Eds.) (2007). Handbook of Paleoanthropology (Volume III). Springer.

# **Teaching Learning Process**

- 1. Classroom teaching
- 2. Seminars and presentation
- 3. Practical classes

# Assessment Methods: Theory and practical examinations (including practical records)

Keywords: Human evolution, Human variation, Primates, Race

# Semester I

# **DSC Paper 2: Society and Culture: Concepts and Approaches**

# [Total Course Credits: 4; (Theory 3 + Practical 1) credits]

# (Teaching hours required: Theory, 45 hours; Practical, 30 hours)

# **Course Objectives:**

- The course introduces concepts of Society and Culture and their role in shaping human lives;
- Raises awareness about ethnocentrism and cultural relativism;
- Outlines some basic concepts and approaches to social and cultural changes

# **Course Learning Outcomes:**

The students will be able to:

- Critically interrogate who we are and what we do.
- Understand the basic concepts and methods of social and cultural Anthropology.
- Understand how social and cultural differences operate in the world.

## **Unit 1 Concept of Society**

Concept of Society, Status and Role, Group, Association, Community and Institutions Social Fact, Social Action, Social Conflict

## **Unit 2 Concept of Culture**

Culture and its attributes, Enculturation, Ethnocentrism, Cultural Relativism, Paradoxes of Culture, Cultural Change, Culture Trait, Culture Complex, Culture Area Tangible and Intangible Culture

## Unit 3 Emergence and Historical Development of Social Anthropology

Early writings: Colonial accounts of travelers and administrators; Ethnography, Ethnology and Social Anthropology; Scope and Relevance; Relationship with other disciplines.

## Unit 4 Approaches to Culture and Society

Evolutionism, Diffusionism, and Historical Particularism

# Practical

Research projects based on everyday life experiences from different walks of life in different cultures. Students will be required to operationalize various concepts, identify the variables and examine their relationships in small field settings.

# References

- 1. De Annemarie Waal Malefijt (1916) Images of Man: A History of Anthropological Thought. Random House.
- 2. Barnard, A. (2021). History and theory in anthropology (Second Edition). Cambridge: Cambridge University Press (Selected Chapters).
- 3. Davis, K. (1973). Human society. New York: Macmillan. (Page: 289-391).
- Durkheim, E. (2013). The Rules of Sociological Method and Selected Texts on Sociology and its Method Edited by Steven Lukes (Second Edition). Houndmills: Palgrave Macmillan. (Page: 20-49, 78-100).
- 5. Eriksen, T. H. (2015). Small Places, Large Issues: An Introduction to Social and Cultural Anthropology (Fourth Edition). London: Pluto Press (Selected Chapters).
- Gluckman, M. (1956). Custom and Conflict in Africa. Oxford: Basil Blackwell. (Page: 1-26, 27-53).
- 7. Marx, K. and F. Engels. (2008). The Communist Manifesto (with an introduction by David Harvey). London: Pluto. (Page: 31-82)
- 8. Michael Wesch. 2018. The Art of Being Human (First Edition). Manhattan, Kansas: New Prairie (Whole book).
- 9. Linton R (1936) Study of Man; Manchester: D Appleton-Century.
- 10. Rapport N. and Overing J. (2004). Key Concepts in Social and Cultural Anthropology. London: Routledge. (Page: 333-343, 92-102).

# **Teaching Learning Process**

Classroom teaching Seminars and presentations

#### **Assessment Methods:**

Class quiz, Assignment and End term theory examinations

# Keywords: Social Anthropology, Culture, Ethnocentrism, Cultural Relativism, Ethnography

# Semester I

DSC Paper 3: Introduction to Archaeological Anthropology [Total Course Credits: 4; Theory- 3 credits; Practical- 1 credit] (Teaching hours required: Theory, 45 hours; Practical, 30 hours)

# **Course Objectives**

- **1.** The course will enhance students understanding of human prehistory in the light of human origins.
- **2.** The course will help students to develop concepts pertaining to the fundamentals of archaeological anthropology.

# **Course Learning Outcomes**

Students will learn on evolutionary relationships of different extinct/hominids in the context of emergence of various stone tool types and settlements.

## Unit 1

Introduction  $\cdot$  Definition and scope of archaeological anthropology  $\cdot$  Relation with other disciplines  $\cdot$  Methods of studying archaeological anthropology

## Unit II

Methods of Estimation of Time and Reconstruction of the Past  $\cdot$  Absolute dating methods  $\cdot$  Relative dating methods.

Geochronology of Pleistocene Epoch  $\cdot$  Glacial and Interglacial  $\cdot$  Pluviation and Inter Pluviation  $\cdot$  Different types of geoclimatic events.

# Unit III

Understanding Culture  $\cdot$  Technique of tool manufacture and estimation of their relative efficiency  $\cdot$  Classification of tools: primary and combination fabrication techniques  $\cdot$  typology and cultural nomenclature.

# Unit IV

Earliest Evidence of Culture in the World - Konso, Olorgesailie, Olduvai Gorge, Pirro Nord, Dmanisi, Attirampakkam, Isampur

# **Practical**

Typo-technological Analysis of Prehistoric Tools: Identification, Interpretation and Drawings of the tool Types

- 1. Core Tool Types
- 2. Flake Tool Types
- 3. Blade Tool Types

## References

- 1. Renfrew Colin and Bahn Paul (2012) Archaeology: Theories, Methods and Practice. New York: Thames & Hudson, 6th Edition.
- 2. Fagan Brian M. and Nadia Durrani (2014). In the Beginning: An Introduction to Archaeology, London: Routledge, 14th Edition.
- 3. Champion Timothy, Clive Gamble, Stephen Shenan & Alasdair Whittle (2009) Prehistoric Europe, London: Routledge
- 4. Allchin, Bridget and Allchin, Raymond F. (2003) The Rise of Civilization in India and Pakistan. Cambridge: Cambridge University Press.
- 5. Phillipson D. W. (2005). African Archaeology. Cambridge: Cambridge University Press.
- 6. Whittaker, J.C. (2009) Flintknapping: Making and Understanding Stone Tools. Austin: University of Texas Press.
- 7. Odell, George H. (2003). Lithic Analysis. New York: Springer.
- 8. Moloney and Shott, M.J. (2016). Lithic Analysis at the Millennium, New York: Routledge.
- 9. Bhattacharya, D.K: An outline of Indian Prehistory (2006) Palaka prakashan Delhi
- 10. Bhattacharya, D.K. (1979). Old Stone Age Tools: A Manual of Laboratory Techniques of Analysis. Calcutta: K. P. Bagchi and Company.
- 11. Inizan, M.L.; M. R. Ballinger; H. Roche and J. Tixier. (1999). Technology and terminology of Knapped Stone. Nanterre: CREP.
- 12. Oakley, K.P. (1972). Man the Tool Maker. London. Trustees of the British Museum Natural History.
- 13. Sankalia, H.D. (1982). Stone Age Tools: Their techniques, Names and Probable Functions. Poona: Deccan College.

# **Teaching Learning Process**

Class Room Presentations using digital methods

Practical classes

Seminars and presentation by students

Assessment Methods: Theory and Practical Examination (including Practical File)

# Keywords

Prehistoric, Archaeological, stone tools, material culture and evolution

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#### GE Paper-1: Forensic and Criminal investigations

# [Total Course Credits: 4; Theory- 3 credits; Practical- 1 credits] (Teaching hours required: Theory, 45 hours; Practical, 30 hours)

## **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

- 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

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#### **Unit 2: Forensic Ballistics and Explosives**

- 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

- 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

- 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

- 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:

- 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:

- 1. Sharma, B.R; Forensic Science in Criminal Investigation & Trials, Universal Publishing Co., New Delhi, 2003
- 2. Saferstein; Criminalistics- An Introduction of Forensic Science, Prentice Hall Inc, USA,2007.
- 3. Swansson, C.R, Chamelin, N.C, &Territ, L; Criminal Investigator, McGrawhill, New York, 2000.
- The Indian Evidence Act,(1872), Amendment Act (2002); Universal Law Publishing Co., 2003.
- 5. The Code of Criminal Procedure (1973) Amendment Act, (2001); Universal Law Publishing Co., 2002.
- 6. Rattan Lal & DhirajLal; The Indian Penal Code, 28th Ed. Wadhwa & Co. Nagpur, 2002.
- 7. Clark E.G.C; Isolation and Identification of drugs, Academic Press, London, 1986
- 8. Feigl, F; Spot Test in Inorganic Analysis, Elsevier Publ. New Delhi, 2002

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- 9. Sharma, B.R.; Firearms in Criminal Investigation & Trials, 4th Ed, Universal Law Publishing Co Pvt Ltd, New Delhi, 2011.
- 10. Hilton, O; Scientific Examination of Questioned Documents. Revised Edition, Elsevier, New York, 1982.
- 11. Singh, I.P. & Bhasin M.K; A manual of biological Anthropology, Kamla Raj Enterprises, New Delhi, 2004.
- 12. Eveleth, P.B. & Tanner, J.M; Worldwide Variation in Human Growth, Cambridge University Press, London, 1976.
- 13. Seigel, J.A, Sukoo, R.J, & Knupfer, G.L; Encyclopaedia of Forensic Science, Academic Press, London, 2000.
- 14. Pickering, R. & Bachman D; The use of Forensic Anthropology, CRC Press, Costa Rica, 2009.
- 15. Butler, J; Advanced Topics in Forensic DNA Typing: Methodology, 1st Ed., Academic Press, London, 2009.
- 16. 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

#### GE Paper-2: Anthropology of Sustainable Development

# [Total Course Credits: 4; Theory- 3 credits; Practical- 1 credits]

#### (Teaching hours required: Theory, 45 hours; Practical, 30 hours)

**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 Notion of Sustainable Development, Genesis and Approaches; Economy, Equity and Environment: Idea of Triple Bottom-line

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

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

Unit 4 Environmental Issue: Biodiversity, Indigenous Knowledge, Traditional Practices associated with sustainable nature

#### Practical

1. 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.

2. Presentation of the project and group discussion

#### References

1. Brightman, Marc. and Lewis, Jerome. (2021). Anthropology of Sustainability: Beyond development and progress. Palgrave Macmillan.

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- 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.
- 4. 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)

Keyword -

Sustainable development, natural resources, livelihood, biodiversity, Economy

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#### GE Paper-3: Biodiversity and Indigenous Knowledge

[Total Course Credits: 4; Theory- 3 credits; Practical- 1 credits] (Teaching hours required: Theory, 45 hours; Practical, 30 hours)

#### **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**

- 1. Students will learn basic concepts of biodiversity and indigenous knowledge along with the rich traditional resources in management and conservation of biological diversity.
- 2. 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.
- 3. They will also learn policies and laws relating to biodiversity conservation including protection of intellectual property rights relating to indigenous knowledge.

#### Unit 1

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

#### Unit 2

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

#### Unit 3

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

#### Unit 4

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

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
- 4. Gadgil, M., Berkes, F & Folke, C. (1993). Indigenous Knowledge for Biodiversity Conservation. AMBIO, Springer, 22 (2/3): 152-156
- 5. Leveque, C. & Mounolou, J. (2003). Brief History of a Concept: Why be concerned by Biological Diversity? In *Biodiversity*. John Wiley & Sons Ltd. 5-12
- 6. Leveque, C. & Mounolou, J. (2003). The Dynamics of Biological Diversity and the Consequences of Human Activities. In *Biodiversity*. John Wiley & Sons Ltd. 131-164
- 7. 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
- 10. Mandal, M. (2009). Internal Displacement in India: Status, Condition & Prospects of Return. *Refugee Watch*, 33: 33-47
- 11. 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.
- 13. Palsson, G. (2007). Bio-value: Appropriating Genomes. In *Anthropology and the New Genetics*. Cambridge University Press.
- 14. 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.
- 15. Sillitoe, P. (1988). The Development of Indigenous knowledge: A New Applied Anthropology. *Current Anthropology* 19 (2):

- 16. 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

GE Paper-4: Health Systems, Promotion and Management

[Total Course Credits: 4; Theory- 3 credits; Practical- 1 credits] (Teaching hours required: Theory, 45 hours; Practical, 30 hours)

#### **Course Objectives**

- 1. To understand basic idea of health systems, health promotion
- 2. To assess the health care management strategies
- 3. 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: Introduction to the basic concepts of health systems, health promotions and health management

**Unit 2:** Models, Contexts and Agents of health promotion; practice framework of health promotion: lifestyle, diet, and physical activity

**Unit 3:** Health system of (India vs International), health system framework: private and state functioning, health system spending and financing

**Unit 4:** Health care institutes/centre management: health care resource, clinical and technological challenges, cost containment, hospital waste management, health care emergency management

**Practical:** 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

#### Annexure-VIII

#### **GE Paper-5: Anthropology and Fieldwork**

[Total Course Credits: 4; Theory- 3 credits; Practical- 1 credits] (Teaching hours required: Theory, 45 hours; Practical, 30 hours)

#### 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: Fieldwork Tradition in Anthropology:

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

Unit II: Designing Field Research

Conceiving the universe of study

Identifying techniques of data collection

Pre-testing and Pilot study

Community immersion and researchers' identity

Unit III: The Changing notion of Anthropological Field

Anthropological field in the era of globalisation

Mobility and interconnection: multi-sited ethnography

Unit IV: Data Analysis and Report Writing

Qualitative and thematic analysis, content analysis

Analysis of metaphors and narratives

Language of representation and persuasion

#### Practicals

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). Agronauts of Western Pacific: An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea. London: Routledge & Kegan Paul Ltd.
- Okley, 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.

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#### Keywords

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

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#### GE Paper-6: Genetic Research in Anthropology

# [Total Course Credits: 4; Theory- 3 credits; Practical- 1 credits] (Teaching hours required: Theory, 45 hours; Practical, 30 hours)

#### **Course Objectives**

1. 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.

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

3. 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.

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

4. 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 I: 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 II: 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 III: Data collection in human genetic studies

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

#### Unit IV: Techniques in human genetics

Agglutination, electrophoresis, PCR, sequencing techniques

#### Unit-V: 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.
- 2. Crawford, M. H. (Ed.). (2007). Anthropological genetics: theory, methods and applications. Cambridge University Press.
- 3. Mange, E. J., & Mange, A. P. (1999). Basic human genetics. Sinauer Associates Inc., U.S.
- 4. Reich, D., Thangaraj, K., Patterson, N., Price, A. L., & Singh, L. (2009). Reconstructing Indian population history. Nature, 461(7263), 489-494.
- 5. 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