

SEMESTER-VI

Bachelor of Science (Hons) Anthropology

DISCIPLINE SPECIFIC CORE COURSE -16 (DSC-16)

Human Population 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 Population Genetics	04	03	Nil	01	Class XII pass	NIL

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

Course Objectives

1. To understand the basic tenets of human population genetics
2. To learn the concepts of evolutionary forces and their applications
3. To understand the role of human genetic variation in shaping current population structure

Learning Outcomes

The students will be able to:

- develop basic understanding of genetic principles of human populations
- understand the concept of polymorphisms and its applications in understanding genetic structure of human populations
- develop an idea of different types of evolutionary forces
- understand the role of genetic variations in studying human populations

Syllabus:

Unit-1 (10 Hours)

Landmarks in the history of population genetics, Concept of genetic polymorphism; haplotypes and haplogroups; transient, balanced polymorphisms; single locus versus multi-locus inheritance and population structure

Unit-2 (11 Hours)

Genotypic and allelic frequencies, assumptions of Hardy-Weinberg equilibrium, and its applications

Unit-3 (12 Hours)

Concept of Mutation, Natural Selection, Genetic drift, Gene flow, admixture and inbreeding

Unit-4(12 Hours)

Models explaining the maintenance of genetic polymorphism (Relationship between sickle cell and malaria, X-linked polymorphism and selection relaxation hypothesis)

Practical (30 Hours)

1. Blood group typing-ABO; MN and Rh (D) blood groups
2. Color Blindness
3. Blood Collection, sample transportation
4. Plasma and RBC separation and storage in field

References

1. Vogel F. and Motulsky A.G. (1996). Human Genetics: Problems and Approaches. Springer, 3rd revised edition.
2. Cooper DN and Kehler-Sawatzki H. (2008). Handbook of Human Molecular Evolution. John Wiley & Sons, volume-2.
3. Lewis R. (2009). Human Genetics: Concepts and Applications 9th Edition. The McGraw-Hill Companies, Inc.
4. Patch C. (2005). Applied Genetics in Healthcare. Taylor & Francis Group
5. Templeton A. R. (2018). Human Population Genetics and Genomics. Academic Press.

Teaching Learning Process

The process of learning will involve acquisition of domain knowledge and understanding of skills required for conducting research in human population genetics. Process will involve lectures, assignments, class-room discussions, laboratory experiments and appropriate inference of results and practical file preparation.

Assessment Methods

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

Keywords

human genetics, DNA, genetic structure, human evolution, natural selection, genetic drift

DISCIPLINE SPECIFIC CORE COURSE -17 (DSC-17)
Tribes of India

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		
Tribes of India	04	03	Nil	01	Class XII pass	NIL

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

Course Objectives

The course is designed to help students understand the contested and problematic nature of the term ‘tribe’ and its definitional attributes. It also seeks to elucidate pressing issues faced by the tribes in India by focus on the contemporary issues, challenges and crisis that confront the rural and tribal communities in India.

Learning Outcomes

At the end of the course, the student will be able to :

- comprehend the nature and concepts of tribe and indigenous communities in comparison to caste societies.
- understand critical issues, problems and challenges related to tribal societies both in historical and contemporary perspectives.
- understand the challenges of tribal development and associated solutions.

Syllabus:

Unit 1: On the concept of tribe (10 Hours)

Concept and approaches to the study of tribes; classification, distribution and cosmogeny of tribes in India; Scheduled Tribes, *Adivasi* and Indigenous people; Particularly Vulnerable Tribal Groups , De notified communities

Unit 2: Tribes and institutions (11 Hours)

Kinship system, types of family, rules of marriage, tribal polity and governance, subsistence economy and tribal market, tribal religion: nature-man-spirit complex, Gender and Tribe

Unit 3: Issues in Tribal Development (12 Hours)

Problems of tribal communities in different parts of India; Displacement and Rehabilitation. Protest movements; Modernization, Globalization and Tribal Transformation

Unit 4: Tribes and Policy (12 Hours)

National Tribal Policy; Forest Rights, Food security, land acquisition, mining, tribal migrants

Practical (30 Hours)

The students shall prepare comprehensive project based on short fieldwork or from secondary sources on different dimensions of tribal life.

References:

1. Bailey, F.G. (1960). *Tribes, Caste and Nations*. Manchester University Press
2. Bhandari, J. S., and Subhadra Channa. (1997). *Tribes and government policies*. New Delhi: Cosmo Publications.
3. Channa, Subhadra Mitra. (2020). *Anthropological Perspectives on Indian Tribes*. New Delhi: Orient Blackswan Private Limited.
4. Chaudhury, Sukant K., and Patnaik, Soumendra Mohan. (2008.) *Indian Tribes and the Mainstream*. New Delhi. Rawat Publications.
5. Fürer-Haimendorf, Christoph von. (1985). *Tribal populations and cultures of the Indian subcontinent*. Handbook of Studies Oriental Leiden: E.J. Brill.
6. Miri, Mrinal. (2003). *Identity and the moral life*. New Delhi: Oxford University Press.
7. Vidyarthi, L.P. (2011 online). *The Maler : A study in Nature-Man -Spirit Complex of a Hill Tribe* (Bookland : Calcutta 1963) Cambridge University Press (Online)
8. Xa-xa, Virginius. (2008). *State, Society, And Tribes: Issues In Post-Colonial India*. New Delhi: Dorling Kindersley (India)

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:

Scheduled Tribe, Caste, Tribal Development, Tribal Policy, Indigenous People

DISCIPLINE SPECIFIC CORE COURSE -18 (DSC-18)
Anthropological Fieldwork

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

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

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

Course objective

To train students to apply the methods and techniques of fieldwork in actual field situation to understand social problem and lived realities in a tribal or a rural community.

Learning Outcomes

The students will be able to:

- apply the theoretical perspectives in actual field situation and systematically undertake a study on an anthropological problem.
- write a report based on the field data using qualitative and quantitative methods.

Syllabus:

UNIT 1. Identification of a community for fieldwork, collection of secondary information and preparation of field statements, designing the field study, identification and formulation of research tools, pre-testing and standardization of research tools. **(07 Hours)**

UNIT 2. Survey methods: formation and administration of household census to collect data on socio-economic and biological variables. **(07 Hours)**

UNIT 3. Ethnographic methods: Team Ethnography, rapport establishment, categories of respondents, sources of data, maintaining field diaries and field notes, ethical considerations **(08 Hours)**

UNIT 4. Collection of data on biological variables and their analyses. **(08 Hours)**

Practical (60 Hours)

Students are required to apply these techniques and methods in real social context to have variable experience and make sense of how to use them in research context.

Students will undertake fieldwork of 10-12 days to any rural or tribal area and explore significant dimensions of the community life involving anthropological techniques.

Students are required to submit a dissertation based on the fieldwork taking into account cultural and biological variables.

References:

1. Brewer, John David. 2000. *Ethnography: Understanding Social Research*. Open University Press.
2. O'Reilly, Karen. 2012. *Ethnographic Methods*. Routledge.
3. Patnaik, Soumendra M. *Doing Team Ethnography*. 2006 *The Eastern Anthropologist* 59 (3-4): 295-319.
4. Srivastava, Vinay Kumar. 2004. *Fieldwork and Methodology*. Oxford University Press. New Delhi
5. Madan, T. N., Beteille, André. 1975. *Encounter and Experience - Personal Accounts of Fieldwork*. Vikas Publishing House.

Teaching and Learning process:

Lectures and Discussions, Field visits, Presentations

Assessment methods: Viva voce examination based on submitted dissertation.

Keywords: Ethnography, Field study design, field research tools, report writing