

DEPARTMENT OF ANTHROPOLOGY
BSc. (Hons.) Anthropology
Semester-4

DISCIPLINE SPECIFIC CORE COURSE -10 (DSC-10)
Human Genetics

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Human Genetics	04	03	Nil	01	Class XII pass	NIL

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

Course Objectives

1. To introduce the students the basic principles of human genetics.
2. To familiarize the students with the methods/technologies used in genetic research.
3. Aims to provide knowledge about the pattern of inheritance of genetic disorders, genetic abnormalities and the importance of genetic testing and counseling.

Learning Outcomes

Student will be able to:

1. describe the structure and function of DNA; concept of gene, transcription and translation.
2. grasps the inheritance pattern of human traits/diseases and types of chromosomal abnormalities and their implications.
3. handle the methods and techniques used in human genetics.
4. comprehend the importance of genetic counselling.

Unit 1: Human Genome, Chromosomes and Abnormalities (09 Hours)

History of Human genetics; Concept of gene; Chromosomal structure and abnormalities, Cytogenetics, and Human Genome Project

Unit 2: DNA Structure and Function (09 Hours)

DNA Structure and Function, DNA Replication, repair and recombination, gene expression, coding and non-coding regions. Expression of genetic information: from Transcription to Translation - the relationship between genes and protein.

Unit 3: Patterns of Inheritance (09 Hours)

Mendelian inheritance (Autosomal and X linked); Co-dominance; Sex-linked inheritance; Multiple allelism; Dosage compensation, Single factor and multifactorial inheritance and Non-Mendelian inheritance

Unit 4: Methods in Human Genetics (09 Hours)

Pedigree analysis, methods of assessing chromosomal abnormalities (Banding techniques; Karyotyping; FISH); Sib-pair and Twin studies; Genotyping and Sequencing methods

Unit 5: Genetic Diagnosis and Counselling (09 Hours)

Prenatal diagnosis; Newborn screening; Genetic counseling

Practical (30 hours)

Project report based on data collection related to one mendelian disorder on the basis of brief field visits, in nearby areas.

References

1. Brown TA. (2007). *Genomes*. Garland Science.
2. Cummings MR (2011). *Human Heredity: Principles and Issues*. Brooks/Cole, Cengage Learning
3. Klug WS (2012). *Concepts of Genetics*. Pearson.
4. Lewis R. (2009). *Human Genetics: Concepts and Application*. The McGraw–Hill Companies, Inc.
5. Vogel F. and Motulsky A.G. (1996). *Human Genetics: Problems and Approaches*. Springer, 3rd revised edition.

Teaching Learning Process

The process of learning will involve acquisition of domain knowledge and understanding of skills required for conducting human genetic research. Process will involve lectures and presentations and report submission.

Assessment Methods

Examination schemes and mode shall be as prescribed by the Examination Branch, University of Delhi from time to time.

Keywords

Human genetics, DNA, chromosomal abnormalities, anthropology, sequencing

DISCIPLINE SPECIFIC CORE COURSE -11 (DSC-11)
Kinship and Polity

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Kinship and Polity	04	03	Nil	01	Class XII pass	NIL

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

Course objective

This course seeks to impart basic anthropological knowledge on themes in the studies of kinship, Family and Marriage, and various political systems.

Learning Outcomes

The students will be able to:

- demonstrate understanding of key anthropological debates and approaches to kinship studies.
- differentiate between different kinds of marriage rules and family types.
- elucidate analysis of power in different forms of political systems.

Syllabus:

Unit 1 (10 Hours)

Approaches to the study of Kinship; Descent, Alliance and cultural Theories; Kinship Usages, Terminologies; Redefining Kinship

Unit 2 (11 Hours)

Marriage and Family : Problems of definition; Approaches to the study of Family; Domestic Group and Household

Unit 3 (12 Hours)

Descent and Political Systems; Approaches to the study of Political Anthropology; Power, Authority and Legitimacy; State and stateless societies

Unit 4 (12 Hours)

Nation, Nation State and Citizenship; Customary Laws; Social Movements

Practical (30 hours)

1. Collect and analyse genealogies of a person and find out the inter-generational changes in terms of age at marriage, education qualification, household, occupation and migration pattern.
2. Conduct an in-depth interview to find out the changing marriage practices and family types.
3. Case study of any current political instance/event in social media to understand how people imagine the state, and are involved in power relations

References

1. Fortes, Meyer, and Evans-Pritchard. (1950) (4th edition). *African Political Systems*. London: Oxford University Press
2. Harris, C. C. (1990). *Kinship. Concepts in social thought*. Minneapolis: University of Minnesota Press.
3. Karve, Irawati. (1968). *Kinship organization in India*. London: Asia Publ. House.
4. Lévi-Strauss, Claude. (1969). *The elementary structures of kinship*. Boston: Beacon Press
5. Shah, A.M (1998). *The Family in India: Critical Essays*. New Delhi : Orient Longman
6. Spencer, Jonathan (2007). *Anthropology, Politics, and the State: Democracy and Violence in South Asia*. University of Edinburgh: Cambridge University Press.
7. Stone, Linda and Diane E King. (2019). *Kinship and Gender: An Introduction* (6th edition). New York: Routledge.
8. Uberoi, Patricia (1994) *Family, Kinship and Marriage in India*. New Delhi: Oxford University Press.
9. Vincent, Joan (ed.) (2002). *The anthropology of Politics: A reader in ethnography, theory and critique*. Blackwell publisher

Teaching Learning Process

Lectures and Discussions, Seminars and Presentations, Practical Classes

Assessment Methods

Examination schemes and mode shall be as prescribed by the Examination Branch, University of Delhi from time to time.

Keywords:

Kinship, Marriage, Family, Politics, Customary Law

DISCIPLINE SPECIFIC CORE COURSE -12 (DSC-12)
Archaeological Fieldwork (4-7 days)

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical / Practice		
Archaeological Fieldwork	04	02	Nil	02	Class XII pass	NIL

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

Course objectives:

To expose students to different prehistoric sites of India.

Learning Outcomes: The students will be able to:

1. demonstrate the understanding of the lithic industry.
2. identify prehistoric tools in situ.
3. describe the stratigraphic context of the tools.

Syllabus:

Unit 1 Methods in Archaeological Anthropology: (07 Hours)

Distinction between exploration, expedition, field Survey and ethnoarchaeology

Unit 2: Geological Background of the Region (07 Hours)

Geomorphology, Geochronology, Topography, Flora and Fauna, Sedimentology

Unit 3: Understanding Culture (08 Hours)

Artifacts and tools, Tool Types, and technology of different cultural periods of prehistoric times

Unit 4: Interpretation of Culture (08 Hours)

Analysis of material, Drawing, Dating of artifacts and logic of inference

Practical (60 Hours)

1. Analysis of Prehistoric Tools: Identification, Interpretation and Drawings of the tool types with special reference to the technology and chronology:

Core Tool Types

Flake Tool Types

Blade Tool Types

2. The students are required to conduct an archaeological fieldwork in a selected region of India for a period nearly 7 days and submit a field report.

References

1. Bhattacharya, D.K (2006). *An outline of Indian Prehistory*. Palaka Prakashan Delhi.
2. Bhattacharya, D.K. (1979). *Old Stone Age Tools: A Manual of Laboratory Techniques of Analysis*. Calcutta: K. P. Bagchi and Company
3. Inizan, M.L.; M. R. Ballinger; H. Roche and J. Tixier. (1999). *Technology and terminology of Knapped Stone*. Nanterre: CREP.
4. Oakley, K.P. (1972). *Man the Tool Maker*. London. Trustees of the British Museum of Natural History.
5. Renfrew Colin and Bahn Paul. (2012). *Archaeology: Theories, Methods and Practice*. New York: Thames & Hudson, 6th Edition.
6. Sankalia, H.D. (1982). *Stone Age Tools: Their Techniques, Names and Probable Functions*. Poona: Deccan College.
7. Whittaker, J.C. (2009). *Flintknapping: Making and Understanding Stone Tools*. Austin: University of Texas Press.

Teaching Learning Process

Classroom Presentations using digital methods
Practical classes
Seminars and presentations by students
Field visit to an archaeologically important site

Assessment Methods

Examination schemes and mode shall be as prescribed by the Examination Branch, University of Delhi from time to time.

Keywords

Prehistoric, Archaeological, stone tools, material culture and evolution