

#### **FOURTH YEAR (U.G. WITH HONOURS)**

Semester	Course Code	Credits	Name of the Course	Remarks
VII	ANTH-DSM-06	3+2	<b>Biological Anthropology</b> (Theory+Practical)	Core Major Course
	ANTH-DSM-07	5	<b>Social-cultural Anthropology</b>	Core Major Course
	ANTH-DSM-08	3+2	<b>Archaeological Anthropology</b> (Theory+Practical)	Core Major Course
	ANTH-DSM-09	5	<b>Research Methodology</b>	Core Major Course
	ANTH-DSE-3A	3+1	<b>Human Genetics</b> (Theory+Practical)	Core Elective Course
	ANTH-DSE-3B	4	<b>Tribal Cultures of India</b>	Core Elective Course
	ANTH-MM-01	3+1	<b>Human Biological Variation</b> (Theory+Practical)	Minor Multidisciplinary
	<b>TOTAL</b>	<b>28</b>		

Semester	Course Code	Credits	Name of the Course	Remarks
VIII	ANTH-DSM-10	3+2	<b>Paleoanthropology</b> (Theory+Practical)	Core Major Course
	ANTH-DSM-11	3+2	<b>Human Evolution</b> (Theory+Practical)	Core Major Course
	ANTH-DSM-12	5	<b>Anthropology and Education</b>	Core Major Course
	ANTH-DSM-13	5	<b>Dissertation</b>	Core Major Course
	ANTH-DSE-4A	4	<b>Human Cytogenetics</b>	Core Elective Course
	ANTH-DSE-4B	3+1	<b>Ecological Anthropology</b> (Theory+Practical)	Core Elective Course
	ANTH-MM-02	3+1	<b>Medical Anthropology</b> (Theory+Practical)	Minor Multidisciplinary
	<b>TOTAL</b>	<b>28</b>		

#### **FOURTH YEAR (U.G. HONOURS WITH RESEARCH)**

Candidates who meet a minimum CGPA of 7.5 will be allowed to continue studies in the fourth year of the undergraduate programme leading to the four years bachelor's degree (Honours with Research).

Semester	Course Code	Credits	Name of the Course	Remarks
VII	ANTH-DSM-06	3+2	<b>Biological Anthropology</b> (Theory+Practical)	Core Major Course
	ANTH-DSM-07	5	<b>Social-cultural Anthropology</b>	Core Major Course
	ANTH-DSM-08	3+2	<b>Archaeological Anthropology</b> (Theory+Practical)	Core Major Course
	ANTH-DSM-09	5	<b>Research Methodology</b>	Core Major Course
	ANTH-DSE-3A	3+1	<b>Human Genetics</b> (Theory+Practical)	Core Elective Course
	ANTH-DSE-3B	4	<b>Tribal Cultures of India</b>	Core Elective Course
	ANTH-MM-01	3+1	<b>Human Biological Variation</b> (Theory+Practical)	Minor Multidisciplinary
	<b>TOTAL</b>	<b>28</b>		

Semester	Course Code	Credits	Name of the Course	Remarks
VIII	ANTH-DSM-10	3+2	<b>Paleoanthropology</b> (Theory+Practical)	Core Course
	ANTH-DSE-4A	4	<b>Human Cytogenetics</b> (Theory+Practical)	Core Elective Course
	ANTH-DSE-4B	3+1	<b>Ecological Anthropology</b> (Theory+Practical)	Core Elective Course
	ANTH-DSM-14	3	<b>Research Writing &amp; Ethics</b>	Core Course
	ANTH-DSM-15	12	<b>Dissertation</b>	Core Course (Research Based)
	ANTH-MM-02	3+1	<b>Medical Anthropology</b> (Theory+Practical)	Minor Multidisciplinary
	<b>TOTAL</b>	<b>28</b>		

<p><b>Self and Social Development (SSD) course work</b></p>	<p><b>Self and social Development Course:</b> University will offer two courses under SSD that are <b>(1) Community Connect &amp; Service (2) Extracurricular activities</b>. Student will have the choice to complete anyone of the two coursework. The course objective is to promote student participation in Community service/extracurricular activities for their self-development along with increasing their participation and developing within them a responsibility towards self and social development.</p> <p><b>(1) Community connect &amp; service Coursework:</b> This course is aimed to connect students with community with the objective of understanding their issues and delivering their valuable inputs for the welfare of society. Student will have to deliver service equivalent to 2 credits for completing the course. This mandatory service may be completed in any one or two semesters from 1<sup>st</sup> to 8<sup>th</sup> semester (I to VI semester in case of exit with Three years U.G. degree or I to VIII semester in case of completion/exit with Four years U.G. Honours/Honours with research) through any social activity organised under the banner of “Swaach Bharat”, “Ek Bharat Shrestha Bharat”, “NSS”, “NCC”, “Namami Gange” or social activities organised by the Campus or Departments. Student will have to produce a certificate in this regard from the organizers of the event(s).</p> <p><b>(2) Extracurricular activities coursework:</b> This course work required student participation in university demarcated activities such as Participation/representation of institution in <b>Intercollegiate activities/State level activities/National level activities (Sports/Cultural etc).</b></p>
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**SHSS/ANTH-DSM-06: Biological Anthropology**  
**[3 Credits (45 Hours)]**

**Unit I:** Biological/Physical Anthropology: Meaning and Scope. Difference in the Approaches of Modern and Traditional Biological Anthropology with Emphasis on Human Evolution. The Rise of Evolutionary Biology: Meaning of Evolution, A Short History of Evolutionary Biology: Evolution before Darwin, Charles Darwinian and Natural Selection, The Modern Synthesis.

**Unit II:** Mechanism (forces) of Evolution: Natural Selection, Genetic Drift, Gene Flow, Mutation, Non-random Mating; Evidence of Evolution: Fossil Record, Comparative Anatomy, Embryology, Biogeography, Molecular Biology.

**Unit III:** Processes of Evolution: Speciation, Adaptation, Convergent Evolution, Divergent Evolution, Coevolution; Levels of Evolutionary Study: Microevolution, Macroevolution, Developmental Biology, Population Genetics, Phylogenetics

**Learning Outcomes**

1. After studying the course students will be able to differentiate between old and new physical anthropology and the concept of biological anthropology applied in new physical anthropology.
2. Students will learn the historical development of anthropological thoughts from beginning to modern times.
3. Students will get complete understanding of evolution applied in modern biology, its mechanism, process, evidences and levels of evolutionary study.

**SHSS/ANTH-DSM-06: Biological Anthropology (Practical)**  
**[2 Credits (30 Hours)]**

Somatometry: Somatometric measurement of head, measurements of body height, breadth and girth, measurements of limbs

Somatoscopy: Somatoscopic observations of human bodies.

Craniometry: Craniometric measurements of human skull.

Osteology: Osteological description of human skeleton.

**Learning Outcomes**

1. From the practical component, students will learn the measurement techniques used in physical anthropology.
2. They will be able to measure different physical dimensions of a person. Also, they will learn physical differences by observing somatoscopic features of human body.

**Suggested Readings**

- Mark Ridley. Evolution. Blackwell Publishing.
- Greg Downey. Becoming Human: How Evolution Made Us, Enculture Press
- Craig Stanford, John S. Allen, Susan C. Anton. Exploring Biological Anthropology: The Essentials. Pearson.
- Robert Jurmain, Lynn Kilgore, Wenda Trevathan, Eric J. Bartelink. Essentials of Physical Anthropology. Cengage Learning.
- Roger Lewin. Human Evolution: An Illustrated Introduction. Blackwell Publishing.
- Carol R. Ember, Melvin Ember and Jean Stein. Anthropology. Pearson
- Philippe Huneman and Denis M. Walsh. Challenging the Modern Synthesis: Adaptation, Development and Inheritance, Oxford University Press.

**SHSS/ANTH-DSM-07: Social-cultural Anthropology**  
**[5 Credits (75 Hours)]**

**Unit I:** Meaning of social and cultural anthropology; nature of the domain of social and cultural anthropology; Relationship of social-cultural anthropology with history, economics, psychology, linguistic, political science & sociology.

**Unit II:** Define & distinguish: Material & Non-material Culture, Ethnocentrism & Cultural Relativism, Etic and Emic Perspectives; Social Change: meaning, factors of social change, theories of social change.

**Unit III:** Approaches to the study of Indian society, culture and civilization: Indological, Anthropological and Historical; Indian Caste System; Social Groups-primary, secondary and tertiary; Communities-rural and urban.

**Unit IV:** Social Organization of Jaunsaris/Tharus/Bhotias/Buxsas/Rajis (One from the tribes of Uttarakhand).

**Learning Outcomes**

1. The students will learn about the meaning, nature and domain of Social-Cultural Anthropology and its relationship with other disciplines.
2. They will learn about concepts of material and non-material culture, different factors of social changes.
3. They will learn about different approaches to study the Indian society, culture, and civilization.
4. They will also learn about the concept of culture, Indian Caste system and its different attributes and characteristics.
5. They will understand the social organization of tribes of Uttarakhand.

**Suggested Readings**

- Barnard, A. 2000. *History and Theory in Anthropology*. Cambridge: Cambridge University.
- McGee R.J. and Warms R.L. 1996. *Anthropological Theories: An Introductory History*.
- Upadhyay, V.S & Gaya Pandey. 1993. *History of Anthropological Thought*. New Delhi: Concept Pub Co.
- Harris, Marvin. 1968. *The Rise of Anthropological Theory: A History of Theories of Culture*. London: Routledge and Kegan Paul.
- Moore M. and Sanders T. 2006. *Anthropology in Theory: Issues in Epistemology*, Malden, MA: Blackwell Publishing.
- Applebaum H.A. 1987. *Perspectives in Cultural Anthropology*. Albany: State University of New York.
- Sarana, Gopala. 2008. *Explorations in Method and Theory in Anthropology*. Rawat Publications. Jaipur.
- Bayly, S. 2001. *Caste, Society and Politics in India from the 18th Century to the Modern Age*. Cambridge: University Press.
- Beteille, A. 1991. *Society and Politics in India*. Delhi: Oxford University Press.
- Bose, N.K. 1961. *The Structure of Hindu Society*. Delhi: Orient Longman.
- Cohn, B. 1971. *India: The Social Anthropology of a Civilization*. London: Prentice-Hall.
- Dash, C. 2006. *Social Ecology and Demographic Structure of Bhotias: Narratives and Discourses*. New Delhi: Concept Publishing Company.
- Dharmshaktu, H. 2018. *Dev-Bhoomi: Where I Belong*. India: Notionpress.com.
- Dube S.C. 1992. *Indian Society*. National Book Trust, India: New Delhi.
- Dumont, L. 1976. *Homo Hierarchicus*. Delhi: Vikas Publishing House.
- Evans-Pritchard, E.E. 1940. *Nuer: A Description of the Modes of Livelihood and Political Institutions of a Nilotic People*. Pantianos Classics.
- Gupta, Dipankar (ed): *Social Stratification*. Delhi: Oxford University Press.
- Hasan, Amir. 1979. *The Buxas of the Tarai*. Delhi: B.R. Publishing Corporation.
- Inden, R. 1980. *Imagining India*. Oxford: Basil Blackwell.
- Kalla AK. 1994. *Ethnology of India*. Munshiram Manoharlal Publishers. New Delhi.
- Karve, Irawati. 1961. *Hindu Society: An Interpretation*. Poona: Deccan College.
- Mandelbaum, D.G., 1970. *Society in India: Changes and Continuities*. Bombay: Popular Prakashan.
- Mandelbaum, D. G. 1972. *Society in India*, 2 Vols. Bombay: Popular Prakashan.
- Majumdar, D.N. 1960. *Himalayan Polyandry-structure, functioning and culture change-a field-study of Jaunsar-Bawar*. Delhi: Asis Publishing House.
- Nicholas D. 2001. *Castes of Mind: Colonialism and the Making of Modern India*. Princeton Un Press.

- Shah, G. (ed). 2004. *Caste and Democratic Politics in India*. Delhi: Orient Blackswan.
- Srinivas, M.N. 2002. *Collected Essays: M.N. Srinivas*. Delhi: Oxford University Press.
- Xaxa, V. 2008. *State, Society and Tribes: Issues in Post-colonial India*. Delhi: Pearson Longman.
- Srivastava, S.K. 2011. *The Tharus- A Study in Culture Dynamics*. Kala Prakashan.

### SHSS/ANTH-DSM-08: Archaeological Anthropology [3 Credits (45 Hours)]

**Unit-I:** Introduction to archaeological anthropology. Definition, Scope and relationship with other allied branches.

**Unit-II:** Dating methods: Principles of Archaeology-Stratigraphy, Typology and Technology, Associated finds and State of Preservation.

**Unit-III:** Geological Time-Scale, Archaeological Sites, Relative and Chronometric dating. Tool typology and salient features of Lower, Middle and Upper Palaeolithic culture. Neolithic Culture of India.

#### Learning Outcomes

1. The students will learn about archaeological anthropology and its relationship with other branches of anthropology and other related disciplines.
2. Students shall get a basic understanding of the nature of the archaeological record and the role of archaeology in understanding cultural development.
3. Get an overview of the changing environments of the Quaternary and its impact on humans.
4. They will also learn about geological timescale and cultural expressions of each epoch.
5. Students shall be familiarized with the basic framework of European and Indian Palaeolithic, Mesolithic, Neolithic Culture.

#### Suggested Readings

- Allchin, B and R. Allchin. 1983. *The Rise of Civilization in India and Pakistan*. New Delhi: SBS.
- Bhattacharya D.K. 1972. *Prehistoric Archaeology*. New Delhi: Hindustan Publishing Corporation.
- Bhattacharya D.K. 1979. *Old Stone Age Tools and Techniques*. Calcutta: K.P. Bagchi Company.
- Bhattacharya, D. K. 2017. *An Outline of Indian Prehistory*. New Delhi: Palaka Prakashan.
- Burkitt, M. C. 1985. *The Old Stone Age: A Study of Palaeolithic Times*. New Delhi: Rupa & Co.
- Karir, B. S. 1985: *Geomorphology and Stone Age Culture of North West India*, Sandeep Prakashan, Delhi.
- Champion et al. 1984. *Prehistoric Europe*. New York: Academic Press.
- Gaur, R. 1987. *Environment and Ecology of Early Man in Northwest India*. Delhi: Renaissance Publishers.
- Rajan, K. 2002. *Archaeology: Principles and Methods*. Thanjavur: Pathippakam
- Rami Reddy, V. 2014. *Elements of Prehistory*. Tirupati: V. Indira.
- Sankalia, H. D. 1964. *Stone Age Tools: Their Techniques, Names and Probable functions*. Poona: Deccan College.
- Agrawal, D.P. 1982. *The Archaeology of India*. New Delhi: Select Books Syndicate.

### SHSS/ANTH-DSM-08: Archaeological Anthropology (Practical) [2 Credits (30 Hours)]

1. Identification and techniques of Stone Age technology.
2. Instruments used in excavation.
3. Study and understanding of tool types of: Lower Palaeolithic Culture, Middle Palaeolithic Culture, Upper Palaeolithic Culture, Mesolithic Culture, Neolithic Culture

**Note:** Students will be taken for an archaeological fieldwork/Museum visit for better understanding of stone tools.

#### Learning Outcomes

1. The students will learn about archaeological anthropology and its relationship with other branches of anthropology and other related disciplines.

2. Students shall get a basic understanding of the nature of the archaeological record and the role of archaeology in understanding cultural development.

**SHSS/ANTH-DSM-09: Research Methodology**  
**[5 Credits (75 Hours)]**

**Unit I:** Nature of Social Science; Relationship of Social Sciences with Natural/Physical and Humanities; Problem of Subjectivity, Objectivity and Reflexivity in Anthropological Research; Research Ethics.

**Unit II:** Field Work Tradition in Anthropology; Approaches: Emic-Etic, Macro-Micro Methods: Ethnography, Comparative Method, Participant Observation, Genealogical Method, Case Study and Survey. Doing ethnographic Fieldwork: Fieldwork Identity; Rapport and Relations; Representation and Emotions; Ethical issues; Reflexivity and Ethnographic Writing.

**Unit III:** Research Design: Review of Literature, Statement of the Research Problem; Objectives, Hypotheses, Research Questions, Conceptual Model, Types of Research Design.

**Unit IV:** Techniques of Data Collection: (a) Primary Sources: Observation, Interview, Key Informants, Schedule and Questionnaire, Life History, Focus Group Discussion, Scaling Techniques, (b) Secondary Sources: Census, National Sample Survey, Documents and Records, Maps, National and International Reports (UNDP, World Bank, UNICEF, etc.); Archaeological Methods – Exploration, Excavation and Documentation.

**Unit V:** Statistical Methods and Research Report: Sampling, Classification and Tabulation of Data, Variables, Measures of Central Tendency and Dispersion; Hypothesis Testing Statistics: t-Test and  $\chi^2$  Test; Different Types of Reports. Preparation of Anthropological Research Report.

**Learning Outcomes:**

1. Students will learn Understand the foundational concepts of research design, including formulation of research problems, questions, strategies, and data handling methods.
2. Students will gain familiarity with anthropological fieldwork traditions and methodological approaches including ethnography, participant observation, and comparative methods.
3. They will learn develop the ability to construct a comprehensive research design, including literature review, problem statement, objectives, hypotheses, and conceptual framework.
4. Students will acquire proficiency in diverse techniques of data collection from both primary and secondary sources, including archaeological methods.
5. Apply statistical tools for data analysis and develop skills in writing structured anthropological research reports.
6. Engage critically with the practice of ethnographic fieldwork, focusing on identity, ethics, reflexivity, and representation.

**Suggested Readings**

- H. Russell Bernard, Research Methods in Anthropology: Qualitative and Quantitative Approach, Altamira Press, 2006.
- H. Russell Bernard, Handbook of Methods in Cultural Anthropology, Altamira Press, 1998, 2nd ed. 2014.
- Michael Crotty, The Foundations of Social Research: Meaning and Perspective in Social Process, Allen & Unwin, 1st ed 1998.
- Norman Blaikie, Approaches to Social Enquiry, Polity Press, 1st ed 1993, 2007.
- Norman Blaikie, Designing Social Research: The Logic of Anticipation, Polity, 1st ed. 2000, 2nd ed. 2010, 2019.
- Norman Blaikie, Analyzing Quantitative Data: From Description to Explanation, 2003, Sage
- Norman Blaikie, Social Research: Paradigms in Action, Polity, 2017.
- David Baronov, Conceptual Foundations of Social Research Methods, Paradigm Publishers, 2004
- C.R. Kothari, Research Methodology: Methods and Techniques, New Age, 2nd ed. 2004
- W. Lawrence Neuman, Social Research Methods, Qualitative and Quantitative Approach, Pearson, 2nd ed. 2014
- Bernard, H. R. 1988. Research Methods in Cultural Anthropology. London: Sage Publications.

- Cohen, L. 1963. Statistical Methods of Social Scientists: An Introduction. New Delhi: Prentice - Hall of India (p) Ltd.
- Danda, A. Research Methodology in Anthropology. Inter-India New Delhi
- Goode, J. and Hatt, P. K. 1962. Methods in Social Research, New York: Mc Graw Hill Book Company.
- Kothari, C. R. 1997. Research Methods: Methods and Techniques. Delhi: Wishwa Prakashan.
- Madge, J. 1952. Tools of Social Science. New York: Free Press of Glencoe.
- Royal Anthropological Institute. 1967. Notes and Queries on Anthropology. London: Routledge and began Paul.
- Sundar Rao, P. S. S. and Richard, J. 1996. An Introduction to Biostatistics. New Delhi: Prentice-Hall of India.
- Thomas, D. H. 1976. Figuring Anthropology: First Principles of Probability and Statistics. New York: Holt, Rinehart and Winston.
- Werner, O. and Schoepfle. G. M. 1987. Systematic Field Work (Vo1.1) Foundations of Ethnography and Interviewing. Newbury Park: C.A. Sage Publications.

**SHSS/ANTH-DSE-3A: Human Genetics**  
**[2 Credits (30 Hours)]**

**Unit I:** Human Genetics: Definition and Scope; Genes and Genomes; Levels of Genetics and Genomics; Application of Genetics and Genomics. Cell Structure and Organelles, Cell Division.

**Unit II:** Structural and Chemical Basis of Genetics: Chromosome, DNA, RNA and Genes. Molecular and Mendelian Inheritance: Inheritance by DNA, Mechanism of Information Inheritance by DNA

**Unit III:** Mendelian Inheritance of Genes; Single and Multiple Gene Inheritance, Universality of Mendelian Principles in Man, Dominant and Recessive Inheritance; Non-Mendelian Inheritance, Sex-limited, Sex-influenced Inheritance. Chromosomal Aberration and Anomalies. Methods of Genetic Study

**Learning Outcomes**

1. Students will learn basic principles of heredity in terms of mendelian and nonmendelian inheritance.
2. Students will learn how laws of inheritance work at the molecular level and how mendelian laws of inheritance are applied at the level of genes.
3. They will learn what are chromosomal aberration and disorders.
4. Students will learn different methods of genetic study.

**SHSS/ANTH-DSE-3A: Human Genetics (Practical)**  
**[1 Credits (15 Hours)]**

Pedigree Analysis, Probability and Chi-Square Testing for Mendel's First and Second Laws from Dihybrid Crosses; Human Chromosome Karyotyping; Observing Cell Division; Studying Multiple Allelism using Blood Group; Population Genetics

**Learning Outcomes**

1. Students will understand pedigree analysis and probability, and apply chi-square testing to verify Mendel's first and second laws through dihybrid crosses. Perform human chromosome karyotyping and identify chromosomal abnormalities. Observe and analyze cell division processes, including mitosis and meiosis. Study blood group genetics to comprehend multiple allelism and inheritance patterns. Analyze population genetics principles and their applications in real-world scenarios.

**Suggested Readings**

- Hema Purandarey. Essentials of Human Genetics, 2<sup>nd</sup> ed, Jaypee.
- Ricki Lewis. Human Genetics: Concepts and Applications, 12<sup>th</sup> ed., McGrawHill.
- B. Taneri, E. Asilmaz, T. Delikurt, P. Savas, S. Targen and Y. Esemeyen. Human Genetics and Genomics: A Practical Guide, Wiley-VCH.
- Hartwell, L.H., et al. Genetics: From Genes to Genomes, 4th Edition. New York: McGraw-Hill.
- Hedric, P.W. Genetics of Populations, 2nd edition. Massachusetts: Jones and Bartlett Publishers.
- Knight, J.C. Human Genetic Diversity. Oxford: Oxford University Press.



- Maynarth, Smith J. Evolutionary Genetics. New York: Oxford University Press
- Crawford, M.H. (ed.). Anthropological Genetics. Cambridge: Cambridge University Press.

**SHSS/ANTH-DSE-3B: Tribal Cultures of India**  
**[4 Credits (60 Hours)]**

**Unit I:** Concepts of tribe and debates centering around the various concepts of tribe, general and specific characteristics of tribes, tribes in India: antiquity, historical, academic, administrative and anthropological importance, de-notified tribes.

**Unit II:** Tribe-caste continuum, constitutional safeguard/provisions, regional and linguistic distribution of tribes in India.

**Unit III:** Classification of tribes based on their economy, occupation and religion, racial elements among the tribes, scheduled and non-scheduled categories of tribes.

**Unit IV:** Forest policies and tribes, migration and occupational shift, tribal arts and aesthetics, displacement, rehabilitation and social change, globalization among Indian tribes.

**Learning Outcomes**

1. The students will learn about various concepts of tribes and the importance of studying them.
2. They will learn about the difficulties of differentiating between tribe and caste in India.
3. They will learn about different constitutional provisions and safeguards for tribe in India.
4. They will learn about classification of tribes based on religion, economy, occupation, race, linguistic etc.
5. They will also learn about the forest policies, migration, arts, problem of displacement and rehabilitation among tribes.

**Suggested Readings**

- Behera, D.K. and Georg Pfeffer. *Contemporary Society Tribal Studies*, Volume I to VII. New Delhi: Concept Publishing Company.
- Georg Pfeffer. *Hunters, Tribes and Peasant: Cultural Crisis and Comparison*. Bhubaneswar: Niswas.
- Vidyarthi, L.P. and B.K. Rai. *Applied Anthropology in India*.
- Vidyarthi, L.P. and B.N. Sahay. *Applied Anthropology and Development in India*. New Delhi: National Publishing House.

**SHSS/ANTH-MM-01: Human Biological Variation**  
**[3 Credits (45 Hours)]**

**Unit I:** Historical Views of Human Variation, The Concept of Race, Race and Racism in Twentieth Century, Changing Attitudes towards Race in Anthropology.

**Unit II:** Concept of Genetic Variation, Causes of Genetic Variation between and within Human Populations with Special Reference to the Role of Mutation, Selection, Genetic Drift, Isolation and Gene Flow.

**Unit III:** Biological Basis of Human Variation, Population Genetics: Polymorphism – ABO & other blood type systems; The Adaptive Significance of Human Variation, Levels of Adaptability: Heat and Cold, High Altitude

**Learning Outcomes**

1. The students will learn historical views on the concept of race and human variation.
2. They will learn the genetic basis of variation.
3. Students will learn about the population genetics.

**SHSS/ANT-MM-01: Human Biological Variation (Practical)**  
**[1 Credits (15 Hours)]**

A field study on biological variation.

**Learning Outcomes**

1. Students will learn the genetic basis of biological variations that appear in phenotypes of humans.



**Suggested Readings**

- Schutkowski, H. Berlin. Human ecology: Biocultural adaptation in human communities. Springer Verlag.
- Berry, J.B. Human ecology and cognitive style: comparative studies in cultural and physical adaptation. (1976). New York: John Wiley.
- G.A. Row. Studies in Human Ecology. (1961) Theodorson, Peterson & Company Elmsford, New York.
- Paul R. Ehrlich, Anne H. Ehrlich and John P. Holdress. Human ecology: Problems and Solutions. W.H. Freeman & Company, San Francisco.

**SHSS/ANTH-DSM-10: Palaeoanthropology**  
**[3 Credits (45 Hours)]**

**Unit I:** Introduction to Palaeoanthropology -Definition, aim and scope. Relation of Palaeoanthropology with other disciplines. Geological Time Scale with stress on Cenozoic era.

**Unit II:** Rules of Taxonomy and nomenclature. Siwaliks nomenclature, Stratigraphy, fauna and flora and Palaeoanthropological significance of Siwaliks.

**Unit III:** Mio-Pliocene Hominoids. Diagnosis, description and distribution through time and, *Sivaladapis*, *Sivapithecus* and *Gigantopithecus*.

**Learning Outcomes:**

1. The student will understand about palaeoanthropology and its affinities with other discipline.
2. They will learn about conceptual palaeontological, geological and anthropological knowledge necessary to understand the subject of Palaeoanthropology.
3. The students will learn about the Siwaliks and fossil primates which are known from Indian Siwaliks.
4. They will learn about various trends in Primate evolution in time and space.

**Suggested Readings**

- Brace C.L. and Montagu, M.F.A. 1969. Man's Evolution: An Introduction to Physical Anthropology, Macmillan.
- Buettner-Janusch, John. 1969. Origins of Man, Wiley Eastern Private Limited: New Delhi.
- Comas, J. 1960: Manual of Physical Anthropology.
- Gaur, R. 1987. Environment and Ecology of Early Man in Northwest India. Delhi: Renaissance Publishers.
- Kennedy, G.E. 1980. Palaeoanthropology. New York: McGraw-Hill.
- Poirier, F.E. and McKee, J.K. 1999. Understanding Human Evolution, 4th ed. New Jersey Prentice Hall.
- Henke, W. and Tattersall. 2007. Handbook of Palaeoanthropology. Springer I (Eds.).
- Szalay, F.S. and Delson, E. 1979. Evolutionary History of the Primates New York: Academic Press.
- Fleagle, J. G. 1998. Primate Adaptation and Evolution. London: Academic Press.
- Shipman, P.1981. Life History of a Fossil: An Introduction to Taphonomy and Palaeoecology. Cambridge: Harvard University Press.
- Begun, D. R. 2013. A Companion to Paleoanthropology. UK: Blackwell Publishing Ltd.
- Vashisht, R.N. 1985: Antecedents of Early Man in Northwest India. Delhi: Inter-India Publications
- Oakley, K. P. 1964. Frameworks for Dating Fossil Man. Transaction Publishers.
- Das, B.M. 1997. Outline of Physical Anthropology. Allahabad: Kitab Mahal
- Shukla, B.R.K. and S. Ratogi. 2002. Physical Anthropology and Human Genetics – An Introduction. Delhi: Palaka Prakashan.

**SHSS/ANTH-DSM-10: Palaeoanthropology (Practical)**  
**[2 Credits (30 Hours)]**

1. How and where to look for fossils, Identification of major rock types. Equipment and techniques for collection,
2. Field cataloguing, Structure and use of Clinometer Compass (Dip and strike)

**Learning Outcomes**

1. The course includes practical training is imparted to the students in various techniques used in the collection, preparation, identification, illustration of fossils, moulding and casting and photography of fossil material.
2. The students will learn identification, methods of collecting fossils and recording information in the field.
3. They will learn about how to conduct field work in palaeoanthropology and how to search fossils.

### Suggested Readings

- Kummel, B. and Raup, D. 1970. Handbook of Paleontological Techniques. San Francisco: (Eds.) Freeman.
- Vasishat, R.N. 1985. Antecedents of Early Man in Northwest India. Delhi: Inter-India Publications.
- Gaur, R. 1987. Environment and Ecology of Early Man in Northwest India. Delhi: Renaissance Publishers.
- Karir, B. S. 1985. Geomorphology and Stone Age Culture of North West India, Sandeep Prakashan, Delhi.
- Green, O.R. 2001. A Manual of Practical Laboratory and Field Techniques in Palaeobiology. Dordrecht: Kluwer Academic Publishers.
- Chaurasia, B. D. 1984. Human Osteology. New Delhi: CBS.

### SHSS/ANTH-DSM-11: Human Evolution [3 Credits (45 Hours)]

**Unit I:** Primate: emergence and evolution, erect posture and bipedalism. Early pre-hominids- classification distribution and diagnosis of- *Sahelanthropus tchadensis*, *Orrorin tugenensis*, and *Ardipithecus ramidus*. Distribution and general features of *Australopithecus africanus*.

**Unit II:** Early Homo - *Homo habilis*, *Homo erectus* (Africa, Java, Peking). Distribution and characteristic feature of Narmada Man (Asia)

**Unit III:** Emergence of *Homo neanderthalensis* distribution and salient features. Emergence of modern humans distribution and general characteristic features.

### Learning Outcomes

1. The students will learn about phases of human evolution.
2. The students shall get a basic understanding of early pre-hominoids and early Homo.
3. They will also be familiar about Narmada Man known from India.
4. The students will understand about emergence of Neanderthal man as well as modern humans.

### Suggested Readings

- Brace, C. L. and Montagu 1969. Man's Evolution: An Introduction to Physical Anthropology, Macmillan.
- Buttner-Janusch, J. 1966. Origins of Man. New York: John Wiley.
- Simpson, G.G. 1953. The Major Features of Evolution. New York: Columbia University Press.
- Vasishat, R.N. 1985. Antecedents of Early Man in Northwest India. Delhi: Inter-India Publications.
- Gaur, R. 1987. Environment and Ecology of Early Man in Northwest India. Delhi: Renaissance Publishers.
- Poirier, F.E. 1990. In Search of Ourselves: An Introduction to Physical Anthropology. New Jersey: Prentice Hall.
- Poirier, F.E. and McKee, J.K. 1999. Understanding Human Evolution 4th ed. New Jersey: Prentice Hall.
- Hoppa RD and Vaupel JW. 2002. Paleodemography: Age Distributions from Skeletal Samples. Cambridge University Press.
- Szalay, F.S. and Delson, E. 1979. Evolutionary History of the Primates. New York: Academic Press.
- Lewin, R. 1999. Human Evolution: An Illustrated Introduction. Massachusetts: Blackwell Science
- Srivastava, R.P. 2011. Morphology of the Primates and Human Evolution. New Delhi: PHI Learning Pvt. Ltd.

### SHSS/ANTH-DSM-11: Human Evolution (Practical) [2 Credits (30 Hours)]

1. Comparative anatomy of skull and bones of mammals.
2. Description and identification of the disarticulated skeleton of non-human primates.
3. Identification and description of fossil casts and dentition of fossil primates.
4. Comparison of dentition of various mammalian fauna.

### Learning Outcomes

1. The students will learn about comparative anatomy of mammals.
2. The students shall get practical training about the identification of skeletal remains of non human primates.
3. The students will also learn about the dentition of fossil primates and identification of various mammals.

### Suggested Readings

- Napier JR and Napier PH. 1985. The Natural History of the Primates. Cambridge, MA: The MIT Press
- Boyd R and Silk JB. 2009. How Humans Evolved. London: WW Norton.
- Tattersall I. 2009. The Fossil Trail: How We Know What We Think We Know about Human Evolution. New York: Oxford University Press.
- Hooton, E. A. 1965. Up from the Ape. New York: Macmillan.
- Vasishat, R.N. 1985. Antecedents of Early Man in Northwest India. Delhi: Inter-India Publications.
- Gaur, R. 1987. Environment and Ecology of Early Man in Northwest India. Delhi: Renaissance Publishers
- Das, B.M. 1997. Outline of Physical Anthropology. Allahabad: Kitab Mahal
- Cela-conde CJ and Frisancho J. (2007). Human Evolution: Trails from the past. Ayala Oxford University Press.
- Srivastava, R.P. 2011. Morphology of the Primates and Human Evolution. New Delhi: PHI Learning Pvt. Ltd.
- Lansen CS, Matter RM and Gebo DL. 1998. Human Origin: The fossil Record. Waveland Press.
- Cameron DW and Colin P. Groves CP. 2004. Bone, Stones and Molecules: "Out of Africa" and Human Origins. Elsevier Inc.

### SHSS/ANTH-DSM-12: Anthropology and Education [5 Credits (75 Hours)]

**Unit I:** Role of Anthropology in Tribal Education; Formal and Informal Education; Tribal Education after Independence-NPE 1968, NPE 1986, NEP 2020; Status of Education in Scheduled Tribes, Ethnography of classroom/schools.

**Unit II:** Tribal Education- Medium of instruction; contents; background of teachers; tribal children in residential and non-residential schools; traditional process of learning and modern education; tribal values and ethics as opposed to modern educational values; problems of drop-outs and stagnation; attitude of different stakeholders towards tribal education.

**Unit III:** Challenges of Tribal Education in India; Government Interventions- Eklavya Model Schools, Scholarships Schemes, Vocational Training Centers in Tribal Areas.

**Unit IV:** Ethnographic survey of a nearby school, participate in the classroom teaching and prepare a report based on observations.

### Learning Outcomes

1. The students will learn about the role of anthropology in tribal education.
2. They will be able to analyse different educational policies since the independence of India critically and will be able to locate the status of education in Scheduled Tribes.
3. They will learn about the various issues about tribal education, like how tribal value systems are different from modern educational values.
4. They will learn about the various challenges of tribal education in India and the different government interventions.

### Suggested Readings

- Anderson-Levitt, Kathryn, ed. 2012. *Anthropologies of Education: A Global Guide to Ethnographic Studies of Learning and Schooling*. New York: Berghahn Books.
- Bourdieu, Pierre. 1986. *The Forms of Capital*. In Handbook of Theory and Research in the Sociology of Education, edited by J. G. Richardson, 241–258. New York: Greenwood.
- Census 2011. Registrar General & Census Commissioner, Ministry of Home Affairs, Govt. of India.

- D' Amato, Suzanne E. 2010. *Education and Anthropology*. In 21<sup>st</sup> Century Anthropology: A Reference Handbook edited by H. James Birx, New Delhi: Sage Reference.
- Henze, R. (2020, October 27). Anthropology of Education. Oxford Research Encyclopedia of Anthropology. Retrieved 18 Mar. 2024, from <https://oxfordre.com/anthropology/view/10.1093/acrefore/9780190854584.001.0001/acrefore-9780190854584-e-10>.
- Levinson, Bradley, and Mica Pollock, eds. 2011. *A Companion to the Anthropology of Education*. Malden, MA: Wiley-Blackwell.
- National Policy on Education 1968. Ministry of Education, Govt. of India.
- National Policy on Education 1986. Ministry of Education, Govt. of India.
- National Education Policy (NEP) 2020. Ministry of Education, Govt. of India.
- Report of the High-level committee on socioeconomic, health and educational Status of tribal communities of India. 2014. Ministry of Tribal Affairs, Government of India.
- Spindler, G.D. 2011. *Anthropology and Education: An Overview*. In The Anthropology of Education: Classic Readings, edited by David Julian Hodges, 19-40. San Diego: Cognella.
- Statistical Profile of Scheduled Tribes in India 2013. Ministry of Tribal Affairs Statistics Division Government of India.
- Thapan, M. 2005. *Life At School: An Ethnographic Study*. New Delhi: OUP.
- Thapan, M. 2014. *Ethnographies of Schooling in Contemporary India*. Delhi: Sage India.
- Xaxa, V. 2021. Education, Assimilation and Cultural Marginalisation of Tribes in India, *Economic & Political Weekly*, Vol. LVI, No 36, pp 10-13.

#### Links to Digital Materials

- Henze, R. 2020, October 27. Anthropology of Education. Oxford Research Encyclopaedia of Anthropology. Retrieved 18 Mar. 2024, from <https://oxfordre.com/anthropology/view/10.1093/acrefore/9780190854584.001.0001/acrefore-9780190854584-e-10>.
- Council on Anthropology and Education (CAE) <http://cae.americananthro.org/>
- Ethnography and Education annual Conference (Oxford, UK) <https://www.ethnographyandeducation.org/>
- European Society of Ethnographers of Education (part of the European Educational Research Association) <https://eera-ecer.de/networks/19-ethnography>
- IForum on Ethnographic Investigations with Children and Youth <http://encuentrosetnograficos.weebly.com/>
- IUAES Commission on Anthropology and Education <http://www.iuaes.org/comm/education.html>
- Simposio Interamericano de Investigación Etnográfica en Educación <https://www.conferences.gseis.ucla.edu/simposio> (Latin America) (website changes each year depending on the location of the Simposio)
- Thematic strand on Sociology of Education of L'Association Française de Sociologie <http://www.test-afs-socio.fr/drupal/RT4>
- Web document: "What Are Anthropologists and Ethnographers of Education Up to Around the World?" [https://www.academia.edu/22536674/What\\_are\\_anthropologists\\_and\\_ethnographers\\_of\\_education\\_up\\_to\\_around\\_the\\_world](https://www.academia.edu/22536674/What_are_anthropologists_and_ethnographers_of_education_up_to_around_the_world)
- Kathryn Anderson-Levitt; includes listings of many conferences and journals that publish educational ethnographies
- Website: "Race: Are We So Different?" <http://www.understandingrace.org/>, public anthropology exhibit of the American Anthropological Association

#### SHSS/ANTH-DSM-13: Dissertation [5 Credits]

Fieldwork at any place approved by the supervisor of the students. The fieldwork may be conducted in any one of the longish vacations.

Submission of one typed copy of the dissertation duly forwarded and recommended by the supervisor. It will include the list of questions asked and a glossary of local words.

The completed dissertation should provide proof of students' understanding of:

- research design as applicable to a specific topic
- issues concerning sampling, quantitative and qualitative analysis of data
- linkage of theory and data in regard to certain specific issues such as gender, rehabilitation, development and backwardness

#### Learning Outcomes

- The students will learn about how to do fieldwork.
- They will learn about designing research according to the requirement of a particular field of enquiry, sampling, problems related to sampling and use of various techniques of data collection.
- They will learn about classification, interpretation, and presentation of data.
- They will also learn about writing a dissertation, selecting chapter headings and subheadings, writing references, footnotes, endnotes, etc.

### SHSS/ANTH-DSE-4A: Human Cytogenetics [4 Credits (60 Hours)]

**Unit I:** Definition, scope, and historical background; Relation to genetics, cytology, anatomy, and medicine; Structure and function of the nucleus and chromosomes; Karyotype, idiogram, chromosomal landmarks.

**Unit II:** Chromosome morphology: centromere, telomere, euchromatin/heterochromatin; Types of chromosomes; Chromosome banding techniques; Molecular cytogenetics

**Unit III:** Mitosis and meiosis: phases, regulation, and significance; Meiotic recombination, synaptonemal complex; Checkpoints and cell cycle regulation; Chromosomal behavior in cancer cells.

**Unit IV:** Numerical and structural alterations, induced chromosomal aberrations in somatic cells, mechanism and consequences, detection methods; sources responsible for change in gene frequencies.

#### Learning Outcomes

- Students will be able to explain the historical development, scope, and interdisciplinary nature of cytogenetics, including its integration with genetics, cytology, anatomy, and medicine.
- They will be able to describe the structure and function of the nucleus and chromosomes, including the karyotype, idiogram, and chromosomal landmarks, and demonstrate basic skills in chromosomal analysis.
- Students can identify and differentiate chromosome morphology (centromere, telomere, euchromatin, heterochromatin), and apply chromosome banding and molecular cytogenetic techniques to study chromosomal structure and variation.
- They will be able to demonstrate understanding of the cell cycle, especially mitosis and meiosis, and explain the regulatory mechanisms, recombination processes, and abnormal chromosomal behavior in pathological conditions such as cancer.

#### Suggested Readings

- Hema Purandarey. Essentials of Human Genetics, 2<sup>nd</sup> ed, Jaypee.
- Ricki Lewis. Human Genetics: Concepts and Applications, 12<sup>th</sup> ed., McGrawHill.
- B. Taneri, E. Asilmaz, T. Delikurt, P. Savas, S. Targen and Y. Esemeyen. Human Genetics and Genomics: A Practical Guide, Wiley-VCH.
- Hartwell, L.H., et al. Genetics: From Genes to Genomes, 4th Edition. New York: McGraw-Hill.
- Hedric, P.W. Genetics of Populations, 2nd edition. Massachusetts: Jones and Bartlett Publishers.
- Knight, J.C. Human Genetic Diversity. Oxford: Oxford University Press.
- Maynard Smith, J. Evolutionary Genetics. New York: Oxford University Press
- Crawford, M.H. (ed.). Anthropological Genetics. Cambridge: Cambridge University Press.

SHSS/ANTH-DSE-4B: Ecological Anthropology [3 Credits (45 Hours)]
<b>Unit-I:</b> Ecological Anthropology: definition and approach; aims and objectives; key terms and concepts used; the distinctive interdisciplinary nature of ecological anthropology.
<b>Unit-II:</b> Historical background and development: Environmental Determinism, Possibilism, Cultural Ecology, Ecological Anthropology, Cultural Materialism, Behavioral Ecology, Global and Political Ecology, Human Ecology and Biocultural Approach.
<b>Unit-III:</b> Culture as adaptive mechanism, hunting and gathering, the origin of food production, agricultural domestication, horticulture, pastoralism, intensive agriculture. Current issues and problems.

#### Learning Outcomes

1. Students will learn fundamental concepts of ecological anthropology.
2. Students will learn different historical phases of development of ecological thought in anthropology.
3. Students will learn ethnographical application of ecological approach.

SHSS/ANTH-DSE-4B: Ecological Anthropology (Practical) [1 Credits (15 Hours)]
Students will undertake an in-depth study of a local community to gain insights into their livelihood patterns and adaptive practices. This exploration will focus on the intricate relationship between the community's lifestyle and the utilization of local environmental resources, examined through an ecological lens. The objective is to understand how the community adapts to and interacts with its environment, emphasizing sustainable practices and resource management. Upon completion of their research, students will compile their findings into a detailed report, which will be submitted to the department.

#### Learning Outcomes

1. Students will develop a comprehensive understanding of local community dynamics, focusing on livelihood patterns and adaptive practices. They will gain insights into the sustainable use of environmental resources, examining the ecological interactions within the community.
2. The research and report-writing process will enhance students' analytical, observational, and reporting skills, preparing them for future ecological studies and community-based research projects.

#### Suggested Readings

- Mark Q. Sutton and E. N. Anderson. Introduction to Cultural Ecology, Altamira Press.
- H. Schutkowski. Human Ecology: Biocultural Adaptations in Human Communities, Springer.
- Roberto Frisancho, Human Adaptation
- Bennet, John, The Ecological Transition: Cultural Anthropology and Human Adaption, Pergamon Press Inc.
- Changnon & Irons, Evolutionary Biology and Human Social Behavior
- Cohen, M., Nathan, The Food Crisis in Pre-history: Over Population and the Origins of Agriculture
- Eidt, R.C., Man, Culture and Settlement
- Gadgil & Guha, This Fissured Land : An Ecological History of India. OUP
- Hardesty. Donald, Ecological Anthropology, John Wiley and Sons. India Oxford University Press.
- Moran, E.F. Human, Adaptability: An Introduction to Ecological Anthropology
- Netting, R.M. The Ecological Approach in Cultural Study
- Odum, H.T. Environment, Power and Society
- Odum, Eugene, Fundamentals of Ecology

SHSS/ANT-MM-02: Medical Anthropology [3 Credits (45 Hours)]
<b>Unit I:</b> Medical Anthropology: Definition, Aim, Scope and Subject Matter of Medical Anthropology. Historical Development of Medical Anthropology. Basic Concepts: Illness, Sickness, Disease.
<b>Unit II:</b> Theoretical Orientations in Medical Anthropology. Medical Systems: a) Medical Systems as Cultural Systems. b. Medical System as Social System and Adaptive System.



**Unit III:** Folk Psychiatry: Culture Change and Mental Illness; Therapeutic Elements in Magico-Religious Healing Techniques. Medical Pluralism: Cosmopolitan, Regional and Local Medical Systems.

**Learning Outcomes**

1. Students will learn the basic concepts of medical anthropology.
2. Students will learn the concepts of social and cultural systems used in medical anthropology.
3. Students will learn about the folk psychiatry and medical pluralism.

**SHSS/ANT-MM-02: Medical Anthropology (Practical)  
[1 Credit (15 Hours)]**

Field based study to understand and document the local medical practices used by people in rural communities. Students will explore traditional healing methods, herbal medicine, and the sociocultural factors influencing health and healthcare in a particular local community.

**Learning Outcomes**

1. Students will develop an understanding of the traditional medical practices prevalent in rural settings.
2. They will acquire practical skills in ethnographic research.
3. They will gain insights into the cultural beliefs, values, and practices that shape health behaviors and healthcare decisions within the community.

**Suggested Readings**

- Foster G.M & Anderson B.G: Medical Anthropology.
- Brown Q.G et al: Understanding and Applying Medical Anthropology.
- Kalla A.K & Joshi P.C: Tribal Health and Medicine.
- Helman C.: Culture, Health and Illness.
- K. White (2002) An Introduction to the Sociology of Health and Illness, London: Sage.
- W. C. Cockerham (2007) Social Causes of Health and Disease, US: Polity Publication.
- M. Akram (2014) Sociology of Health, New Delhi/Jaipur: Rawat Publications.

## B.Sc./B.A. Fourth Year, U.G. Honours with Research (VII Semester)

### SHSS/ANTHH-DSM-06: Biological Anthropology [3 Credits (45 Hours)]

**Unit I:** Biological/Physical Anthropology: Meaning and Scope. Difference in the Approaches of Modern and Traditional Biological Anthropology with Emphasis on Human Evolution. The Rise of Evolutionary Biology: Meaning of Evolution, A Short History of Evolutionary Biology: Evolution before Darwin, Charles Darwinian and Natural Selection, The Modern Synthesis.

**Unit II:** Mechanism (forces) of Evolution: Natural Selection, Genetic Drift, Gene Flow, Mutation, Non-random Mating; Evidence of Evolution: Fossil Record, Comparative Anatomy, Embryology, Biogeography, Molecular Biology.

**Unit III:** Processes of Evolution: Speciation, Adaptation, Convergent Evolution, Divergent Evolution, Coevolution; Levels of Evolutionary Study: Microevolution, Macroevolution, Developmental Biology, Population Genetics, Phylogenetics

#### Learning Outcomes

1. After studying the course students will be able to differentiate between old and new physical anthropology and the concept of biological anthropology applied in new physical anthropology.
2. Students will learn the historical development of anthropological thoughts from beginning to modern times.
3. Students will get complete understanding of evolution applied in modern biology, its mechanism, process, evidences and levels of evolutionary study.

### SHSS/ANTH-DSM-06: Biological Anthropology (Practical) [2 Credits (30 Hours)]

**Somatometry:** Somatometric measurement of head, measurements of body height, breadth and girth, measurements of limbs.

**Somatoscopy:** Somatoscopic observations of human bodies.

**Craniometry:** Craniometric measurements of human skull.

**Osteology:** Osteological description of human skeleton.

#### Learning Outcomes

1. From the practical component, students will learn the measurement techniques used in physical anthropology. They will be able to measure different physical dimensions of a person. Also, they will learn physical differences by observing somatoscopic features of human body.

#### Suggested Readings

- Mark Ridley. Evolution. Blackwell Publishing.
- Greg Downey. Becoming Human: How Evolution Made Us, Enculture Press
- Craig Stanford, John S. Allen, Susan C. Anton. Exploring Biological Anthropology: The Essentials. Pearson.
- Robert Jurmain, Lynn Kilgore, Wenda Trevathan, Eric J. Bartelink. Essentials of Physical Anthropology. Cengage Learning.
- Roger Lewin. Human Evolution: An Illustrated Introduction. Blackwell Publishing.
- Carol R. Ember, Melvin Ember and Jean Stein. Anthropology. Pearson
- Philippe Huneman and Denis M. Walsh. Challenging the Modern Synthesis: Adaptation, Development and Inheritance, Oxford University Press.

### SHSS/ANTH-DSM-07: Social-cultural Anthropology [5 Credits (75 Hours)]

**Unit I:** Meaning of social and cultural anthropology; nature of the domain of social and cultural anthropology; Relationship of social-cultural anthropology with history, economics, psychology, linguistic, political science & sociology.

<b>Unit II:</b> Define & distinguish: Material & Non-material Culture, Ethnocentrism & Cultural Relativism, Etic and Emic Perspectives; Social Change: meaning, factors of social change, theories of social change.
<b>Unit III:</b> Approaches to the study of Indian society, culture and civilization: Indological, Anthropological and Historical; Indian Caste System; Social Groups-primary, secondary and tertiary; Communities-rural and urban.
<b>Unit IV:</b> Social Organization of Jaunsar/Tharus/Bhotias/Buxsas/Rajis (One from the tribes of Uttarakhand).

### Learning Outcomes

1. The students will learn about the meaning, nature and domain of Social-Cultural Anthropology and its relationship with other disciplines.
2. They will learn about concepts of material and non-material culture, different factors of social changes.
3. They will learn about different approaches to study the Indian society, culture, and civilization.
4. They will also learn about the concept of culture, Indian Caste system and its different attributes and characteristics.
5. They will understand the social organization of tribes of Uttarakhand.

### Suggested Readings

- Barnard, A. 2000. *History and Theory in Anthropology*. Cambridge: Cambridge University.
- McGee R.J. and Warms R.L. 1996. *Anthropological Theories: An Introductory History*.
- Upadhyay, V.S & Gaya Pandey. 1993. *History of Anthropological Thought*. New Delhi: Concept Pub. Co.
- Harris, Marvin. 1968. *The Rise of Anthropological Theory: A History of Theories of Culture*. London: Routledge and Kegan Paul.
- Moore M. and Sanders T. 2006. *Anthropology in Theory: Issues in Epistemology*, Malden, MA: Blackwell Publishing.
- Applebaum H.A. 1987. *Perspectives in Cultural Anthropology*. Albany: State University of New York.
- Sarana, Gopala. 2008. *Explorations in Method and Theory in Anthropology*. Rawat Publications. Jaipur.
- Bayly, S. 2001. *Caste, Society and Politics in India from the 18th Century to the Modern Age*. Cambridge: University Press.
- Beteille, A. 1991. *Society and Politics in India*. Delhi: Oxford University Press.
- Bose, N.K. 1961. *The Structure of Hindu Society*. Delhi: Orient Longman.
- Cohn, B. 1971. *India: The Social Anthropology of a Civilization*. London: Prentice-Hall.
- Dash, C. 2006. *Social Ecology and Demographic Structure of Bhotias: Narratives and Discourses*. New Delhi: Concept Publishing Company.
- Dharmshaktu, H. 2018. *Dev-Bhoomi: Where I Belong*. India: Notionpress.com.
- Dube S.C. 1992. *Indian Society*. National Book Trust, India: New Delhi.
- Dumont, L. 1976. *Homo Hierarchicus*. Delhi: Vikas Publishing House.
- Evans-Pritchard, E.E. 1940. *Nuer: A Description of the Modes of Livelihood and Political Institutions of a Nilotic People*. Pantianos Classics.
- Gupta, Dipankar (ed): *Social Stratification*. Delhi: Oxford University Press.
- Hasan, Amir. 1979. *The Buxas of the Tarai*. Delhi: B.R. Publishing Corporation.
- Inden, R. 1980. *Imagining India*. Oxford: Basil Blackwell.
- Kalla AK. 1994. *Ethnology of India*. Munshiram Manoharlal Publishers. New Delhi.
- Karve, Irawati. 1961. *Hindu Society: An Interpretation*. Poona: Deccan College.
- Mandelbaum, D.G., 1970. *Society in India: Changes and Continuities*. Bombay: Popular Prakashan.
- Mandelbaum, D. G. 1972. *Society in India*, 2 Vols. Bombay: Popular Prakashan.
- Majumdar, D.N. 1960. *Himalayan Polyandry-structure, functioning and culture change-a field-study of Jaunsar-Bawar*. Delhi: Asis Publishing House.
- Nicholas D. 2001. *Castes of Mind: Colonialism and the Making of Modern India*. Princeton Un Press.
- Shah, G. (ed). 2004. *Caste and Democratic Politics in India*. Delhi: Orient Blackswan.
- Srinivas, M.N. 2002. *Collected Essays: M.N. Srinivas*. Delhi: Oxford University Press.
- Xaxa, V. 2008. *State, Society and Tribes: Issues in Post-colonial India*. Delhi: Pearson Longman.
- Srivastava, S.K. 2011. *The Tharus- A Study in Culture Dynamics*. Kala Prakashan.

**SHSS/ANTH-DSM-08: Archaeological Anthropology**  
**[3 Credits (45 Hours)]**

**Unit-I:** Introduction to archaeological anthropology. Definition, Scope and relationship with other allied branches.

**Unit-III:** Dating methods: Principles of Archaeology-Stratigraphy, Typology and Technology, Associated finds and State of Preservation.

**Unit-III:** Geological Time-Scale, Archaeological Sites, Relative and Chronometric dating. Tool typology and salient features of Lower, Middle and Upper Palaeolithic culture. Neolithic Culture of India.

**Learning Outcomes**

1. The students will learn about archaeological anthropology and its relationship with other branches of anthropology and other related disciplines.
2. Students shall get a basic understanding of the nature of the archaeological record and the role of archaeology in understanding cultural development.
3. Get an overview of the changing environments of the Quaternary and its impact on humans.
4. They will also learn about geological timescale and cultural expressions of each epoch.
5. Students shall be familiarized with the basic framework of European and Indian Palaeolithic, Mesolithic, Neolithic Culture.

**Suggested Readings**

- Allchin, B and R. Allchin. 1983. The Rise of Civilization in India and Pakistan. New Delhi: SBS.
- Bhattacharya D.K. 1972. Prehistoric Archaeology. New Delhi: Hindustan Publishing Corporation.
- Bhattacharya D.K. 1979. Old Stone Age Tools and Techniques. Calcutta: K.P. Bagchi Company.
- Bhattacharya, D. K. 2017. An Outline of Indian Prehistory. New Delhi: Palaka Prakashan.
- Burkitt, M. C. 1985. The Old Stone Age: A Study of Palaeolithic Times. New Delhi: Rupa & Co.
- Karir, B. S. 1985: Geomorphology and Stone Age Culture of North West India, Sandeep Parkashan, Delhi.
- Champion et al. 1984. Prehistoric Europe. New York: Academic Press.
- Gaur, R. 1987. Environment and Ecology of Early Man in Northwest India. Delhi: Renaissance Publishers.
- Rajan, K. 2002. Archaeology: Principles and Methods. Thanjavur: Pathippakam
- Rami Reddy, V. 2014. Elements of Prehistory. Tirupati: V. Indira.
- Sankalia, H. D. 1964. Stone Age Tools: Their Techniques, Names and Probable functions. Poona: Deccan College.
- Agrawal, D.P. 1982. The Archaeology of India. New Delhi: Select Books Syndicate.

**SHSS/ANTH-DSM-08: Archaeological Anthropology (Practical)**  
**[2 Credits (30 Hours)]**

1. Identification and techniques of Stone Age technology.
2. Instruments used in excavation.
3. Study and understanding of tool types of: Lower Palaeolithic Culture, Middle Palaeolithic Culture, Upper Palaeolithic Culture, Mesolithic Culture, Neolithic Culture

**Note:** Students will be taken for an archaeological fieldwork/Museum visit for better understanding of stone tools.

**Learning Outcomes**

1. The students will learn about archaeological anthropology and its relationship with other branches of anthropology and other related disciplines.
2. Students shall get a basic understanding of the nature of the archaeological record and the role of archaeology in understanding cultural development.

**Suggested Readings**

- Bhattacharya, D.K. 1997. Prehistoric Archaeology. Hindustan Publishing Corporation (India), Delhi.

- Sankalia, H.D. 1982. Stone Age Tools: Their techniques, Names and Probable Functions. Poona: Deccan College.
- Bhattacharya, D.K. 1979. Old Stone Age Tools: A Manual of Laboratory Techniques of Analysis. Calcutta: K. P. Bagchi and Company.
- Gaur, R. 1987. Environment and Ecology of Early Man in Northwest India. Delhi: Renaissance Publishers.
- Karir, B. S. 1985. Geomorphology and Stone Age Culture of North West India, Sandeep Parkashan, Delhi.
- Debenath, A and H.L.Dibble. 1993. Handbook of Palaeolithic Typology. Philadelphia: University of Pennsylvania Press.
- Oakley, K.P. 1972. Man the Tool Maker. London. Trustees of the British Museum Natural History.

### SHSS/ANTH-DSM-09: Research Methodology

[5 Credits (75 Hours)]

**Unit I:** Nature of Social Science; Relationship of Social Sciences with Natural/Physical and Humanities; Problem of Subjectivity, Objectivity and Reflexivity in Anthropological Research; Research Ethics.

**Unit II:** Field Work Tradition in Anthropology; Approaches: Emic-Etic, Macro-Micro Methods: Ethnography, Comparative Method, Participant Observation, Genealogical Method, Case Study and Survey. Doing ethnographic Fieldwork: Fieldwork Identity; Rapport and Relations; Representation and Emotions; Ethical issues; Reflexivity and Ethnographic Writing.

**Unit III:** Research Design: Review of Literature, Statement of the Research Problem; Objectives, Hypotheses, Research Questions, Conceptual Model, Types of Research Design.

**Unit IV:** Techniques of Data Collection: (a) Primary Sources: Observation, Interview, Key Informants, Schedule and Questionnaire, Life History, Focus Group Discussion, Scaling Techniques, (b) Secondary Sources: Census, National Sample Survey, Documents and Records, Maps, National and International Reports (UNDP, World Bank, UNICEF, etc.); Archaeological Methods – Exploration, Excavation and Documentation.

**Unit V:** Statistical Methods and Research Report: Sampling, Classification and Tabulation of Data, Variables, Measures of Central Tendency and Dispersion; Hypothesis Testing Statistics: t-Test and  $\chi^2$  Test; Different Types of Reports. Preparation of Anthropological Research Report.

### Learning Outcomes:

1. Students will learn Understand the foundational concepts of research design, including formulation of research problems, questions, strategies, and data handling methods.
2. Students will gain familiarity with anthropological fieldwork traditions and methodological approaches including ethnography, participant observation, and comparative methods.
3. They will learn develop the ability to construct a comprehensive research design, including literature review, problem statement, objectives, hypotheses, and conceptual framework.
4. Students will acquire proficiency in diverse techniques of data collection from both primary and secondary sources, including archaeological methods.
5. Apply statistical tools for data analysis and develop skills in writing structured anthropological research reports.
6. Engage critically with the practice of ethnographic fieldwork, focusing on identity, ethics, reflexivity, and representation.

### Suggested Readings

- H. Russell Bernard, Research Methods in Anthropology: Qualitative and Quantitative Approach, Altamira Press, 2006.
- H. Russell Bernard, Handbook of Methods in Cultural Anthropology, Altamira Press, 1998, 2nd ed. 2014.
- Michael Crotty, The Foundations of Social Research: Meaning and Perspective in Social Process, Allen & Unwin, 1st ed 1998.
- Norman Blaikie, Approaches to Social Enquiry, Polity Press, 1st ed 1993, 2007.
- Norman Blaikie, Designing Social Research: The Logic of Anticipation, Polity, 1st ed. 2000, 2nd ed. 2010, 2019.
- Norman Blaikie, Analyzing Quantitative Data: From Description to Explanation, 2003, Sage

- Norman Blaikie, Social Research: Paradigms in Action, Polity, 2017.
- David Baronov, Conceptual Foundations of Social Research Methods, Paradigm Publishers, 2004
- C.R. Kothari, Research Methodology: Methods and Techniques, New Age, 2nd ed. 2004
- W. Lawrence Neuman, Social Research Methods, Qualitative and Quantitative Approach, Pearson, 2nd ed. 2014
- Bernard, H. R. 1988. Research Methods in Cultural Anthropology. London: Sage Publications.
- Cohen, L. 1963. Statistical Methods of Social Scientists: An Introduction. New Delhi: Prentice - Hall of India (p) Ltd.
- Danda, A. Research Methodology in Anthropology. Inter-India New Delhi
- Goode, J. and Hatt, P. K. 1962. Methods in Social Research, New York: Mc Graw Hill Book Company.
- Kothari, C. R. 1997. Research Methods: Methods and Techniques. Delhi: Wishwa Prakashan.
- Madge, J. 1952. Tools of Social Science. New York: Free Press of Glencoe.
- Royal Anthropological Institute. 1967. Notes and Queries on Anthropology. London: Routledge and began Paul.
- Sundar Rao, P. S. S. and Richard, J. 1996. An Introduction to Biostatistics. New Delhi: Prentice-Hall of India.
- Thomas, D. H. 1976. Figuring Anthropology: First Principles of Probability and Statistics. New York: Holt, Rinehart and Winston.
- Werner, O. and Schoepfle. G. M. 1987. Systematic Field Work (Vo1.1) Foundations of Ethnography and Interviewing. Newbury Park: C.A. Sage Publications.

**SHSS/ANTH-DSE-3A: Human Genetics**  
**[3 Credits (45 Hours)]**

**Unit I:** Human Genetics: Definition and Scope; Genes and Genomes; Levels of Genetics and Genomics; Application of Genetics and Genomics. Cell Structure and Organelles, Cell Division

**Unit II:** Structural and Chemical Basis of Genetics: Chromosome, DNA, RNA and Genes. Molecular and Mendelian Inheritance: Inheritance by DNA, Mechanism of Information Inheritance by DNA

**Unit III:** Mendelian Inheritance of Genes; Single and Multiple Gene Inheritance, Universality of Mendelian Principles in Man, Dominant and Recessive Inheritance; Non-Mendelian Inheritance, Sex-limited, Sex-influenced Inheritance. Chromosomal Aberration and Anomalies. Methods of Genetic Study

**Learning Outcomes**

1. Students will learn basic principles of heredity in terms of mendelian and nonmendelian inheritance.
2. Students will learn how laws of inheritance work at the molecular level and how mendelian laws of inheritance are applied at the level of genes.
3. They will learn what are chromosomal aberration and disorders.
4. Students will learn different methods of genetic study.

**SHSS/ANTH-DSE-3A: Human Genetics (Practical)**  
**[1 Credits (15 Hours)]**

Pedigree Analysis, Probability and Chi-Square Testing for Mendel's First and Second Laws from Dihybrid Crosses; Human Chromosome Karyotyping; Observing Cell Division; Studying Multiple Allelism using Blood Group; Population Genetics

**Learning Outcomes**

1. Students will understand pedigree analysis and probability, and apply chi-square testing to verify Mendel's first and second laws through dihybrid crosses. Perform human chromosome karyotyping and identify chromosomal abnormalities. Observe and analyze cell division processes, including mitosis and meiosis. Study blood group genetics to comprehend multiple allelism and inheritance patterns. Analyze population genetics principles and their applications in real-world scenarios.

**Suggested Readings**

- Hema Purandarey. Essentials of Human Genetics, 2<sup>nd</sup> ed, Jaypee.

- Ricki Lewis. Human Genetics: Concepts and Applications, 12<sup>th</sup> ed., McGrawHill.
- B. Taneri, E. Asilmaz, T. Delikurt, P. Savas, S. Targen and Y. Eseven. Human Genetics and Genomics: A Practical Guide, Wiley-VCH.
- Hartwell, L.H., et al. Genetics: From Genes to Genomes, 4th Edition. New York: McGraw-Hill.
- Hedric, P.W. Genetics of Populations, 2nd edition. Massachusetts: Jones and Bartlett Publishers.
- Knight, J.C. Human Genetic Diversity. Oxford: Oxford University Press.
- Maynarth, Smith J. Evolutionary Genetics. New York: Oxford University Press
- Crawford, M.H. (ed.). Anthropological Genetics. Cambridge: Cambridge University Press.

**SHSS/ANTH-DSE-3B: Tribal Cultures of India**  
**[4 Credits (60 Hours)]**

**Unit I:** Concepts of tribe and debates centering around the various concepts of tribe, general and specific characteristics of tribes, tribes in India: antiquity, historical, academic, administrative and anthropological importance, de-notified tribes.

**Unit II:** Tribe-caste continuum, constitutional safeguard/provisions, regional and linguistic distribution of tribes in India.

**Unit III:** Classification of tribes based on their economy, occupation and religion, racial elements among the tribes, scheduled and non-scheduled categories of tribes.

**Unit IV:** Forest policies and tribes, migration and occupational shift, tribal arts and aesthetics, displacement, rehabilitation and social change, globalization among Indian tribes.

**Learning Outcomes**

1. The students will learn about various concepts of tribes and the importance of studying them.
2. They will learn about the difficulties of differentiating between tribe and caste in India.
3. They will learn about different constitutional provisions and safeguards for tribe in India.
4. They will learn about classification of tribes based on religion, economy, occupation, race, linguistic etc.
5. They will also learn about the forest policies, migration, arts, problem of displacement and rehabilitation among tribes.

**Suggested Readings**

- Behera, D.K. and Georg Pfeffer. *Contemporary Society Tribal Studies*, Volume I to VII. New Delhi: Concept Publishing Company.
- Georg Pfeffer. *Hunters, Tribes and Peasant: Cultural Crisis and Comparison*. Bhubaneswar: Niswas.
- Vidyarathi, L.P. and B.K. Rai. *Applied Anthropology in India*.
- Vidyarathi, L.P. and B.N. Sahay. *Applied Anthropology and Development in India*. New Delhi: National Publishing House.

**SHSS/ANTH-MM-01: Human Biological Variation**  
**[3 Credits (45 Hours)]**

**Unit I:** Historical Views of Human Variation, The Concept of Race, Race and Racism in Twentieth Century, Changing Attitudes towards Race in Anthropology.

**Unit II:** Concept of Genetic Variation, Causes of Genetic Variation between and within Human Populations with Special Reference to the Role of Mutation, Selection, Genetic Drift, Isolation and Gene Flow.

**Unit III:** Biological Basis of Human Variation, Population Genetics: Polymorphism – ABO & other blood type systems; The Adaptive Significance of Human Variation, Levels of Adaptability: Heat and Cold, High Altitude

**Learning Outcomes**

1. The students will learn historical views on the concept of race and human variation.
2. They will learn the genetic basis of variation.
3. Students will learn about the population genetics.



**SHSS/ANT-MM-01: Human Biological Variation (Practical)**  
**[1 Credits (15 Hours)]**

A field study on biological variation.

**Learning Outcomes**

1. Students will learn the genetic basis of biological variations that appear in phenotypes of humans.

**Suggested Readings**

- Schutkowski, H. Berlin. Human ecology: Biocultural adaptation in human communities. Springer Verlag.
- Berry, J.B. Human ecology and cognitive style: comparative studies in cultural and physical adaptation. (1976). New York: John Wiley.
- G.A. Row. Studies in Human Ecology. (1961) Theodorson, Peterson & Company Elmsford, New York.
- Paul R. Ehrlich, Anne H. Ehrlich and John P. Holdress. Human ecology: Problems and Solutions. W.H. Freeman & Company, San Francisco.

**SHSS/ANTH-DSM-10: Palaeoanthropology**  
**[3 Credits (45 Hours)]**

**Unit-I:** Introduction to Palaeoanthropology -Definition, aim and scope. Relation of Palaeoanthropology with other disciplines. Geological Time Scale with stress on Cenozoic era.

**Unit-II:** Rules of Taxonomy and nomenclature. Siwaliks nomenclature, Stratigraphy, fauna and flora and Palaeoanthropological significance of Siwaliks.

**Unit-III:** Mio-Pliocene Hominoids. Diagnosis, description and distribution through time and, *Sivaladapis*, *Sivapithecus* and *Gigantopithecus*.

**Learning Outcomes:**

1. The student will understand the fundamental concepts of palaeoanthropology.
2. They will learn about conceptual palaeontological, geological and anthropological knowledge necessary to understand the subject of palaeoanthropology.
3. The students will learn about the various Siwalik formations and the fossil primates which are known from Indian Siwaliks.

**Suggested Readings**

- Brace C.L. and Montagu, M.F.A. 1969. Man's Evolution: An Introduction to Physical Anthropology, Macmillan.
- Buettner-Janusch, John. 1969. Origins of Man, Wiley Eastern Private Limited: New Delhi
- Comas, J. 1960. Manual of Physical Anthropology.
- Vashisht, R.N. 1985. Antecedents of Early Man in Northwest India. Delhi: Inter-India Publications.
- Gaur, R. 1987. Environment and Ecology of Early Man in Northwest India. Delhi: Renaissance Publishers.
- Kennedy, G.E. 1980. Palaeoanthropology. New York: McGraw-Hill.
- Poirier, F.E. and McKee, J.K. 1999. Understanding Human Evolution, 4th ed. New Jersey Prentice Hall.
- Henke, W. and Tattersall. 2007. Handbook of Palaeoanthropology. Springer I (Eds.).
- Szalay, F.S. and Delson, E. 1979. Evolutionary History of the Primates New York: Academic Press.
- Fleagle, J. G. 1998. Primate Adaptation and Evolution. London: Academic Press.
- Begun, D. R. 2013. A Companion to Paleoanthropology. UK: Blackwell Publishing Ltd.
- Oakley, K. P. 1964. Frameworks for Dating Fossil Man. Transaction Publishers.
- Das, B.M. 1997. Outline of Physical Anthropology. Allahabad: Kitab Mahal
- Shukla, B.R.K. and S. Ratogi. 2002. Physical Anthropology and Human Genetics – An Introduction. Delhi: Palaka Prakashan.

**SHSS/ANTH-DSM-10: Palaeoanthropology (Practical)**  
**[2 Credits (30 Hours)]**

1. How and where to look for fossils, Identification of major rock types. Equipment and techniques for collection,
2. Field cataloguing, Structure and use of Clinometer Compass (Dip and strike)

**Note:** Students will be taken for the Palaeoanthropological field work where possible. Students will submit palaeoanthropological field work report.

**Learning Outcomes**

1. The course includes practical training is imparted to the students in various techniques used in the collection, preparation, identification, illustration of fossils, moulding and casting and photography of fossil material.
2. The students will learn identification, methods of collecting fossils and recording information in the field.

### Suggested Readings

- Kummel, B. and Raup, D. 1970. Handbook of Paleontological Techniques. San Francisco: (Eds.) Freeman.
- Vasishat, R.N. 1985. Antecedents of Early Man in Northwest India. Delhi: Inter-India Publications.
- Gaur, R. 1987. Environment and Ecology of Early Man in Northwest India. Delhi: Renaissance Publishers.
- Karir, B. S. 1985. Geomorphology and Stone Age Culture of North West India, Sandeep Parkashan, Delhi.
- Green, O.R. 2001. A Manual of Practical Laboratory and Field Techniques in Palaeobiology. Dordrecht: Kluwer Academic Publishers.
- Chaurasia, B. D. 1984. Human Osteology. New Delhi: CBS.

### SHSS/ANTH-DSE-4A: Human Cytogenetics [4 Credits (60 Hours)]

**Unit I:** Definition, scope, and historical background; Relation to genetics, cytology, anatomy, and medicine; Structure and function of the nucleus and chromosomes; Karyotype, idiogram, chromosomal landmarks.

**Unit II:** Chromosome morphology: centromere, telomere, euchromatin/heterochromatin; Types of chromosomes; Chromosome banding techniques; Molecular cytogenetics

**Unit III:** Mitosis and meiosis: phases, regulation, and significance; Meiotic recombination, synaptonemal complex; Checkpoints and cell cycle regulation; Chromosomal behavior in cancer cells.

**Unit IV:** Numerical and structural alterations, induced chromosomal aberrations in somatic cells, mechanism and consequences, detection methods; sources responsible for change in gene frequencies.

### Learning Outcomes

1. Students will be able to explain the historical development, scope, and interdisciplinary nature of cytogenetics, including its integration with genetics, cytology, anatomy, and medicine.
2. They will be able to describe the structure and function of the nucleus and chromosomes, including the karyotype, idiogram, and chromosomal landmarks, and demonstrate basic skills in chromosomal analysis.
3. Students can identify and differentiate chromosome morphology (centromere, telomere, euchromatin, heterochromatin), and apply chromosome banding and molecular cytogenetic techniques to study chromosomal structure and variation.
4. They will be able to demonstrate understanding of the cell cycle, especially mitosis and meiosis, and explain the regulatory mechanisms, recombination processes, and abnormal chromosomal behavior in pathological conditions such as cancer.

### Suggested Readings

- Hema Purandarey. Essentials of Human Genetics, 2<sup>nd</sup> ed, Jaypee.
- Ricki Lewis. Human Genetics: Concepts and Applications, 12<sup>th</sup> ed., McGrawHill.
- B. Taneri, E. Asilmaz, T. Delikurt, P. Savas, S. Targen and Y. Esem. Human Genetics and Genomics: A Practical Guide, Wiley-VCH.
- Hartwell, L.H., et al. Genetics: From Genes to Genomes, 4th Edition. New York: McGraw-Hill.
- Hedric, P.W. Genetics of Populations, 2nd edition. Massachusetts: Jones and Bartlett Publishers.
- Knight, J.C. Human Genetic Diversity. Oxford: Oxford University Press.
- Maynard, Smith J. Evolutionary Genetics. New York: Oxford University Press
- Crawford, M.H. (ed.). Anthropological Genetics. Cambridge: Cambridge University Press.

### SHSS/ANTH-DSE-4B: Ecological Anthropology [3 Credits (45 Hours)]

**Unit-I:** Ecological Anthropology: definition and approach; aims and objectives; key terms and concepts used; the distinctive interdisciplinary nature of ecological anthropology.

**Unit-II:** Historical background and development: Environmental Determinism, Possibilism, Cultural Ecology, Ecological Anthropology, Cultural Materialism, Behavioral Ecology, Global and Political Ecology, Human Ecology and Biocultural Approach.

**Unit-III:** Culture as adaptive mechanism, hunting and gathering, the origin of food production, agricultural domestication, horticulture, pastoralism, intensive agriculture. Current issues and problems.

**Learning Outcomes**

1. Students will learn fundamental concepts of ecological anthropology.
2. Students will learn different historical phases of development of ecological thought in anthropology.
3. Students will learn ethnographical application of ecological approach.

**SHSS/ANTH-DSE-4B: Ecological Anthropology (Practical)****[1 Credits (15 Hours)]**

Students will undertake an in-depth study of a local community to gain insights into their livelihood patterns and adaptive practices. This exploration will focus on the intricate relationship between the community's lifestyle and the utilization of local environmental resources, examined through an ecological lens. The objective is to understand how the community adapts to and interacts with its environment, emphasizing sustainable practices and resource management. Upon completion of their research, students will compile their findings into a detailed report, which will be submitted to the department.

**Learning Outcomes**

1. Students will develop a comprehensive understanding of local community dynamics, focusing on livelihood patterns and adaptive practices. They will gain insights into the sustainable use of environmental resources, examining the ecological interactions within the community.
2. The research and report-writing process will enhance students' analytical, observational, and reporting skills, preparing them for future ecological studies and community-based research projects.

**Suggested Readings**

- Mark Q. Sutton and E. N. Anderson. Introduction to Cultural Ecology, Altamira Press.
- H. Schutkowski. Human Ecology: Biocultural Adaptations in Human Communities, Springer.
- Roberto Frisancho, Human Adaptation
- Bennet, John, The Ecological Transition: Cultural Anthropology and Human Adaption, Pergamon Press Inc.
- Changnon & Irons, Evolutionary Biology and Human Social Behavior
- Cohen, M., Nathan, The Food Crisis in Pre-history: Over Population and the Origins of Agriculture
- Eidt, R.C., Man, Culture and Settlement
- Gadgil & Guha, This Fissured Land : An Ecological History of India. OUP
- Hardesty. Donald, Ecological Anthropology, John Wiley and Sons. India Oxford University Press.
- Moran, E.F. Human, Adaptability: An Introduction to Ecological Anthropology
- Netting, R.M. The Ecological Approach in Cultural Study
- Odum, H.T. Environment, Power and Society
- Odum, Eugene, Fundamentals of Ecology

**SHSS/ANTH-DSM-15: Dissertation****[12 Credits]**

Fieldwork for a minimum period of three weeks at any place approved by the supervisor of the students. The fieldwork may be conducted in any one of the longish vacations.

Submission of one typed copy of the dissertation duly forwarded and recommended by the supervisor. It will include the list of questions asked and a glossary of local words.

The completed dissertation should provide proof of students' understanding of:

- a. research design as applicable to a specific topic
- b. issues concerning sampling, quantitative and qualitative analysis of data
- c. linkage of theory and data in regard to certain specific issues such as gender, rehabilitation, development and backwardness

**Learning Outcomes**

1. The students will learn about how to do fieldwork.

2. They will learn about designing research according to the requirement of a particular field of enquiry, sampling, problems related to sampling and use of various techniques of data collection.
3. They will learn about classification, interpretation, and presentation of data.
4. They will also learn about writing a dissertation, selecting chapter headings and subheadings, writing references, footnotes, endnotes, etc.

**SHSS/ANT-MM-02: Medical Anthropology**  
**[3 Credits (45 Hours)]**

**Unit I:** Medical Anthropology: Definition, Aim, Scope and Subject Matter of Medical Anthropology. Historical Development of Medical Anthropology. Basic Concepts: Illness, Sickness, Disease.

**Unit II:** Theoretical Orientations in Medical Anthropology. Medical Systems: a) Medical Systems as Cultural Systems. b. Medical System as Social System and Adaptive System.

**Unit III:** Folk Psychiatry: Culture Change and Mental Illness; Therapeutic Elements in Magico-Religious Healing Techniques. Medical Pluralism: Cosmopolitan, Regional and Local Medical Systems.

**Learning Outcomes**

1. Students will learn the basic concepts of medical anthropology.
2. Students will learn the concepts of social and cultural systems used in medical anthropology.
3. Students will learn about the folk psychiatry and medical pluralism.

**SHSS/ANT-MM-02: Medical Anthropology (Practical)**  
**[1 Credit (15 Hours)]**

Field based study to understand and document the local medical practices used by people in rural communities. Students will explore traditional healing methods, herbal medicine, and the sociocultural factors influencing health and healthcare in a particular local community.

**Learning Outcomes**

1. Students will develop an understanding of the traditional medical practices prevalent in rural settings.
2. They will acquire practical skills in ethnographic research.
3. They will gain insights into the cultural beliefs, values, and practices that shape health behaviors and healthcare decisions within the community.

**Suggested Readings**

- Foster G.M & Anderson B.G: Medical Anthropology.
- Brown Q.G et al: Understanding and Applying Medical Anthropology.
- Kalla A.K & Joshi P.C: Tribal Health and Medicine.
- Helman C.: Culture, Health and Illness.
- K. White (2002) An Introduction to the Sociology of Health and Illness, London: Sage.
- W. C. Cockerham (2007) Social Causes of Health and Disease, US: Polity Publication.
- M. Akram (2014) Sociology of Health, New Delhi/Jaipur: Rawat Publications.