

**VIDYASAGAR UNIVERSITY
MIDNAPORE, WEST BENGAL**



**MASTER OF SCIENCE (M.Sc.)
IN ANTHROPOLOGY**

BASED ON
NEP 2020 AND UGC 2024 GUIDELINES
[w.e.f 2025-26 Session]

Preamble

The post-graduate (M.Sc.) programme in Anthropology provides an in-depth understanding of human evolution and variation in time and space. The students will get to learn about different population, their culture, lifestyle, adaption to the environment, strategy for survival. The course provides insights into the current biological and social challenges, aims to improve the lives and livelihoods of population. To enhance academic flexibility, the syllabus includes several elective papers, enabling students to select courses that align with their interests and career aspirations. Additionally, students may opt for a MOOC course through SWAYAM, thereby gaining access to a wide range of learning opportunities beyond the department. Furthermore, courses on the Indian Knowledge System (IKS), Intellectual Property Rights (IPR), and the Life and Philosophy of Vidyasagar have been included to foster holistic academic development and to broaden intellectual horizons.

The two-year M.Sc. programme in Anthropology was initiated at the time of the inception of Vidyasagar University in 1985-86. Currently the course comes under the Faculty of Science. The Choice-Based Credit System (CBCS) was implemented in 2018. From the academic session 2025-26, both the one-year and two-year M.Sc. programmes in Anthropology have been introduced, with the syllabus designed in line with the guidelines of the National Education Policy (NEP) 2020.

The syllabus emphasizes three specializations namely, Biological, Scio-cultural, and Archaeological Anthropology and also align with the requirements of national and state level examinations like SET and UGC NET. The programme equips students with critical knowledge like methodological, practical, fieldwork, internships, community engagement and seminar presentations. The department is enriched with ICT-enabled smart classroom, bio-cultural and prehistoric archaeology laboratory. The department also has a separate library for the students to read in their free time. The members of the department regularly publish in reputed national and international peer-reviewed/Scopus/Web of Science journals.

With a competent and dedicated faculty and available infrastructure, the department aim to provide the best learning environment for the students.

Programme Outlines

Sl. No.	Category	Details
1.	Type of Program	This is a regular mode M.Sc. programme, based on the guidelines of NEP 2020.
2.	Duration	The department offers two types of M.Sc. programmes in Anthropology; 1. Two year M.Sc. and 2. One year M.Sc.
3.	Eligibility Criteria	<ol style="list-style-type: none"> 1. For Two Year M.Sc.: Students who have completed a 3-year Honours degree in Anthropology or allied disciplines are eligible for admission to the two-year M.Sc. programme. 2. For One Year M.Sc.: Students, who have completed a 4-year Honours degree in Anthropology are eligible for admission to the one-year M.Sc. programme.
4.	Intake Capacity	The current intake capacity of the programme is 65 students. Admission is carried out in accordance with the prevailing government norms, and the reservation rules for EWS, OBC, SC, ST, PWD, and other applicable categories are strictly followed.
5.	Admission procedure	The university conducts a written admission test as part of the selection process. Admission is based primarily on the performance in the written test, along with consideration of marks obtained in the undergraduate (UG) programme or in the Higher Secondary (HS) examination, as applicable. The Admission Committee oversees the entire admission process, ensuring that all rules and regulations are properly followed.
6.	Evaluation Process	<ul style="list-style-type: none"> ▪ The students will be assessed through a combination of continuous evaluation and end-semester examination. Internal Assessment (IA) carries 20% weightage, while the End-Semester Examination accounts for 80% of the total marks. ▪ Two Continuous Examinations (CEs) will be conducted for each paper/course, and the average of these two will determine the final CE marks. The CEs may be conducted in diverse formats such as multiple-choice questions (MCQs), open-book examinations, take-home exercises, case studies, assignments, or small projects. ▪ The end-semester examination will comprise short-answer, medium-answer, and long-answer type questions to evaluate the students' knowledge based understanding and analytical skills comprehensively.
7.	Teaching Methods	<p>To achieve the intended learning outcomes, the following teaching-learning methods will be employed:</p> <ul style="list-style-type: none"> ▪ Lecture-based Learning – Structured delivery of core concepts through classroom lectures. ▪ Group Learning – Collaborative discussions and group activities to promote teamwork and idea-

		<p>sharing.</p> <ul style="list-style-type: none"> ▪ Individual Learning – Independent study and self-paced learning to strengthen conceptual clarity. ▪ Technology-based Learning – Use of digital tools, software, and online resources to support interactive learning. ▪ Peer Teaching – Students explaining concepts to peers, encouraging active participation and reinforcement of knowledge. ▪ Problem-solving Approach – Learning through real-world problems, case studies, and exercises to develop analytical and critical thinking skills. ▪ Project-based Approach- Learning through project writing on the topics contained in the syllabus. ▪ Fieldwork- Learning empirically through fieldwork ▪ Presentation- Learning through audio visual presentation for better understanding.
8.	Special Instructions	<p>To align the syllabus with the National Education Policy (NEP) 2020, several general courses such as Indian Knowledge System (IKS), Intellectual Property Rights (IPR), Research Methodology and Ethics, Social Service/Community Engagement, Internship/Industry Visit or Industry-related Project, Field Visit, Research Project, and Life and Philosophy of Vidyasagar have been made compulsory. Alongside these, a set of core courses has been included to strengthen subject foundations. The syllabus also offers elective papers to provide flexibility and choice. The course offers three specializations, viz. Biological Anthropology, Socio-cultural Anthropology and Archaeological Anthropology, students can choose any one of the three specialization and elective courses are available accordingly.</p>
9.	Dissertation	<p>The research project will be done by the students under the supervision of department Faculty in the third semester. The students can choose their supervisors. While choosing supervisors, academic performance will be used as criteria and the students with best academic performance will choose first.</p>



Programme Outcomes (POs)

PO 1: Knowledge and understanding of Human from Biological and Cultural Perspective. The Post Graduate students will develop an understanding of human holistically, and know about different aspects of his physical and social conditions.

PO 2: Critical Thinking Ability: Students will be able to critically look at the social and cultural phenomena and evaluate them in a holistic perspective.

PO 3: Development of Analytical Skills and Research Skills: The student will develop analytical skills to assess complex social-cultural phenomena. The theoretical knowledge will help to sharpen their analytical skills. The programme is also designed to impart training in various research methods used in anthropology, including qualitative and quantitative methods, ethnographic fieldwork, participant observation, case study, interviews, schedule and survey.

PO 4: Cultural Competence and Adaptability: Students come to know about cultural relativism that familiarises them of cultural diversity and be able to engage respectfully and effectively with individuals and communities from different cultural backgrounds, thus enhancing greater adaptability with the situations. They will be sensitive towards social and environmental issues. With this, they can better contribute to the peace and harmony, sustainability and interpersonal tolerance.

PO 5: Communication Skills: Students will be able to acquire better communication skills since the programme offers scopes for writing and oral presentation as well as interpersonal interactions in fieldwork.

PO 6: Use of Digital and ICT tools: The students will get used to deal with different digital tools including the online learning platforms like MOOCs.

PO 7: Interdisciplinary Perspective: Students will learn to integrate knowledge and insights transcending disciplinary boundaries while pursuing anthropological research through its conjunctive approaches and interdisciplinary methodological and theoretical understanding.

PO 8: Professional Efficiency: Students will acquire efficiency in working in careers including academia, research institutions, government agencies, NGOs, and private sector organizations, and possess the necessary skills to succeed in their chosen field. This will also help to develop leadership ability.

PO 9: Ethical Conduct: Students will learn to inculcate ethical principles of anthropological training and research, including obtaining informed consent, maintaining confidentiality, and respecting the rights and dignity of research participants, and will be able to maintain a general ethical standard in their behavioural practice. This ethical consideration includes both human and non-human species across genders and social identities.

PO 10: Life-long Learning: The student will be able to continue life-long learning through the knowledge and simple methodologies that the programme imparts them.

Programme Specific Outcomes (PSOs):

PSO 1: The Post Graduate will be able to understand biological and cultural evolution of humans with a knowledge of human origin and its reasons for variability.

PSO 2: The students will have knowledge of human adaptability in different ecological and geographical regions across the globe with an understanding of existing cultural practices and biological diversity.

PSO 3: The students will learn to apply anthropological knowledge in understanding contemporary social issues such as identity, sustainability, health, education, development and human rights. The anthropological theories and methodologies will give them an insight of the issues. Thus, they can contribute to the public policies and programs.

PSO 4: The students will gain a critical and insightful understanding of existing anthropological methods and techniques including fieldwork to address social issues apart from learning the professional skills in this regard.

DRAFT

Lev el	Yr.	SEM	Course Type	Course Code	Course Title	Credit	L-T- P	Marks		
								T	I/P	TOTAL
M.Sc. in ANTHROPOLOGY	1 st	I	DSC1	ANT DSC 1	History and Development of Anthropology	4	T	40	10	50
			DSC2	ANT DSC 2	Research Methodology and Ethics	4	T	40	10	50
			DSC3	ANT DSC 3	Human Evolution and Variation	4	T	40	10	50
			DSC4	ANT DSC 4	Dimensions of Socio-cultural Anthropology	4	T	40	10	50
			DSC5	ANT DSC 5	Prehistoric Archaeology	4	T	40	10	50
			IKS	ANT IKS	Indian Knowledge System	2	T	25		25
			VAC	ANT VDS	Vidyasagar: Life and Philosophy			Compulsory Non-credit course		
		II			TOTAL	22		220	55	275
			DSC 6		Demographic Anthropology and Basic Statistics	4	T	40	10	50
			DSC 7		Fossil and Living Primates	4	T	40	10	50
			DSC 8		Indian Society and Culture	4	T	40	10	50
			DSC9 (M)		Biological Anthropology Practical I	4	P	0	50	50
			DSC 10		Ethnographic Fieldwork	4	P	0	50	50
			DSC 11		Prehistoric Archaeology Fieldwork	2	P	0	25	25
					TOTAL	22		245	30	275
					TOTAL: 1st Year of PG	44		440	110	550
Lev el	Yr.	SEM	Course Type	Course Code	Course Title	Credit	T-P	Marks		
								T	I/P	TOTAL
M.Sc.	2 nd	III	DSE 1	DSE 1A	Advanced Human Genetics	4	T	40	10	50
				DSE 1B	Theories of Social-cultural Anthropology					
				DSE 1C	African and European Prehistory					
			DSE2	DSE 2A	Nutritional Anthropology	4	T	40	10	50
				DSE 2B	Environmental Anthropology					
				DSE 2C	Theories of Prehistoric Anthropology and Museology					
			DSE3	DSE 3A	Biocultural Aspect of Health and Disease	4	T	40	10	50
				DSE 3B	Developmental Anthropology					

M.Sc. in Anthropology	2nd	III	DSE4	DSE 3C	Bio-cultural Evolution and Recent Development					
				DSE 4A	Biological Anthropology Practical II	4	P	0	50	50
				DSE 4B	Anthropology of Religion and Ethnicity	4	T	40	10	50
				DSE 4C	Prehistoric Archaeology Practical	4	P	0	50	50
			DSE 5		MOOCs	4		50	50	
					Social Service/Community Engagement	2		25	25	
		IV			TOTAL	22		200	75	275
			DSE 6	DSE 6A	Population Genetics	4	T	40	10	50
				DSE 6B	Medical Anthropology					
				DSE 6C	Evolution of Culture in India and Regional Archaeology					
			DSE 7	DSE 7A	Applied Biological Anthropology	4	T	40	10	50
				DSE 7B	Emerging Areas of Social-cultural Anthropology					
				DSE 7C	Emerging Areas of Archaeological Anthropology and Rock Art Studies					
			DSC 12		Dissertation	8	P	0	100	100
			DSC 13		Internship/Capstone Project/Applied Field or Industry Project/Innovation and Incubation/Entrepreneurship/Start-up Proposal or Practice	4	P	0	50	50
			DSC 14		Intellectual Property Right (IPR)/Skill Enhanced Course	2			25	25
					TOTAL	22		80	195	275
					TOTAL: 2nd Year of PG	44		280	270	550

T= Theory; L= Lecture; P= Practical; I= Internal

M.Sc. in Anthropology

Year: 1st

(Total Credits: 44/ Total Marks: 550)

Semester: I (FIRST)

Total Credit: 22

Total Marks: 275

1. Course Code: ANT DSC 1

Course Name: History and Development of Anthropology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 1.1 Anthropology: definition, aim and scope; growth in historical perspective; major sub-disciplines of Anthropology and their interrelationships.
- 1.2 Biological Anthropology and its sub-disciplines; aim and scope of Biological Anthropology; relation with other disciplines; history and development of Biological Anthropology.
- 1.3 Socio-cultural Anthropology and its sub-disciplines; aim and scope of Socio-cultural Anthropology; relation with other disciplines; history and development of Socio-cultural Anthropology.
- 1.4 Prehistoric Archaeology and its sub-disciplines; aim and scope of Prehistoric Archaeology; relation with other disciplines; history and development of Prehistoric Archaeology.
- 1.5 Linguistic Anthropology and its aim and scopes.
- 1.6 Origin and development of Anthropology in India; major developmental phases: formative, constructive, and analytical periods.
- 1.7 Life and works of some pioneering anthropologists/who has major contribution in the development of Anthropology: Carolus Linnaeus, Charles Darwin; Johann Friedrich Blumenbach, W. H. R. Rivers, E. Durkheim, E. B. Tylor, L. H. Morgan, F. Boas, B. K. Malinowski, Raymond Dart, R. Redfield; The Leakey Family: Louis Leakey, Marry

Leakey and Richard Leakey; J. Weiner, V. Gordon Childe, S. C. Roy, N.K. Bose, B. S. Guha, K. P. Chattopadhyay, S. S. Sarkar, T. C. Das, S.C. Sinha, Irawati Karve, L. P. Vidyarthi, J. Goodall, D. Fossey and B. Galdikas, C. Stringer, C.J. Thompson.

1.8 Holism in Anthropology; Bio-cultural approach in Anthropology

Recommended readings:

1. Barnard, Alan (2000) History and Theory in Anthropology. Cambridge, U.K.: Cambridge University Press.
2. Bose, N. K. (1967) Problems of National Integration, Shimla: Indian Institute of Advanced Study.
3. Bose, N. K. (1969) Problems of Indian Nationalism, Bombay: Allied Publishers.
4. Davis, K. (1949) Human Society, New York: Macmillan Co.
5. Ember, C. R., M. R. Ember and P. N. Peregrine (2003) Anthropology, Pearson Education.
6. Eriksen, T. H. and F. S. Neilsen (2001) A History of Anthropology: Anthropology, Culture and Society, Pluto Press.
7. Guha, A. (2018) Social Anthropology of B.S. Guha: An Exploration', Indian Anthropologist, pp. 1-12.
8. Guha, A. (2019) Colonial, Hindu and Nationalist Anthropology in India, Sociological Bulletin, vol.68, no.2, pp. 154-68.
9. Guha, A. (2021) Nation Building on the Margins: How the Anthropologists of India Contributed? Sociological Bulletin, vol.70, no.1, pp. 59-75.
10. Ingold, Tim (1994) Companion Encyclopaedia of Anthropology, London: Routledge.
11. Lasker, G.W. (1976) Physical Anthropology, Canada: Holt, Rinehart & Winston Inc.
12. Lewis, B., R. Jurmainand L. Kilgore (2010) Understanding Humans: Introduction to Physical Anthropology and Archaeology, Wadsworth Cengage Learning.
13. Metcalf, Peter (2005) Anthropology: The Basics, Abingdon [England]: Routledge.
14. Mukhopadhyay, R. 2019. Dr. Bhupendranath Datta: Remembering a Great Scholar in Indian Anthropology and Sociology, J. Indian Anthropol. Soc. 54: 65-73.
15. Nadel, S. F. (1951) The Foundations of Social Anthropology, Glencoe, III: Free Press.
16. P. Uberoi, N. Sundar & S. Deshpande (ed.), (2007) Anthropology in the East: Founders of Indian Sociology and Anthropology Ranikhet: Permanent Black.
17. Relethford, John. H. (1994) Fundamentals of Biological Anthropology, U.S.: Brown (William C.) Co.

18. Standford, C. B., J. S. Allen, S. C. Anton, (2017) Exploring Biological Anthropology: The Essentials, U.S.: Pearson.
19. Uberoi, P., N. Sundar, & S. Deshpande (2000) 'Indian Anthropology and Sociology: Towards a History', Economic and Political Weekly, pp. 1998-2002.
20. Vidyarthi, L. P. (1978) Rise of Anthropology in India: A Social Science Orientation, vols. I & II., New Delhi: Concept Publishing Company.
21. Bandyopadhyay, S. (2024). Samajik Sanskritik Nribijnan (Social Cultural Anthropology). Kolkata: Parul Prakashani.

Course outcome:

1. The objective of this course is to acquaint students with the basics of the subject Anthropology and the subject matter of the discipline.
2. Through this course, the students will be introduced to the meaning and scope of Anthropology, its major sub-disciplines, uniqueness, and the relationship of the subject with allied biological and social sciences.
3. The students will also come to know the new trends in the subject and the new sub-disciplines that have emerged.
4. The students will be acquainted with the different development phase of the Anthropology both in India and other countries in the world.
5. Through this course, the students will be introduced to the life and works of pioneer anthropologists of world as well as of India.

2. Course Code: ANT DSC 2

Course Name: Research Methodology and Ethics

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 2.1 Research – concept, proposition, hypothesis, and theory.
- 2.2 Method, technique, and methodology
- 2.3 Data collection methods; cross-cultural comparison.
- 2.4 Sources and types of data – quantitative, qualitative; combining quantitative and qualitative data in Anthropology.
- 2.5 Techniques of data collection: use of questionnaire, schedule, maps, and photography.
- 2.6 Population and Sample; Sampling Methods: Random and Non-random.

2.7 Research design: definition and steps; types of research design; treatment and control groups.

2.8 Basic characteristics of anthropological fieldwork; fieldwork tradition in anthropology.

2.9 Pre-Malinowskian, Malinowskian and Post-Malinowskian fieldwork traditions.

2.10 Archival studies in Anthropology.

2.11 Participant observation: features, merits, and limitations; emic and etic approaches in Anthropology.

2.12 Ethnography as a method in Anthropology; trends in ethnographic research; multispecies ethnography; ethnography and Globalization.

2.13 Importance of field diary in Anthropological fieldwork; life history method; ethnographic writing.

2.14 Research Ethics; ethical guidelines in fieldwork; Helsinki protocols; Publication ethics.

Recommended readings:

1. Abraham, K. (1964). *The Conduct of Inquiry: Methodology for Behavioral Sciences*, San Francisco: Chandler Pub. Co.
2. Bernard, H. R. (1998). *Hand book of Methods in Cultural Anthropology*, Walnut Creek, California: AltaMira Press.
3. Danda, A. K. (1992). *Research Methodology in Anthropology*, New Delhi: Inter-India Publications.
4. Fernandez, W., and Tandon, R. (1981). *Participatory Research and Evaluation*, New Delhi: Indian Social Institute.
5. Fischer, M. (2003). *Applications in Computing for Social Anthropologists*, London: Routledge.
6. Goode, W. J. & Hatt, P. K. (1952). *Methods in Social Research*, New York: McGraw Hill Education.
7. Gravetter, F. J. and Wallnau, L. B. (2017). *Statistics for the Behavioural Sciences* (10th edition), Boston, MA: Cengage Learning.
8. Hester, J. J. (1976). *Introduction to Archaeology*, New York: Holt, Rinehart & Winston.
9. Kassam, Y. O., and Mustafa, K. (1982). *Participatory Research: An Emerging Alternative Methodology in Social Science Research*, New Delhi: Society for Participatory Research in Asia.
10. Madrigal, L. (2012). *Statistics for Anthropology*, Cambridge: Cambridge University Press.

11. Mandelbaum, D. G. (1973). The study of life history: Gandhi. *Current anthropology*, 14(3), 177-206.
12. Mukherjee, N. (1995). *Participatory Rural Appraisal and Questionnaire Survey*, New Delhi: Concept Publishing Co.
13. Pelto P. J. and Pelto, G. H. (1978). *Anthropological Research: The Structure of Inquiry*, London: Cambridge University Press.
14. Renfrew, C. (Ed.) (1973). *The Explanation of culture change: Models in prehistory*. London. Duckworth.
15. Trigger B. G. (1983). *Beyond History: The Methods of Prehistory*, New York: Irvington Publishers.
16. Wheeler, M. (1954). *Archaeology from the Earth*, Oxford: Oxford University Press.
17. Young, P. and Schmid, C. F. (1939). *Scientific Social Surveys and Research*, New Jersey: Prentice – Hall.

Course outcome:

1. The objective of this course is to acquaint students with the brief description and characteristics of the research methodology.
2. Through this course, the students will also be introduced to the types and sources of data and information anthropologists deal with as their subject matter.
3. Through this course, the students will be introduced to the emergence of fieldwork tradition in anthropology and the writing of ethnography.
4. The students will also come to know the different methods and their brief description used in the Anthropology and the source and types of data used in anthropological study.
5. The student will also come to know the ethical guidelines of research study in human society.

3. Course Code: ANT DSC 3

Course Name: Human Evolution and Variation

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 3.1 Contemporary theories of organic evolution: Neo-Lamarckism, Neo-Darwinism, synthetic theory, neutral theory.

3.2 Trends in hominid evolution: erect posture and bipedalism, changes in dentition, encephalisation, brain and sense organs.

3.3 Molecular evidence: contributions of Goodman, Sarich, and Wilson.

3.4 Traces of evolution from mtDNA and Y-chromosome.

3.5 Human origin: out of Africa and multiregional theories. biocultural evolution and hominization process

3.6 Human variation: Morphological trait- Skin colour, Hair; Quantitative trait- stature, head shape; Genetic marker- Blood group, Haemoglobin variants; causes of human variation

3.7 Role of heredity and environment: stature, skin colour, intelligence.

3.8 Historical overview of the concept of race, criteria of racial classification, factors for race formation, genetic aspects of race mixture; racism; UNESCO statement on race.

3.9 Interplay of biology and culture to shape human adaptation; acclimatization and adaptation; types of adaptation; physiologic, genetic, and cultural adaptation in respect of thermal environment, high altitude.

3.10 Application of molecular anthropology to study human evolution.

Recommended readings:

1. Beals, R. L. and Hoijer, H. (1965). *An Introduction to Anthropology*, New York: Macmillan Company.
2. Coon, C. S. (1991). *Living Races of Man*, New York: Alfred A. Knopf.
3. Harrison, G. A. et.al. (1964). *Human Biology: an introduction to human evolution and growth*, New York: Oxford University Press.
4. Rowe, B. M. and Stein, P. L. (1978). *Introduction to Physical Anthropology*, New York: McGraw-Hill.
5. Sarkar, S. S. (1954). *The Aboriginal Races of India*. Calcutta, India: Bookland Ltd.
6. Backer, P.T. and Weiner (Eds.) (1966). *Biology of Human Adaptability*. Oxford University Press.
7. Bodmer and Cavalli Sforza. (1977). *Genetics, Evolution and Man*. American Society of Human Genetics.
8. Das, B.M. (1980). *Outlines of Physical Anthropology*. New Delhi: Kitab Mahal
9. Day, M. H. (1986). *Guide to Fossil Man*, Chicago: The University of Chicago Press.
10. Ember, C. R., Ember, M. and Peregrine, P. N. (2001). *Physical Anthropology and Archaeology*, Pearson, BK & CD-ROM Edition.

11. Buettner-Janusch, John (1966). *Origins of Man: Physical Anthropology*, New York: John Wiley & Sons.
12. Johnson, M. D. (2016). *Human Biology: Concepts and Current Issue*. New Delhi: Pearson Education India.
13. Lewis, B., R. Jurmain and L. Kilgore (2010). *Understanding Humans: Introduction to Physical Anthropology and Archaeology*, Wadsworth Cengage Learning.
14. Montagu, A. (Ed.) (1964). *Concept of Race*, New York: The Free Press.
15. Relethford, John. H. (1994). *Fundamentals of Biological Anthropology*, U.S.: Brown (William C.) Co.
16. Rowe, B. M. and Stein, P. L. (1978). *Introduction to Physical Anthropology*, New York: McGraw-Hill.
17. Sahlins, M. D. and Service, E. R. (Eds.) (1960). *Evolution and Culture*. Michigan: University of Michigan Press.

Course outcome:

1. The objective of this course is to acquaint students with the theories related to the evolution of humans and their relation with other non-human primates.
2. Through this course, the students will be introduced to different theories and evidences related to the organic evolution.
3. Through this course, the students will also be introduced to the emergence, evolution, and migration of human in different corner of the world.
4. The students will also come to know the characteristics, similarities, and dissimilarities among different ethnic groups.

4. Course Code: ANT DSC 4

Course Name: Dimensions of Socio-cultural Anthropology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 4.1 Concept of culture; aspects of culture; culture and symbols; cultural diversity, cultural universals, enculturation, transculturation, ethnocentrism, cultural relativism, and historical particularism; Humanistic and anthropological approaches to culture.
- 4.2 Culture trait, culture complex, and culture area.

4.3 Attributes of the concept of culture: learned and historically derived, plurality, relativity, functional integration, holism, behavioural determinism.

4.4 Relationship between society and culture; concepts of diffusion, acculturation, innovation, culture contact, and culture change.

4.5 Concepts of institution, association, social groups; social stratification: caste and class; Social status and role.

4.6 Social organization - Family: definition and universality; family, household and domestic groups, functions, and typology. Marriage: definition and universality; laws of marriage, types of marriage, functions of marriage, marriage regulations (preferential, prescriptive, and proscriptive). Kinship: consanguinity and affinity; rules of inheritance; principles and types of descent (patrilineal, matrilineal, bilineal, bilateral, parallel, cross descents). Forms of descent groups (lineage, clan, phratry, moiety and kindred).

4.7 Political organization: band, tribe, chiefdom, state; types of leadership: clan, tribe, chief, kingdom; Forms of Government: monarchy, oligarchy, theocracy, democracy, authoritarianism, totalitarianism; Crime and punishment in tribal society.

4.8 Concept of Religion; Anthropological approaches to the study of religion (evolutionary, psychological, and functional), Monotheism and Polytheism; Myths and Rituals; Forms of religion in tribal and peasant societies (animism, animatism, fetishism, naturism, and totemism); Religion, magic, and science interrelationships; Belief system of Tribes; Elements of religion: ancestor worship, sacrifice, myth and ritual, taboo, totem, mana.

4.9 Magic: Concept, types, functions; relation with religion; magico-religious functionaries (priest, shaman, traditional healer, sorcerer, and witch).

Recommended readings:

1. Barnet, H.G. (1963) Innovation. The Basis of Culture Change. USA: McGraw-Hill.
2. Dalton, G. (1967). Tribal and Peasant Economies: Readings in Economic Anthropology. USA: Natural History Press.
3. Evans-Prichard, E.E. (1951). Social Anthropology. London: Cohen and West.
4. Foster, G.M. (1962). Traditional Cultures and Impact of Technological Change. New York. Harper & Row.
5. Fox, R. (1984). Kinship and Marriage: An Anthropological Perspective. London: Cambridge Press.

6. Honigman, J. J. and Alland, A. (1973). Handbook of Social and Cultural Anthropology. Chicago: Rand McNally Co.
7. Jha, M. (1994). An Introduction to Social Anthropology, New Delhi: Vikash Publishing House.
8. Kluckhohn, C. (2017). Mirror for Man: The Relation of Anthropology to Modern Life. London: Routledge.
9. Mair, Lucy. (2006). An Introduction to Social Anthropology. London: Oxford University Press
10. Majumdar, D. N. and Madan, T. N. (1989). An Introduction to Social Anthropology, New Delhi: National Publishing House.
11. Malinowski, B.A. (1960). Scientific Theory of Culture and Other Essays. New York: Oxford University Press.
12. Radcliffe-Brown, A.R. (1965). Structure and Function in Primitive Society. New York: Free Press.
13. Rogers, E.M. & Shoe Maker, F.F. (1971). Communication of Innovation: A Cross-Cultural Approach. New York: Free Press.
14. Rogers, E.M. (2003). Diffusion of Innovation (5th Edition). New York: Free Press.
15. Sahlins, M. and Service, E. R. (1960). Evolution and Culture. The University of Michigan Press, Ann Arbor.

Course outcome:

1. The objective of this course is to acquaint students with the different concepts and features of culture and attributes of culture concept.
2. Through this course, the students will be introduced to the concepts of social structure, social organization, culture transmission and change, and the relation between the society and the culture.
3. Through this course, the students will also be introduced to the different concepts related to magic and religion.
4. The students will also come to know the application of the socio-cultural anthropological knowledge in the human development and in policy making.

5. Course Code: ANT DSC 5

Course Name: Prehistoric Archaeology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

5.1 Brief ideas about Prehistory, Protohistory and History and their inter-relations, Ideas about Conjunctive approach of Archaeological Anthropology, Relationship of Archaeology with Other Sciences- History, Geology, Geography, Zoology, Botany.

5.2 Brief ideas on Ethnoarchaeology, Environmental Archaeology, Experimental Archaeology,

5.3 Geoarchaeology, Underwater Archaeology, Salvage Archaeology, Garbage Archaeology.

5.4 Contribution of C.J. Thomsen, Three-age system: Stone Age, Copper / Bronze Age, Iron Age.

5.5 Concept of Ecofact, artifact, tool, site (primary, semi-primary, butchering site, factory site, habitation site), Cultural Resource Management. Study of Natural Processes - Terrace, Moraine, Fluvial, Glacial, Pluvial, Loess, Lacustrine; Post-Depositional Features of Sediments- Calcretes, Ferrecretes, Weathering; Methods of climatic reconstruction: palynology, paleontology, Archaeological site formation process.

5.6 Geo-chronology: eras, epochs, and periods. Geological time scale and its significance. Major environmental episodes of Pleistocene and Holocene. Periodization in Prehistoric Archaeology,

5.7 Dating: concept of chronology in prehistory, historical, archaeological, scientific method; absolute and relative methods; Relative methods: stratigraphy, typology, seriation, FUN method; Absolute methods: radio-carbon, dendrochronology, thermoluminescence, potassium-argon, pollen analysis, obsidian hydration, and archaeomagnatism.

5.8 Field archaeology: Exploration method – pre-exploration activity, map reading, use of GPS and GIS technique, site surface survey, arial photography, satellite image, geophysical survey technique, archaeological sampling, technique of recording, methods of collecting artifacts, analysis of artifacts; Excavation methods - planning, permission, staff, equipments, logistics; different methods – augur, trail, vertical, horizontal, step,

grid, quadrant excavation with advantages & disadvantages of each technique. Conservation and preservation of archaeological site.

5.9 Stone Tool typology, different technology used for making stone tools, basic raw materials used for tool making, fracture mechanism, technical details of core, flake, blade, microlithic, polished tools with probable functions.

Recommended Reading:

1. Agrawal, D.P. (1982). The Archaeology of India, Curzon Press
2. Bhattacharya, D.K. (1979). Old Stone Age: A Manual of Laboratory Techniques of Analysis, Calcutta: K. P. Bagchi & Co.
3. Bhattacharya, D.K. (2006). An outline of Indian Prehistory. Delhi: Palaka Prakashan.
4. Bordes, F. (1968). The Old Stone Age, McGraw-Hill.
5. Chakraborty, D.K. (2006). The Oxford Companion to Indian Archaeology.
6. Coles, J.M. and E.S. Higgs. (1969). The Archaeology of Early Man. London: Faber and Faber.
7. Fagan B. M. (2004). People of the Earth: An Introduction to World Prehistory. New Jersey: Pearson Education.
8. Fagan, B.M. and N. Durrani (2019). World Prehistory, Taylor & Francis Ltd.
9. Fagan, B. 1988. In the beginning: An Introduction to Archaeology. Glenview: Scott, Foresman and company.
10. Hole, H. and R.F. Heizer. (1966). An Introduction to Prehistoric Archaeology. New York: Hold, Rinehart, and Winston.
11. Inizan, M.L, M.R. Ballinger, H. Roche, J. Tixier. (1999). Technology and Terminology of Knapped Stones, CREP: Nanterre.
12. Kale, S. and A. Gupta. (2018). Introduction to Geomorphology, Universities Press.
13. Korisetter, R. (ed.) (2017). Beyond Stones and More Stones, Vol. – 1, Bengaluru: Mythical Society.
14. Paddayya, K. and Sushma G. Deo. (2017). Prehistory of South Asia, Bengaluru: The Mythic Society.
15. Rajan, K. (2002). Archaeology: Principal & Methods, Manoo Pathippakam publisher.
16. Renfrew, C. and P. Bahn. (2001). Archaeology: Theories methods and Practices, London: Thames and Hudson.

17. Wheeler, M. (1954). Archaeology from the Earth, Oxford: Oxford University Press.

Course Outcome:

1. Students will have ideas on basic concepts of Archaeology and related disciplines.
2. They will learn basic theoretical understandings of Archaeology.
3. They will have ideas about Relative, Absolute, Cultural and Geological chronology of Archaeology and their various methods.
4. The students will learn the methodologies of exploration and excavation techniques and also will acquire knowledge about assemblage analysis.
5. The students will come to know the description of different tools and their manufacturing techniques, raw material used.

6. Course Code: ANT IKS

Course Name: Indian Knowledge System

Marks: 25 (Theoretical – 20 + Internal Assessment – 5)

Credits: 2; Class Hours: 30

6.1 Knowledge System: Defined and types of Knowledge Systems, Indian Knowledge System - (IKS): Define and Importance of Study of IKS. Unique features of Indian Knowledge Systems.

6.2 Corpus sources of IKS in Ancient India: *Vedas, Smritis, Puranas and Mahakavya* (Epics), Dimensions of the concept of Knowledge in Indian Philosophy: Gautama's *Naya Darshana* with emphasis on Truth and Reasoning; Kanad's *Vaisheshika Darshan* with emphasis on *Prameya, Pramana and Samasya*. *Lokayata Darshan* with special reference to Charbak, Outline of the Concept of Yoga Philosophy. Concept of Body and Health.

6.3 Indian Knowledge Systems and aspects of scientific knowledge in ancient India with special reference to Vedic literature: Mathematics, Astronomy, Architecture, Chemistry, Life Sciences (Botanical and Zoological), Geography, and Medicine (Ayurveda). Indian Knowledge Systems related to Economics, Governance and Public Administration.

6.4 Indian Knowledge Systems and Anthropological Knowledge: Concept of Ethnic Groups and Peoples in Vedic Literature, Knowledge of Society and Culture from Pre-Vedic (Indus Valley Civilization) to Post Vedic Period [*Ashrama, Purushartha, Varna, Jati, Jana*, Marriage, Family, Kinship, and Religion] Traditional Knowledge and Indian Tribes with special reference to Ethnomedical and Environmental Knowledge.

Recommended readings:

Bodding, P.O., 2024. *Studies in Santal Medicine and Connected Folklore*, Part-I,ii,&iii. New Delhi: Gyan Publishing House.

Chattpadhyay, Debiprasad, 1959. *Lokayata – A Study in Ancient Indian Materialism*. New Delhi: People's Publishing House.

Chauhan, Bhag Chand, 2023. *Textbook on the Knowledge System of Bhārata*. New Delhi: Garuda Prakashan.

Khandelwal, N.M and Chauhan, P. 2023. *Indian Knowledge System*. Mumbai: Himalaya Publishing House.

Raha, Sibaji et.al., 2014. *History of Science in India*, Volume-1, Part-I, Part-II, Volume VIII. Kolkata: National Academy of Sciences, India and The Ramkrishan Mission Institute of Culture.

Course outcome:

1. The objective of this course is to acquaint students with the brief description, scope and the subject matters of Indian Knowledge System.
2. This course will be inform the students the textual and philosophical sources and roots of Indian Knowledge System.
3. Through this course, the students will be introduced to different aspects of the scientific knowledge, which are parts of the Indian Knowledge System.
4. The students will also come to know about the relationship between the Indian Knowledge System and anthropology.

7. Course Name: Life and Philosophy of Vidyasagar

Course Code: ANT VDS

Marks: 25 (T)

Credits: Non-credit; Class Hours: 30

7.1 Vidyasagar: Biography of a versatile man

Birth and Lineage, Education, Career as teacher and administrator, Vidyasagar as Writer, Vidyasagar as Publisher. Later part of his life and works in Karmatar.

7.2. Vidyasagar and Indian Education: The then Indian education system; Vidyasagar plan for reformation of Indian education- Vidyasagar as teacher, Vidyasagar as writer, planner and reformer of Indian education.

7.3 Vidyasagar and Women Emancipation: Education of the Women, Introduction of widow remarriage, Struggle to stop child marriage, Humanitarian works for the downtrodden.

7.4. Vidyasagar and his works: A Critical evaluation

Philanthropist Vidyasagar, Vidyasagar: Traditions and modernity: Vidyasagar as Traditional modernizer, Relevance of Vidyasagarian thoughts and values: Vidyasagar and the then Society of Bengal, Vidyasagar and contemporary understanding, Lesson for future generations.

Recommended Readings:

Ghosh, Binoy, 1394 B. *Vidyasagar o Bangali Samaj*. Kolkata: Bengal Publishers Pvt. Ltd.

Haldar, Abinash Chandra, 2020. *Vidyasagar Charitramrita*. Kolkata: Rohini Nandan.

Hatcher, Brian A., 2014. *Vidyasagar: The Life and After Life of Eminent Indian*. New Delhi: Routledge.

Indramitra, 1992. *Karunasagar Vidyasagar*. Kolkata: Ananda Publishers.

Tripathi, Amalesh, 2011. *Vidyasagar: The Traditional Moderniser*. Cambridge: Cambridge University Press.

Vidyasagar, Iswarchandra, 2019. *Vidyasagar Rachanabali* (1-3 Vol.). Midnapore: Vidyasagar University.

Course Outcomes:

1. The objective of this course is to acquaint students with the life and works of Pandit Iswarchandra Vidyasagar.
2. This course will inform the students about the textual works, reformative, humanitarian entrepreneurial activities of Vidyasagar.
3. Through this course, the students will learn to acquire a critical assessment of the Vidyasagar in the perspective of his time.
4. The students will also get acquainted with values and lessons that the life of Vidyasagar reflects. This will help in the building of ethical foundation of the life of the students and the development of their personality.

Semester: II (SECOND)

Total Credits: 22

Total Marks: 275

6. Course Code: ANT DSC 6

Course Name: Demographic Anthropology and Basic Statistics

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 7.1 Definition, scope, and objectives of demography; formal demography and population study.
- 7.2 Sources of demographic data; stable and stationary populations; age-sex composition.
- 7.3 Demographic processes: fertility, mortality, and migration; techniques and measurements of demography; rates and ratios -sex ratio and child woman ratio; crude and specific birth and death rates; concepts of fecundity, fecundability and fertility; total and age specific fertility rates, infant mortality rate, dependency ratio, and labour force participation rate.
- 7.4 Malthusian theory of population explosion; Criticism of Malthusian theory.
- 7.5 Demographic Transition theory; Caldwell's wealth flows theory of fertility decline; socio-cultural factors affecting fertility in human populations.
- 7.6 Relationship between Anthropology and statistics; areas of application of statistics in Anthropology.
- 7.7 Population and samples; different sampling methods.
- 7.8 Variables: types and scales of measurement; parametric and non-parametric frequency distribution and graphical representations; central tendency and variability.
- 7.9 Normal curve, skewed curves, Z-score.
- 7.10 Basic concepts of hypothesis testing; Type I & Type II errors; Inferential statistics – correlation and regression.

Recommended readings:

1. Basu, A. M. and Aaby, P. (1998). *The Methods and Uses of Anthropological Demography*, Oxford: Clarendon Press.
2. Cox, P. R. (2009). *Demography* (5th Ed), Cambridge, GBR: Cambridge University Press.
3. Engelhardt, H., Kohler, H. P. and Furnkranz-Prskawetz, A. (2009). *Causal Analysis in Population Studies: Concepts, Methods, Applications* (The Springer Series on Demographic Methods and Population Analysis): Netherlands: Springer Dordrecht.
4. Gravetter, F. J. and Wallnau, L. B. (2017). *Statistics for the Behavioural Sciences* (10th edition), Boston, MA: Cengage Learning.

5. Kothari, C. R. (2013). Research Methodology: Methods and Techniques, New Delhi: New Age International Pvt. Ltd.
6. Madrigal, L. (2012). Statistics for Anthropology, Cambridge: Cambridge University Press.

Course outcome:

1. The objective of this course is to acquaint students with the brief description, scope and the subject matters of Demographic Anthropology.
2. Through this course, the students will be introduced to the source of data, techniques and measurement used in demographic research.
3. Through this course, the students will be introduced to different concepts and theories of demography.
4. The students will also come to know about the relation between the demography and anthropology.

7. Course Code: ANT DSC 7

Course Name: Fossil and Living Primates

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 8.1 Reconstructing early Hominin behaviour and ecology; major fossil primates of Asia, Africa, and Europe: Ankarapithecus; Hominoid fossil remains from Indian subcontinent- Sivapithecus, Gigantopithecus, Narmada Man.
- 8.2 Hominoid fossils: Aegyptopithecus, Propithecus, Dryopithecus, Proconsul
- 8.3 Hominid Precursors and Early Hominids; Brief discussion: *Sahelanthropus tchadensis*, *Orrorin tugenensis*, *Ardipithecus ramidus*, *Australopithecus anamensis*, *Australopithecus africanus*, *Australopithecus afarensis*, *Australopithecus robustus*, *Australopithecus boisei*.
- 8.4 Appearance of genus *Homo*; *Homo habilis*; *Homo erectus* from Asia (Indonesia and China), Europe (Dmanisi skulls and other finds) and Africa (*Homo ergaster*, Turkana, Swartkrans), distribution, general features, and their phylogenetic status. Expansion of home base by *Homo erectus* from Africa to Asia and Europe.
- 8.5 *Homo neanderthalensis*: salient features; conservative and progressive type; phylogenetic position; causes of extinction
- 8.6 *Homo heidelbergensis*, *Homo naledi*, *Homo floresiensis*, Denisovan man; Cro-Magnon; Grimaldi; Chancelade; *Homo sapiens idaltu*; Early modern humans.

- 8.7 Living primates: distribution, characteristics, and classification (Napier and Napier, 1967).
- 8.8 Patterns of social and reproductive behaviour of primates; evolution of primate behaviour.
- 8.9 Comparative anatomy of man and nonhuman primates with special reference to skull, pelvis, dentition, and long bones; evolution of brain and senses.
- 8.10 Great apes (Gorilla, Chimpanzee, and Orangutan): characteristic features and phylogeny; similarities and differences of great apes with humans.
- 8.11 Characteristics and position of man in the animal kingdom.

Recommended readings:

- 1. Beals, R. L. and Hoijer, H. (1965). An Introduction to Anthropology, New York: Macmillan Company.
- 2. Butzer, K. W. (1964). Environment and Archaeology: An Introduction to Pleistocene Geography, Chicago: Adline Pub. Co.
- 3. Campbell, B. G., Loy, J. D. and Cruz-Uribe, K. (2005). Humankind Emerging. London: Pearson.
- 4. Day, M. H. (1986). Guide to Fossil Man, Chicago: The University of Chicago Press.
- 5. Lewin, R. (1985). Human Evolution: An Illustrated Introduction, New York: W.H. Freeman
- 6. Oakley, K. P. (1961). Man, the tool-maker, London: The Trustees of the British Museum.
- 7. Rowe, B. M. and Stein, P. L. (1978). Introduction to Physical Anthropology, New York: McGraw-Hill.
- 8. Seth, P. K. (2003). Understanding Evolution of Man: An Introduction to Paleoanthropology, New Delhi: Kalpaz Publications.
- 9. Napier, J. R. and Napier P. H. 1967. A Handbook of Living Primates, New York: Academic Press

Course outcome:

- 1. The objective of this course is to acquaint students with the evidence and trends in hominid evolution.
- 2. The student will come to know about the major anatomical changes in human body.
- 3. Through this course, the students will be introduced to the brief description and phylogenetic position of the Hominid Precursors and Early Hominids groups.
- 4. The students will also come to know the current knowledge and debates related to phylogeny.

8. Course Code: ANT DSC 8

Course Name: Indian Society and Culture

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

9.1 Basic features of Indian society and culture

9.2 Tribal society in India: characteristic features - economic, political, social, and religious

9.3 Changes in the tribal society in India.

9.4 Caste system in India: Anthropological contributions: tribe-caste continuum, folk-urban continuum, little and great traditions, dominant caste, Nature-Man-Spirit complex, and sacred complex.

9.5 Village studies in India and its significance; Jajmani system; village solidarity; Factionalism; Changing agrarian relations in Indian villages; Impact of globalization on Indian villages

9.6 Social change in India – Anthropological perspectives. Universalization, Parochialization, Sanskritization, Brahmanisation, Hinduization, Islamization, Westernization, Modernization, Urbanization, and Industrialization

Recommended readings:

1. Dube S.C. (1958). India's Changing Villages: Human Factors in Community Development, London: Routledge.
2. Karve, I. (1953). Kinship Organisation in India, Poona: Deccan College.
3. Karve, I. (1961). Hindu Society: An Interpretation, Poona: Deccan College.
4. Leach, E. R. (Ed.) (1960). Aspects of Caste in South India, Ceylon, and North-West Pakistan, Cambridge: Cambridge University Press.
5. Mandelbaum, D. G. (1970). Society in India, Berkeley: University of California Press.
6. Marriot, M. (1955). Village India: Studies in the Little Community, Chicago: The University of Chicago Press.
7. Sankalia, H. D. (1962). Prehistory and Protohistory of India and Pakistan, Bombay: Bombay University Press.
8. Singer, M. (1972). When a Great Tradition Modernizes: An Anthropological Approach to Indian Civilization. USA: Praeger Publishers.

9. Singh, K. (1992). People of India: An Introduction. Calcutta: Anthropological survey of India.
10. Singh, K.S. (2020). Tribal Society in India: An Anthropological Perspective. Delhi: Manohar Press.
11. Srinivas, M.N. (1995). Social Change in Modern India. London: Orient Black Swan Press.
12. Vidyarthi, L.P. (1979). Sacred Complex of Kashi. A Microcosm of Indian Civilization. New Delhi: Concept Publication.
13. Von, F. H. C., Yorke, M. and Rao, Jayaprakash. (1982). Tribes of India, the struggle for survival, Berkeley: University of California Press.

Course outcome:

1. The objective of this course is to acquaint students with the basics of the studies on the Indian Society and Culture.
2. Through this course, the students will be introduced to the basic characteristics of Indian and culture, studies of anthropologists on Indian Caste system and social change in India.
3. Through this course, the students will also be introduced to the studies of anthropologists on village studies in India.

9. Course Code: ANT DSC 9

Course Name: Biological Anthropology Practical I

Marks: 50

Credits: 4; Class Hours: 120

10.1 Fossil Primates (Characteristics, Drawings, Identification)

10.2 Somatoscopy

10.3 Somatometric measurements

10.4 Osteology

10.5 Colour blindness test and PTC tasting ability

10.6 Laboratory notebook.

10.7 Viva-voce.

Recommended readings:

1. Paddar, S.R. and Bhagat, A. (2018). Hand Book of Osteology. Delhi: Scientific Book Company.
2. Singh I.P. and Bhasin M.K. (1968). Anthropometry. Delhi: University of Delhi.
3. Mukherji, D., Mukherjee, D., Bharati, P. Mukhopadhyay, A. (2018). Laboratory Manual for Biological Anthropology. Kolkata: Scholar Publisher.

Course outcome:

1. The objective of this course is to acquaint students with the practical facet and instrumental used in the Somatometry, Somatoscopy and population variation.
2. The student will come to know about the human anatomy and differences between different groups.
3. The students will learn the methodology and techniques related to Somatometric measurements, Somatoscopy, Osteology, Colour blind test, and PTC test.

10. Course Code: ANT DSC 10

Course Name: Ethnographic Fieldwork

Marks: 50

Credits: 4; Total Hours: 120

- 11.1 Fieldwork under the supervision of departmental teacher (s) for at least 10 days in a tribal or non-tribal area preferably in a rural setting.
- 11.2 Village/Settlement map, census, and economic pursuits.
- 11.3 Panchayat/local self government, developmental schemes, governance, and politics.
- 11.4 Rites of passage, rituals, and festivals.
- 11.5 Measurements on body composition and information on health awareness, reproductive health awareness, morbidity profile.
- 11.6 Analysis and interpretation of data and report writing.
- 11.7 Viva-voce

Recommended Readings:

1. Das, B. M., and Roy, S. (2019). Fieldwork Training in Social Work. India: Routledge.
2. Singh I.P. and Bhasin M.K. (1968). Anthropometry. Delhi: University of Delhi.

Course outcome:

1. The objective of this course is to acquaint students with the fieldwork situation in real life.
2. The student will come to know the methodological approach used in the anthropological fieldwork in real-life experience.
3. Students will learn how to collect data related to social-cultural, economic, and political aspect of life from real life situation.

11. Course Code: ANT DSC 11**Course Name: Prehistoric Archaeology Fieldwork (Practical)****Marks: 25****Credits: 2**

A report will be prepared on Field archaeological training - Exploration/training in Excavation techniques of an archaeological/prehistoric/rock art site for minimum of three (3) days and learn the following on field. i. Exploration Techniques, or ii. Excavation Techniques, iii. Trail trench, iv. Recording of sites and artifacts, v. Trench Layout, vi. Section Drawing, vii. Geomorphology, viii. Stone tool/pottery Drawing, ix. Ethno-archaeological data collection, x. Raw material source, xi. Analyses of material evidences, xii. Antiquity Registration, xiii. Report writing.

Recommended readings:

1. Allchin and Allchin (1993). The Rise of Civilization of India and Pakistan. Cambridge University Press
2. Rajan, K. (2002). Archaeology: Principal & Methods, Manoo Pathippakam publisher.
3. Renfrew, C. and P. Bahn. (2001). Archaeology: Theories methods and Practices, London: Thames and Hudson.
4. Wheeler, M. (1954). Archaeology from the Earth, Oxford: Oxford University Press.

Course outcome:

1. The student will come to know the methodological used in the prehistoric archaeological fieldwork.
2. Students will learn how to record a site, collection of stone tools, analysis of the artifacts and other related issues.

M.Sc. 2nd Year (Direct Admission 1st Year)

Semester: III (THIRD)

Total Credit: 22

Total Marks: 275

12. Course Code: ANT DSE 1A

Course Name: Advanced Human Genetics

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

12.1 Principles in human genetics: Mendelian inheritance, structure and function of DNA, RNA, Proteins; Concept of Gene, Genetic Code, replication, protein synthesis; Lethal gene; central dogma; concept of mutation, DNA fingerprinting; coding and non-coding DNA

12.2 Methods of studying human genetics in Anthropology: pedigree analysis, twin study, foster child, co-twin method.

12.3 Genetic variation and Polymorphism- G6PD, Phosphoglucomutase, Haptoglobins, Transferrin, Immunoglobulins, HLA-subtypes, inheritance, polymorphism, HLA, and Disease; Lactate dehydrogenase.

12.4 Inborn error of metabolism.

13.4 Haemoglobin: Normal-HbA, HbF, HbA2, Abnormal- HbS, HbC, HbD, HbE, Thalassemia, HbS and Malaria.

13.5 Techniques for biochemical analysis- Electrophoresis, PCR;

13.6 Dermatoglyphics: finger print pattern- qualitative and quantitative variables; Palmer dermatoglyphics- main line formula and index, inheritance; dermatoglyphics and disease.

13.7 Cytogenetics: Karyotyping, Techniques for studying chromosomal structure, autoradiography, banding, florescence; Chromosomal aberrations: Numerical-Turner's, Klinefelter's, Down's, Patau's, Edward's syndrome, Triploidy, Tetraploidy; structural- Cri-du-chat, Philadelphia chromosome.

13.8 Genetics of complex diseases; GWAS

Recommended readings:

1. Bhamrah, H. S. and Chaturvedi, C. M. (2002). A Textbook of Genetics, New Delhi: Anmol Publications Pvt. Ltd.
2. Dalela, R. C. and Verma, S. R. (1972). A Text Book of Genetics, Meerut, U.P.: Jay Prakash Nath.
3. Durham, N. M. And Plato, C. C. (Eds.) (1990). Trends in Dermatoglyphic Research, Springer Science & Business Media.
4. Emery, A. E. H. (1968). Elements of Medical Genetics, Edinburg: Churchill Livingstone.
5. Gardner, E. J. and Snustad, D. P. (1981). Principles of Genetics (6th Ed.), New York: John Wiley & Sons.
6. Harrison, G. A. et.al. (1964). Human Biology: an introduction to human evolution and growth, New York: Oxford University Press.
7. Livingstone, F. B. (1967). Abnormal Haemoglobins in Human Population, Chicago: Aldine Transaction.
8. Mange, E. J. and Mange, A. P. (1994). Basic Human Genetics, Sunderland, MA: Sunauer Associates Inc.
9. Rothwell, N.V. (1977). Human Genetics, New Jersey: Prentice Hall.
10. Stern, C. (1949). Principles of Human Genetics, San Francisco: W. H. Freeman and Co.
11. Vogel, F. and Motulsky, A. G. (1986). Human Genetics: Problems and approaches, New York: Springer- Verlag.

12. Wyandt, H. E. and Tonk, V. S. (2011). Human Chromosome Variation: Heteromorphism and Polymorphism, London: Springer.

Course outcome:

1. The objective of this course is to acquaint students with the theories, concepts, and themes of studying medical genetics.
2. Through this course, the students will be introduced to the genetic variation and polymorphism, hereditary abnormalities, and theoretical knowledge of techniques for biochemical analysis.
3. Through this course, the students will be introduced to the brief discussion of Dermatoglyphics and its subject matters.
4. Through this course, the students will be introduced to the methods and techniques of studying chromosomal structure and abnormalities, and genetic relationship and diversity.
5. The students will also come to know about the discussion on the difficulties in subjecting man for genetic investigations.

13. Course Code: ANT DSE 1B

Course Name: Theories of Social-cultural Anthropology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

14.1 The nature of anthropological theories: Positivistic, interpretative, hermeneutic, and phenomenological traditions; Nomothetic and ideographic approaches; objectivity and subjectivity in Anthropology; Philosophical background of anthropological theory.

14.2 Evolutionism: general characteristics; Types of evolutionary theory in Socio-cultural Anthropology; Contributions of E. B. Tylor, L. H. Morgan, V. G. Childe, Julian Steward and Leslie White, R. L. Carneiro.

14.3 Diffusionism: British, German, and American schools of thought and their criticisms.

14.4 Historical particularism and the rise of the concept of culture: Boas, Sapir, Kroeber, and Benedict.

14.5 Structural-functionalism: Radcliff-Brown, Malinowski, Evans-Pritchard, and Nadel. Dynamic approaches: Leach and Gluckman.

14.6 Culture personality school: Benedict, Mead, and Linton. Basic and modal personality.

14.7 Structuralism: Levi-Strauss and Needham.

14.8 Postmodernism in Anthropology: Foucault and Bourdieu

14.9 Different theoretical schools – Frankfurt, Manchester, Chicago, Hermeneutic Circle and Critical theory

Recommended readings:

1. Barnard, Alan, (2000). History and Theory in Anthropology. Cambridge: Cambridge University Press.
2. Benedict, R. (1934). Patterns of Culture, London: Routledge & Kegan Paul Ltd.
3. Best, S. and Kellner, D. (1991). Postmodern Theory, Hampshire: Palgrave Macmillan.
4. Bidney, D. (1953). Theoretical Anthropology, New York: Columbia University Press.
5. Dolgin, J. L., Kemnitzer, D. S., Schneider D. M. (Eds.) (1977). Symbolic Anthropology: A Reader in the Study of Symbols and Meanings, New York: Columbia University Press.
6. Douglas, M. (1978). Cultural Bias, London: The Royal Anthropological Institute.
7. Durkheim, E. (1951). Suicide: A Study in Sociology, Glencoe, Illinois: The Free Press.
8. Erickson, P. (1993). Anthropological Lives: Biographies of Eminent Anthropologists, New Delhi: Reliance Publishing House.
9. Foucault, M. (1972). The Archaeology of Knowledge, London: Tavistock Publication.
10. Geertz, C. (1973). The Interpretation of Culture, New York: Basic Books.
11. Harris, M. (1968). Rise of Anthropological Theory, London: Routledge & Kegan Paul.
12. Hastrup, H. (1995). A Passage to Anthropology: Between Experience and Theory, London: Routledge.
13. Hatch, E. (1973). Theories of Man and Culture, New York: Columbia University Press.
14. Ingham, J. M. (1996). Psychological Anthropology Reconsidered, Cambridge, England: Cambridge University Press.
15. Kumar, K. (2005). From Post-industrial to Post-modern Society, 2nd edition, Malden: Blackwell Publishing.
16. Leach, E. (1976). Culture and Communication, Cambridge, England and New York: Cambridge University Press.
17. Malinowski, B. K. (1960). Scientific Theory of Culture and Other Essays, New York: Oxford University Press.
18. Manganaro, M. (2014). Modernist Anthropology: From Fieldwork to Text, Princeton, New Jersey: Princeton University Press.

19. Manners, R. A. and Kaplan, D. (Ed.) (1968). Theory in Anthropology- A Sourcebook, Chicago: Aldine Atherton.
20. Manners, R.A. and Kaplan. (Eds.) (1968). Theory in Anthropology, Chicago: Aldine Pub. Co.
21. McGee, R. J. and Warms, R. L. (Ed.) (2004). Anthropological Theory, Boston: McGraw Hills.
22. Moore, H. L. (1996). The Future of Anthropological Knowledge, London and New York: Routledge.
23. Nadel, S.F. (1951). The Foundations of Social Anthropology, London: Cohen & West.
24. Needham, R. (1962). Structure and Sentiment: A Test Case in Social Anthropology, Chicago: The University of Chicago Press.
25. Prichard, E and Evan, E. (1981). A History of Anthropological Thought, New York: Basic Books.
26. Redfield, R. (1956). Peasant Society and Culture: An Anthropological Approach to Civilization, Chicago: The University of Chicago Press.
27. Redfield, R. (1962). Human Nature and the Study of Society (Vol.1), Chicago: The University of Chicago Press.
28. Sahlins, D. M. and Service, E. R. (1988) Evolution and Culture, Ann Arbor, Michigan: The University of Michigan Press.
29. Sarana, G. (1983). Sociology and Anthropology and Other Essays, Calcutta: ISRAA.
30. Steward, J. H. (Ed.) (1967). Contemporary Change in Traditional Societies, Urbana: University of Illinois Press.
31. Strauss, C. L. (1974). Structural Anthropology, New York: Basic Books.
32. Turner, R. (1974). Ethnomethodology: Selected Readings, Harmondsworth: Penguin
33. Tyler, S. A. (Ed.) (1987). Cognitive Anthropology: readings, Long Grove, Illinois: Waveland Press Inc.
34. White, L. A. (1949). The Science of Culture: A Study of Man and Civilization, New York: Grove Press Inc.

Course outcome:

1. The objective of this course is to acquaint students with the different anthropological theories, approaches and subjectivity and objectivity in Anthropology.

2. Through this course, the students will be introduced to the brief description and contributions of different schools in Anthropology.
3. Through this course, the students will be introduced to the contributions of different scholars and their contribution on different anthropological theories.
4. The students will also come to know about the contribution of philosophical background of anthropological theories.

14. Course Code: ANT DSE 1C

Course Name: African and European Prehistory

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 5.1 Lower Palaeolithic Culture: Basic raw materials used for tool making by prehistoric men; different techniques of making tools;
- 5.2 C. J. Thomsen contribution and Three Age System;
- 5.3 Early Stone Age cultures of Africa, with special emphasis on Lomekwian, Oldowan, Abbevillian, Acheulian cultures of Africa and Acheulean cultures of Europe, characteristics, technological development, and expansion
- 5.4 Middle Palaeolithic culture: Characteristic features and distribution of Middle Palaeolithic Culture of Europe - Mousterian Cultural phases; traditions (zone-wise distribution); typology, technological and Economic implications of evolution of flake tools, earliest human burials, and emergence of rituals of Neanderthals
- 5.5 Upper Palaeolithic culture: Emergence of blade technology, bone tools, and emergence of AMHS; Characteristics and distribution of Upper Palaeolithic culture of Europe; different traditions - Châtelperronian, Perigordian, Gravettian, Aurignacian, Solutrean, Magdalenian cultures; Emergence and evolution of art: Home art and cave art, characteristics, and sites
- 5.6 Mesolithic culture: Concept of epi-palaeolithic, post-Pleistocene environment and cultural adaptation of man; development of microlithic typo-technology, function; Mesolithic cultural of Europe with its traditions and distribution - Azilian, Tardenoisian, Maglemosian, Kitchen Midden and Ertebolle culture
- 5.7 Emergence of Village Farming Way of Life: Features of Neolithic, main tools and technologies of Neolithic period, Origin of food production practice – Western Asia, consequences of food production; domestication of plant and animal in different regions of the World – Jerico, Jermo and Çatalhöyük

Recommended readings:

1. Allchin and Allchin (1993). The Rise of Civilization of India and Pakistan. Cambridge University Press.
2. Agarwal, D.P. (1992). Man, and Environment in India through Ages. New Delhi, Books and Books
3. Allchin, B., and R. (1982). Rise of civilisation in India and Pakistan, Cambridge University Press, Cambridge
4. Bhattacharya, D.K. (1997). Prehistoric Archaeology (A Comparative Study of Human Succession), Hindustan Publishing Company, Delhi.
5. Bhattacharya, D.K. (1978). The Emergence of Culture in Europe, B.R. Publishing Corporation, Delhi.
6. Clark, G. (1977). World Prehistory: A New Outline, Cambridge University Press.
7. Clark, J.G.D. (1936). Mesolithic settlement of Northern Europe. Cambridge University Press, Cambridge
8. Fagan, B.M. (2004). People of the Earth: An Introduction to World Prehistory. Eleventh Edition, Pearson Education.
9. Gamble, C. (1986). The Palaeolithic Settlement of Europe, Cambridge University Press.
10. Reddy, V.R. (1991). Neolithic and post Neolithic Cultures, Mittal publication, New Delhi.
11. Sankalia, H.D. (1974). Prehistory and Protohistory of India and Pakistan, Poona, Deccan College.

Course Outcome:

1. The objective of this course is to acquaint students with cultural sequences of prehistoric cultural evidences from Palaeolithic to Chalcolithic phase in Europe and Africa.
2. Students will learn about Cultural evolution during Pleistocene throughout the world.
3. Students will learn about Holocene cultural evolution throughout the world.

16. Course Code: ANT DSE 2A

Course Name: Nutritional Anthropology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 16.1 History of growth studies in Anthropology; importance of growth studies.
- 16.2 Basics of pre-natal and post-natal growth; growth processes and stages of growth; growth curves and variation in growth curves; secular trends in growth.
- 16.3 Measurement of growth: cross-sectional, longitudinal, linked longitudinal and mixed longitudinal; problems of collecting data on human growth.
- 16.4 Factors affecting growth: genetical, hormonal and environmental
- 16.5 Brief outline of the nutrients of the human body, human variation in food intake and nutritional requirements.
- 16.6 Undernutrition, overnutrition and obesity, socio-cultural factors affecting nutrition.
- 16.7 Energy requirements of the human body, Basal Metabolic Rate (BMR), factors affecting the Basal Metabolic Rate.
- 16.8 Nutritional high-risk groups: infants, pregnant and lactating mothers, and elderly persons.
- 16.9 Nutritional status of India with special reference to West Bengal.
- 16.10 Food and culture; food habits: attitude towards food, food taboos, food choices, and food preferences.
- 16.11 Secular trends in anthropometric characters with special reference to stature in India.

Recommended readings:

- 1. Beguin, B. (1999). Patterns of Human Growth, Cambridge: Cambridge University Press.
- 2. Cameron, N. (2002). Human Growth and Development, London: Academic Press.
- 3. Falkner, F. and Tanner, J. M. (1986). Human Growth: A comprehensive treatise, New York: Plenum Publishing.
- 4. Ganguly, P. & Pal, A. (1974). "Secular Trend in Stature in India", Indian Anthropology Today, ed. D. Sen, Calcutta: Department of Anthropology, Calcutta University, 42-48.
- 5. Ganguly, P. (1979). "Progressive Decline in Stature in India: A Study of Sixty Population Groups", Physiological and Morphological Adaption and Evolution, ed., William A. Stini, The Hague: Mouton Publishers, 315-37.
- 6. Harrison, G. A. et.al. (1964). Human Biology: an introduction to human evolution and growth, New York: Oxford University Press.
- 7. Tanner, J. M. (1990). Fetus into Man: Physical Growth from Conception to Maturity Cambridge, MA: Harvard University Press. Downloaded

Course outcome:

1. The objective of this course is to acquaint students with the basics and history of the growth study in anthropology and subject matters and the importance of this discipline.
2. Through this course, the students will be introduced to the basics of different stages and secular trends in growth studies.
3. Through this course, the students will be introduced to the different methods and the measurements in growth studies.
4. The students will also come to know about the different nutrients and factors effecting the human growth.
5. The students will be introduced to the different problems and its responsible factors related to the human growth and also about the cultural determinants of food habits.
6. The students will also learn about the nutritional status of India with reference to the West Bengal.

17. Course Code: ANT DSE 2B

Course Name: Environmental Anthropology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 17.1 Definition, aim and scope of Environmental Anthropology. Historical background and development of Environmental Anthropology. Concepts of Environmental Determinism and Environmental Possibilism.
- 17.2 Branches and Concepts: Ecological Anthropology, New Ecological Anthropology and, Environmental Anthropology.
- 17.3 Cultural Ecology and the Contribution of Julian Steward; Critique of Julian Steward.
- 17.4 Contribution of Clifford Geertz, Fredrik Barth, Andrew P. Vyada and Roy Rappaport in the study of human-Environment relationship.
- 17.5 Ethnoecology, Traditional Environmental Knowledge, Sacred Groves.
- 17.6 Ways of Subsistence and Environment: Hunting-Gathering, Horticulture, Pastoralism and Agriculture.
- 17.7 Environmentalism and environmental protest movements with special reference to India. Environment and Development. Environmental issues including rights and movement related to the landscape, water, mining, and Forest.

17.8 Emerging Concepts and fields: Anthropocene, Conservation, Climate Change, Natural Disaster, Environmental Impact Assessment. Outline of the legal provisions related to environmental protection in India.

Recommended readings:

1. Cohen, Yehudi A. (1968). *Man in adaptation; the cultural present*. Chicago: Aldine Pub. Co.
2. Geertz, Clifford, (1963). *Agricultural Involution*. Berkeley: University of California Press.
3. Guha, Ramchandra, (2000). *Environmentalism – A Global History*. New York: Longman.
4. Hardesty, L. K. (1977). *Ecological Anthropology*. New York: John Wiley & Sons.
5. Kohli, Kanchi and Menon, Manju, 2021. *Development of Environmental Laws in India*. Cambridge: Cambridge University Press.
6. Kopnina, H. and Shoreman-Ouimet, E. (Eds.). (2011). *Environmental anthropology Today*. New York: Routledge.
7. Moran, E. F. (1979). *Human Adaptability*. California: Duxbury Press.
8. Rappaport, R. A. (2020). *Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People*. USA: Waveland Press, Inc.
9. Steward, J. H. (1955). *Theory of Culture Change*. The University of Michigan: University of Illinois Press.
10. Townsend, P. K. (2000). *Environmental Anthropology*. Prospect Heights, III.: Waveland Press.
11. Vayda, Andrew P., (2009). *Explaining Human Actions and Environmental Changes*. Lanham: Altamira Press.

Course outcome:

1. The objective of this course is to acquaint students with the basics of the subject Environmental Anthropology, the subject matter, and the historical background and development of the discipline.
2. Through this course, the students come to know to the contributions and concepts proposed by different anthropologists, approach to the understanding of human-environment relationship, and contemporary issues concerning environment.
3. The students will also come to know about the environmentalism, human adaptation in different ecological settings, and the anthropological studies on climate change, weather

and natural disaster, and will acquire such pragmatic skills like Environmental Impact Assessment and legal provisions for environmental protection.

18. Course Code: DSE 2C

Course Name: Theories of Prehistoric Anthropology and Museology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 18.1 Preformation theory, Catastrophism, Uniformitarianism, Darwin's theory
- 18.2 Effect of three age system in human cultural history, Processual archaeology, post-processual archaeology,
- 18.3 Neolithic Revolution, consequences, and effects; theories of Neolithic revolution – Oasis theory, nuclear zone theory. Tension zone theory, Independent Parallel Inventions;
- 18.4 Geo-archaeology – formation of soil, calcrete, ferricrete, Rock circle concept.
- 18.5 Basic Concepts in Ethnoarchaeology- Nature and interrelationship of archaeological and ethnographic records: Role of Analogy. Definition, scope, and methods of ethnoarchaeology, Ethnoarchaeological researches in India;
- 18.6 Experimental Archaeology- Definition, Aim and scope, history, theoretical background, types of experimentations in archaeology. Flint Knapping Experiments in India.
- 18.7 Definition and scope of Museum; History, Development; Types of Museums: Open Air, Eco Museum, Community Centre, Galleries and Virtual Museum, Specialized Museum, Children Museum, Personal Museum, Site Museum etc.; Functions of Museum; Legislations and Conventions related to Museum; Relationship between museum and Anthropology; Relevance of Museums and its role in society; Museum and Community: Role of museums in modern society and sustainable development
- 18.8 Museum as a profession; Role of Director, Curator, Conservator, Guide lecturer; Collection management and museum ethics; Documentation of museum objects;
- 18.9 Types of exhibitions and their purposes; Museum education; visitor engagement; Museum communication; Technology/ IT in Museums; Threat to museum collection, museum environment, care, and conservation of collection; Handling/ care and Storage of museum objects;
- 18.10 Changing concept of Museums: Virtual Museums, Offbeat Museums, Science and Technological museums etc., Financial Management - Strategy, Planning, Fund, Budget; Challenges and problems of museums.

Recommended Reading:

1. Renfrew, Colin and Paul Bahn (2006). Archaeological: Theories and Methods and Practice. Thames and Hudson. London
2. Hodder, Ian. (1992). Theory and Practice in Archaeology. London: Routledge.
3. Jones, Andrew 2004. Archaeological Theory and Scientific Practice. Cambridge: Cambridge Press.
4. Preucel, R. (ed). 1991. Processual and Post-processual Archaeologies Multiple Ways of Knowing the Past. Carbondale (Illinois): Southern Illinois University Press.
5. Shanks, M. and Tilley, C., 2016. Re-constructing archaeology: theory and practice. Routledge.
6. Drewett, P., 2011. Field archaeology: an introduction. Routledge.
7. Wheeler, M., 1954. Archaeology from the Earth. Penguin Books.
8. Balme, J. and Paterson, A. eds., 2009. Archaeology in practice: a student guide to archaeological analyses. John Wiley & Sons.
9. Pearsall, D.M., 2007. Encyclopedia of Archaeology. Academic Press.
10. David, N., Kramer, C. and Nicholas, D., 2001. Ethnoarchaeology in action. Cambridge University Press.
11. Coles, J. 1979. Experimental Archaeology. Hutchinson, London.
12. Flenniken, J.J. 1984. The Past, Present and Future of Flintknapping: An Anthropological Perspective. Annual Review of Anthropology. 13:187-203.
13. Crabtree, D.E. 1975. Comments on Lithic technology and Experimental Archaeology. In Lithic Technology: Making and Using Stone Tools ed. by E. Swanson. Mouton Publishers. The Hague, Paris: 105-114.
14. Whittaker, J. 2009. Flint Knapping: Making and Understanding Stone tools. University of Texas Press, Austin.
15. Binford, L. 2011. Processual Archaeology: Lewis Binford Essays. Smithsonian Institute.
16. Allchin, B. 1994. Living Traditions: South Asian Ethnoarchaeology. New Delhi: Oxford & IBH Co Pvt Ltd.
17. Dhavalikar, M.K. 1983. Ethnoarchaeology in India, Bulletin of the Deccan College Research Institute 42: 49-68.
18. Murty, M.L.K. 1985. Ethnoarchaeology of Kurnool Cave Area, World Archaeology 17 (2): 192-205.

Course Outcome:

1. The learning objectives that students are expected to achieve after studying topic such as, understanding of foundational theories in archaeology.
2. Students will be able to apply the principles and methods of ethnoarchaeology and experimental archaeology to analyze and interpret archaeological data and human behavior in the past.
3. Students will be able to define a museum and articulate its core functions, including collecting, conserving, research, interpreting and exhibiting tangible and intangible heritage.
4. To comprehend how museums serve as inclusive spaces for social cohesion and community empowerment.
5. To identify how museums promote understanding of social, environmental, and cultural issues in the context of sustainable development.
6. To describe the scope of the museum profession, recognizing it as a field focused on managing and presenting cultural heritage.

19 Course Code: ANT DSE 3A

Course Name: Bio-cultural Aspect of Health and Disease

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 19.1 Why to study Health? Definition of health by WHO; illness and disease; Public Health; Concepts of psychosocial/mental health and its determinants; Bio-cultural aspects of health and disease
- 19.2 Epidemiology of common diseases: Malaria, Tuberculosis, Leprosy, CVD risk factors: Diabetes, hypertension, obesity.
- 19.3 Infectious diseases: STDs, HIV/AIDS, COVID-19; Treatment methods: Modern and traditional; Ethnicity and health; Gene-environment interaction in health and disease: Kuru, Sickle-cell anemia and osteomalacia
- 19.4 Basic concepts of some research methods in bio-anthropological study: Case-control, follow-up, cohort, intervention, clinical trial, cross-sectional and longitudinal; Data source: Primary, secondary, hospital and clinic

19.5 Definition of immunity; Brief idea about immunity system and its relationship with health; Concepts and functions of immunity system; Immunisation and vaccination; Types of immunity; Concepts of autoimmunity and chronic autoimmune diseases: Type-1 diabetes, Rheumatoid arthritis.

19.6 Definition and concept of ageing; Concepts of gerontology and geriatrics, Human ageing and senescence: Anthropological significance of research in ageing.

19.7 Theories on ageing: Biological, psychological and social; Concepts and perspectives of successful/healthy ageing.

19.8 Methods/tools of ageing studies: Quality of Life (QoL), general health (by different GHQs, ADL and IADL), nutritional health (MNA), psychosocial issues: depression, loneliness, cognitive impairment.

19.9 Menstruation and menopause: sociocultural and biological aspects; physiology, myth, hygiene practices and awareness related to menstruation; Family planning and contraceptives: social cultural and biological issues.

19.10 Definition and concepts of reproduction and obstetrics; Knowledge, attitude and practice during obstetric phases: Antepartum, Intrapartum and Postpartum.

Recommended readings:

1. Bhat, P.N.M. (1995). "Maternal Mortality in India; Estimate from Regression Model" Studies in Family Planning, Vol. 16 (4).
2. Bonita, R., Beaglehole, R., and Kjellström, T. (1993). Basic epidemiology, Geneva: World Health Organization.
3. Emery, A. E. H. (1968). Elements of Medical Genetics, Edinburg: Churchill Livingstone.
4. Engelhardt, H., Kohler, H. P., & Prskawetz, A. (2009). Causal analysis in population studies. In Causal Analysis in Population Studies (pp. 1-7). Springer, Dordrecht.
5. Grigg, D.B. 1982. Modern population growth in historical perspective, Geography 67, pp.97- 108.
6. Harrison, G. A. et.al. (1964). Human Biology: an introduction to human evolution and growth, New York: Oxford University Press.
7. Husain, M. (2003). Human Geography, New Delhi: Rawat Publications.
8. Joralemon, D. (2010). Exploring Medical Anthropology, New Jersey: Prentice Hall.

9. Mehta, P. M. and Chauhan, K. B. (2016). Aging, Nutrition and Health (1st Ed.), Delhi: Kalpaz Publication.
10. Park. K. (2000). Preventive and Social Medicine. Jabalpur: Banarsidas Bhanot Publishers.
11. Stearns, S. C., and Koella, J. C. (Eds.). (2008). Evolution in health and disease. Oxford: Oxford University Press.
12. Stinson, S., Bogin, B., & O'Rourke, D. H. (Eds.). (2012). Human biology: an evolutionary and biocultural perspective, New Jersey: John Wiley & Sons.
13. Vlasoff, M. (1979). "Labour demand and economic utility of children: A case study of rural India". *Population Studies* 33:415-28, Taylor & Francis Ltd.
14. W.H.O. (1999). The World Health Report 1999: Making a Difference, Geneva, Switzerland: World Health Organisation.
15. Arking, R. (1991). Biology of Aging: Observations and Principles, New Jersey: Prentice Hall.
16. Crews, D. E. (2010). Human senescence: Evolutionary and biocultural perspectives, New York: Cambridge University Press.
17. Foos, P. W. and Clark, M. C. (2013.). Human Aging, London: Routledge, Taylor and Francis Group.
18. Rajan, S. I., Mishra, U. S., & Sarma, P. S. (2013). Demography of Indian aging, 2001–2051. In An Aging India: Perspectives, Prospects, and Policies (pp. 11-30). Routledge.
19. Schaie, K. W. and Willis, S. L. (Eds.) (2016). Handbook of Psychology of Aging, London: Academic Press.
20. Schneider, E. and Rowe, J. W. (Eds.) (2011) Handbook of the Biology of Aging, edited by, New York: Academic Press.
21. Sokolovsky, J. (Ed.) (1997). The Cultural Context of Aging: Worldwide Perspectives. Westport, CT: Bergin and Garvey.
22. UNICEF, and UNICEF. (2016). Strategy for Water, Sanitation and Hygiene 2016-2030, Programme Division: UNICEF.
23. Ussher, J. M., Chrisler, J. C., and Perz, J. (Eds.) (2020). Routledge International Handbook of Women's Sexual and Reproductive Health (1st Ed.), London: Routledge.
24. W.H.O. (2015). Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential practice, Geneva: World Health Organization.

25. Wingood, G. M., and DiClemente, R. J. (Eds.) (2002). *Handbook of Women's Sexual and Reproductive Health* (1st Ed.), New York: Springer.
26. World Health Organization. (2015). *World Report on Aging and Health*. Geneva, Switzerland: World Health Organization.
27. World Health Organization. (2017). *Consolidated Guideline on Sexual and Reproductive Health Rights of Women Living with HIV*, Geneva. Switzerland: World Health Organization.

Course outcome:

1. The objective of this course is to acquaint students with the theories, concepts and themes of aging as well as women's reproductive health.
2. Through this course, the students will be introduced with different aspects of aging with its consequences, social/psychological and biological theories, successful aging and its biosocial correlates.
3. Additionally, the students will be introduced to basic knowledge about women's reproductive health through different reproductive stages of women; from menarche to menopause, health and disease related issues, factors for infertility and assisted pregnancies as well as chronic illness associated with reproductive life of women.
4. The objective of this course is to acquaint students with the bio-cultural aspect and anthropological approaches of studying health, disease, and illness.
5. Through this course, the students will be introduced to the brief description of Epidemiology and its subject matters.
6. Through this course, the students will be introduced to the different health related programmes.
7. The students will also come to know about the health issue of the old aged population in the society.

20 Course Code: ANT DSE 3B

Course Name: Developmental Anthropology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

20.1 Development: Meaning and evolution of the concept; Indices and measurements of development; Anthropological concept of development; Policy studies in Anthropology.

20.2 Applied, Action and Development Anthropology; Contribution of Anthropology to development studies.

20.3 Participatory approach to development; Participatory Rural Appraisal (PRA) and Rapid Rural Appraisal (RRA); Limitations of PRA and RRA.

20.4 Rural development with special reference to India and West Bengal in particular; Special programmes on rural development in India; Poverty alleviation schemes in India and West Bengal.

20.5 Panchayati Raj Institutions in India with special reference to West Bengal.

20.6 The concept of development-caused displacement; Impoverishment risks under development-caused displacement; Displacement scenario in India and rehabilitation Anthropological contributions with special reference to the study of the displacement of tribals.

20.7 Land acquisition Act in India and its limitations; Land reforms in India and the assessment of land reforms; the New Land Acquisition Law of India: its positive aspects and limitations; Ethnography of land acquisition.

20.8 Evolution of Forest policy in India: pre-colonial, colonial, and post-colonial period; Community and Social Forestry; Joint Forest Management.

20.9 Common Property Resources (CPR) and the management of CPR with special reference to India; Water management policy in India.

20.10 Application of Socio-cultural Anthropology in human development; Role of social cultural anthropology in Social Impact Assessment (SIA) and in formulating developmental policies related to land, forest, and water.

Recommended readings:

1. Cernea, M. M. (1991). *Involuntary resettlement: Social research, policy and planning. Putting people first: Sociological variables in rural development*, 2, 188-215. World Bank: Oxford University Press.
2. Cernea, M. M. (2007). Financing for development: Benefit-sharing mechanisms in population resettlement. *Economic and Political Weekly*, 1033-1046.
3. Cernea, M. M. and Maldonado, J. K. (Eds.) (2018). *Challenging the prevailing paradigm of displacement and resettlement: risks, impoverishment, legacies, solutions*, Oxon: Routledge.

4. De Wet, C. J. (2006). Development-induce Displacement: Problems, Policies, and People, Oxford, New York: Berghahn Books.
5. Dube, S. C. (1990). Traditions and Development, New Delhi: Vikas Publication House.
6. Fernandes, W., Chetri, S., Lama, S., Joseph, S. (2012). Progress: at whose cost? Development induced displacement in West Bengal 1947-2000. Guwahati: North Eastern Social Research Centre.
7. Guha, A. (2007). Land, law and the left: The Saga of Disempowerment of Peasantry in the Era of Globalisation, New Delhi: Concept Publishing Company.
8. Guha, A. (2022). Encountering Land Grab: An Ethnographic Journey, New Delhi: Manohar
9. Mahapatra, L. K. (1999). Resettlement, impoverishment, and reconstruction in India: development for the deprived. New Delhi: Vikas Publishing House.
10. Mathur, K. (2013). Panchayati Raj, New Delhi: Oxford University Press.
11. Pandey, P. (2008). Developmental Anthropology, New Delhi: Concept Publication Company.
12. Shah, G and Sah, D.C. (Eds.) (2002). Land Reform in India: Performance and Challenges in Gujarat and Maharashtra, New Delhi: Sage Publications.
13. Sharma, B. D. (1978). Tribal Development: Conceptual Frame, Bhopal: Tribal Research and Development Institute.
14. Upadhyay, V. S. and Pandey, G. (2003). Tribal Development in India: A Critical Appraisal, Ranchi: Crown Publication.

Course outcome:

1. The objective of this course is to acquaint students with the basics of Development Anthropology and its subject matters.
2. Through this course, the students will be introduced to the brief description and contribution of knowledge of Applied, Action, and Development anthropology.
3. Through this course, the students will be introduced to the brief description of different methods and development programmes used in development anthropology.
4. The students will also come to know about the use of anthropological knowledge in solving different development problems, and in policy making.

21 Course Code: ANT DSE 3C

Course Name: Biocultural Evolution and Recent Development

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 21.1 Hominization process, Bio-cultural evolution of man – a million years of journey with evidences and examples, positive feedback through Bipedalism.
- 21.2 Development of stone tool type and technology, Mode - I to Mode – V model development with evolution of brain (encephalization).
- 21.3 Brief discussion: pre-hominid and early hominid species and their sub-species, and its phylogenetic position and palaeoenvironment evidences
- 21.4 Appearance of genus Homo; Homo habilis; Homo erectus from Asia (Indonesia and China) and Homo ergaster, Homo heidelbergensis - distribution, general features, and their phylogenetic status;
- 21.5 Narmada man, Pleistocene animal fossil recovered in India.
- 21.6 Homo neanderthalensis: salient features; conservative and progressive type, unique cultural developments, phylogenetic position, causes of extinction; Homo floresiensis,
- 21.7 Early Homo sapience - Cro-Magnon, Grimaldi, Chancelade, AMHS.
- 21.8 Modern human origin: Out of Africa and Multiregional theory. Co-existence of the hominid, Denisovan man and its controversies.
- 21.9 Palaeodemography: Estimating Population size; concept of mortality, fertility, and morbidity; Human population before and after agriculture.
- 21.10 Recent Genomic study of fossils - Traces of evolution from mtDNA and Y-chromosome. Evolutionary aspects of Human Chromosomes, Founder effect, and Bottleneck effect in Human Evolution. Molecular clock theory.

Recommended Reading:

- 1. Badam, G.L. 1979. Pleistocene Fauna of India, Pune: Deccan College.
- 2. Brothwell, D.R. and A.M. Pollard. 2001. Handbook of Archaeological Science, New York: John Wiley and Sons Ltd.
- 3. Elizabeth, J. Reitz and E.S. Wing. 1999. Zooarcheology, Cambridge: Cambridge University Press
- 4. Henke, W., T. Hardt, and I. Tattersall. Editors. 2013. Handbook of Paleoanthropology 3 Vols: Springer. Second edition
- 5. Dunsworth H. M. 2010. Origin of the genus Homo. Evolution: Education and Outreach, 3(3), pp-353-366.

6. Delson, E. Tattersall, I. Van Couvering, J. Brooks, A. S. 2006. Encyclopedia of Human Evolution and Prehistory. Garland Publishing House. New York.
7. Norton, C. J. Braun, D. R. 2010. Asian Paleoanthropology: From Africa to China and Beyond. Springer.
8. Larsen, C. S. 2010. Essentials of Physical Anthropology: Discovering our Origins. W. W. Norton and Company.
9. Cela- Conde, C. Ayala, F. J. 2007. Human Evolution: Trails from the Past. Oxford University Press.
10. Henke, W. Tattersall, I. 2007. Hand Book of Paleoanthropology. Springer.
11. Dunsworth, H.M., 2007. Human origins 101. Greenwood Press, London.
12. Kimura, M., & Weiss, G. H. (1964). The stepping stone model of population structure and the decrease of genetic correlation with distance. *Genetics*, 49(4), 561.

Course Outcome:

1. Students should be able to comprehend the Hominization process and the bio-cultural evolution of humans over millions of years, supported by evidence and examples.
2. Learners should be able to analyze the “Out of Africa” and “Multiregional theory” regarding modern human origins, including the co-existence of hominids and the Denisovan.
3. Students should be aware of recent genomic studies of fossils, particularly traces of evolution from mtDNA and Y-chromosome.
4. Students should learn about the evolutionary aspects of human chromosomes, including the Bottleneck effect in human evolution and molecular clock theory.

22 Course Code: ANT DSE 4A

Course Name: Biological Anthropology Practical II

Marks: 50

Credits: 4; Class Hours: 120

22.1 Osteometric measurements and indices of human long bones: Femur, Tibia, Fibula, Humerous, Radius, and Ulna.

22.2 Craniometry – Human Skull

22.3 Dermatoglyphics: Fingers and palms; TFRC and AFRC; Landmarks identification

22.4 Identification of genetic markers

- 22.5 Evaluation of Laboratory notebook
- 22.6 Assessment of nutritional status and body composition
- 22.7 Measurement of Physical Fitness Index (PFI) by Harvard's step test
- 22.8 Measurement of VO₂ Max by step test method
- 22.9 Measurement of body surface area by Dubois and Dubois formula.
- 22.10 Measurement of systolic and diastolic blood pressures.
- 22.11 Evaluation of Laboratory notebook.

Recommended readings:

- 1. Charles, R. (1878). A Manual of Anthropometry, London: J. & A. Churchill
- 2. Gandy, J. W., Madden. A. and Holdsworth, M. (Eds.) (2012). Oxford Handbook of Nutrition and Dietetics, Oxford: Oxford University Press.
- 3. Poddar, S. R. and Bhagat, A. (2018). A Hand Book of Osteology, New Delhi: Scientific Publishers.
- 4. Preedy, V. R. (Ed.) (2012). Handbook of Anthropometry, London: Springer.

Course outcome:

- 1. The objective of this course is to acquaint students with the practical facet and instrumental used in the Osteometry, Craniometry, Dermatoglyphics, Genetic Markers, Nutrition and Physiological Anthropology.
- 2. The student will come to know about the different indices and test used in Nutrition and Physiological Anthropology on practical basis.

23 Course Code: ANT DSE 4B

Course Name: Anthropology of Religion and Ethnicity

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 23.1 Theoretical Approaches to the study of religion in Anthropology: Intellectual, Sociological, Psychological, Functional, Interpretative, Phenomenological.
- 23.2 Contributions to the study of ritual and religion: E.B. Tylor, James Frazer, Emile Durkheim, Arnold Van Gennep, Bronislaw Malinowski, E. Evans-Pritchard, Milford Spiro, Clifford Geertz, Victor Turner, Mary Douglas, Surajit Sinha, L.P. Vidyarthi.

23.3 Religion in contemporary society: Fundamentalism, Pilgrimage, Diaspora Religion, Cult, New Religious Movement, Civil Religion, Religion and Globalisation.

23.4 Ethnicity: Definition and Features; concept of ethnic group; anthropological approaches to the study of ethnicity; concept of identity and ethnic identity; symbolic construction of community; idea of imagined community.

23.5 Process of ethnic identity formation; Methodology for determination of ethnic identity; ethnic boundary and its maintenance; Ethnicity and nationality; Ethnicity and race; ethnicity and tribe; ethnic minorities.

23.6 Ethnic movements: history of ethnicity-based movements in India and other parts of the world; regional characters of ethnic movements; governance, development, and ethnic movement; ethnic conflicts.

23.7 Diaspora and diaspora identity.

Recommended readings:

1. Barth, F. (1998). Ethnic Group Boundaries, Illinois, Long Grove: Waveland Press Inc.
2. Brass, P. R. (1991). Ethnicity and Nationalism: Theory and Comparison, New Delhi: Sage.
3. Danda, A. K. (1992). Research Methodology in Anthropology, New Delhi: Inter-India Publications.
4. Durkheim, E. (1965). The Elementary Forms of the Religious Life, New York: The Free Press.
5. Erikson, T.H. (1993). Ethnicity and Nationalism London: Pluto Press.
6. Evans-Pritchard, E. E. (1965). Theories of Primitive Religion, Oxford: Clarendon Press.
7. Evans-Pritchard, E. E. and Gillies, E. (1937). Witchcraft, Oracles and Magic Among the Azande, Oxford: Clarendon Press.
8. Freud, S. (1938). Totem and Taboo, Harmondsworth, England: Penguin Books.
9. Malinowski, B. (1948). Magic, science, Religion and Other Essays, Boston, Mass: Beacon Press.
10. Mann, R. S. and Sahay, V. S. (1981). Nature -Man –Spirit Complex in Tribal India, New Delhi: Concept.
11. Nicholas, R. W. (2003). Fruits of Worship: Practical Religion in Bengal, Kolkata: Orient Blackswan.
12. Wallace, A.F.C. (1966). Religion: An Anthropological View, New York: Random House.

Course outcome:

1. The objective of this course is to acquaint students with the anthropological approaches on the religion study.
2. Through this course, the students will be introduced to the contribution of different scholars on religion study.
3. Through this course, the students will be introduced to the theories and concepts related to the religious beliefs.
4. The students will also come to know about the brief description, concepts and theories related to the ethnicity study.
5. The students will also come to know about the historical base and features of ethnicity movements.

24 Course Code: ANT DSE 4C

Course Name: Prehistoric Archaeology Practical

Marks: 50

Credits: 4; Class Hours: 120

- 24.1 Drawing, description and identification of prehistoric tools of different cultural periods.
- 24.2 Techno-metric analysis and functional interpretation of Prehistoric Tools and artifacts.
- 24.3 Identification of basic petrographic (Microscopic) features of lithic raw materials.
- 24.4 Classification of lithic raw materials according to their hardness (Moh's scale).
- 24.5 Short field visit to any prehistoric site or museum in India.

Recommended Reading:

1. Andrefsky, W. 2005. Lithics: Macroscopic approaches to Analysis. Cambridge University Press.
2. Bhattacharya, D.K. (1979). Old Stone Age Tools: A Manual of Laboratory Techniques of Analysis. Calcutta: K. P. Bagchi and Company.
3. Ebright, C.A. 1987. Quartzite Petrography and its Implications for Prehistoric Use and Archeological Analysis, Archaeology of Eastern North America 15:29-45.

4. Ghoshmaulik S. K., Rath, Basanti and Mishra, S.K., Practical Anthropology, Society for Anthropological and Archaeological Studies, Orissa
5. Inizan, M. L., M. R. Ballinger, H. Roche and J. Tixier. 1999. Technology and terminology of Knapped Stone. Nanterre: CREP.
6. Oakley, K. P. (1972). Man, the Tool Maker. London. Trustees of the British Museum of Natural History.
7. Sankalia, H. D. (1982). Stone Age Tools: Their techniques, Names and Probable Functions. Poona: Deccan College.
8. Whittaker, J. 1994. Flintknapping: Making and Understanding Stone Tools. University of Texas Press.
9. Goodman, M.E. 1944. The Physical Properties of Stone Tool Materials, American Antiquity 9(4): 415-433.

25 Course Code: ANT DSE 5 A/B/C

Course Credit: 4

Marks – 50

Course Name: MOOCs

(To be selected by the students from the selected options by the faculties)

26 Course Code: ANT DSC 12

Course Name: Social Service / Community Engagement

Marks: 25

Credits: 2

The student is required to get engaged in a social Service/ Community work for a period of not less than 10 days. The engagement must be documented with official communication, written report and visuals. The written report will clearly mention the objectives of engagement, setting, target people/community, importance/rationale of work, nature of activity, duration of work and outcome. The word limit will be 3000-5000.

The student may undertake the work independently with the permission/approval from the departmental authority or the department may facilitate such engagement. A project report has to be submitted by the student for evaluation.

Semester: IV (FOURTH)

Total Credit: 22

Total Marks: 275

27 Course Code: ANT DSE 6A

Course Name: Population Genetics

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

27.1 Definition and scope of population genetics, its relevance in Anthropology.

27.2 Concept of gene frequency and gene pool. Population structure and genetic structure; Mendelian population as the ultimate endogamous unit of population genetic study.

27.3 Mating system: Random mating/pan mixing; selective mating/ preferential mating; mate choice/ sex selection; assortative mating.

27.4 Genetic structure of human populations. Principles of genetic equilibrium; Hardy-Weinberg law. Calculation of gene frequencies.

27.5 Causes for changes in gene frequencies: mutation, hybridization, genetic drift and selection.

27.6 Genetic polymorphism – Balanced and transient polymorphism with reference to sickle cell gene. SNP, RFLP, Insertion/Deletion, VNTR.

27.7 Measuring of relatedness; heterozygosity calculation

27.7 Biological consequences of mating systems: Consanguinity; inbreeding and outbreeding. Inbreeding coefficient (F-ratios); inbreeding: heterozygosity; homozygosity; genetic load.

27.8 Reproductive isolates and models of isolation; models for studying gene flow: island model, the stepping stone model, diffusion model, and isolation by distance model.

27.9 Role of social divisions and hierarchy in genetic isolation

27.10 Partial selection and complete elimination against recessive and dominant homozygotes; Heterozygous advantage.

Recommended readings:

1. Bhamrah, H. S. and Chaturvedi, C. M. (2002). A Textbook of Genetics, New Delhi: Anmol Publications Pvt. Ltd.
2. Bodmer and Cavalli Sforza. (1977). Genetics, Evolution and Man. American Society of Human Genetics.
3. Brudette, W. J. (1962). Methodology in Human Genetics, California: Holden-Day.
4. Cavalli-Sforza, L. L. and Bodmer, W. F. (1971). The Genetics of Human Populations, San Francisco: W. H. Freeman.
5. Crow, F. and Kimura, M. (1970). An Introduction to Population Genetics Theory, New York, Harper and Row.
6. Cummings, M. R. (1997). Human Heredity: Principles and Issues, Belmont, California; London: Wadsworth.
7. Dalela, R. C. and Verma, S. R. (1972). A Text Book of Genetics, Meerut, U.P.: Jay Prakash Nath.
8. Gardner, E. J. and Snustad, D. P. (1981). Principles of Genetics (6th Ed.), New York: John Wiley & Sons.
9. Grigg, D.B. 1982. Modern population growth in historical perspective, Geography 67, pp.97- 108.
10. Harris, H. (1966). Human Biochemical Genetics, Cambridge: Cambridge University Press.
11. Harrison, G. A. et.al. (1964). Human Biology: an introduction to human evolution and growth, New York: Oxford University Press.

12. Harrison, G.A., Boyce, A. J. and Wenner-Gren Foundation for Anthropological Research. (1972). *The Structure of Human Population*, Oxford: Clarendon Press.

13. Kimura, M., & Weiss, G. H. (1964). The stepping stone model of population structure and the decrease of genetic correlation with distance. *Genetics*, 49(4), 561.

14. King, R. C., Stansfield, W. D., & Mulligan, P. K. (2006). *A dictionary of genetics*, Oxford University Press.

15. Lewis, R. (2003). *Human Genetics: Concepts and Applications*, New York: McGraw- Hill.

16. Mange, E. J. and Mange, A. P. (1994). *Basic Human Genetics*, Sunderland, MA: Sunauer Associates Inc.

17. Montagu, A. (Ed.) (1964). *Concept of Race*, New York: The Free Press; London: Collier-Macmillan.

18. Relethford, J. H. (2013). *The Human Species: An Introduction to Biological Anthropology*, New York: McGraw-Hill.

19. Rothwell, N.V. (1977). *Human Genetics*, New Jersey: Prentice Hall.

20. Shukla, B.R.K. and Rastogi, S. (2011). *Physical Anthropology and Human Genetics – An Introduction*. Calcutta: Palaka Publication.

21. Stern, C. (1949). *Principles of Human Genetics*, San Francisco: W. H. Freeman and Co.

22. Weiss, K. M. and Ballonoff, P. A. (1975). *Demographic Genetics*, Stroudsburg, Pennsylvania: Dowden Hutchinson & Ross.

23. Winchester, A. and Mertens, T. R. (1983). *Human Genetics*, Columbus: C. E. Merrill Pub. Co.

24. Wright, S. (1984). *Evolution and the Genetics of Populations*, Chicago: University of Chicago Press.

25. Yunis, J. J. (Ed) (1969). *Biochemical Methods in Red Cell Genetics*, New York: Academic Press.

Course outcome:

1. The objective of this course is to acquaint students with the basics of Human Population Genetics, its relevance, and subject matters.
2. Through this course, the students will be introduced to the different concepts and theories related human population genetics.
3. Through this course, the students will be introduced to the types and biological consequences of mating system.

4. The students will also come to know about the genetic polymorphism, genetic structure of human population, and the cause of change in genetic structure of human population.
5. The students will also come to know about the concepts of the concepts of reproductive isolation, models of isolation, and partial selection.

28 Course Code: ANT DSE 6B

Course Name: Medical Anthropology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

28.1 Medical Anthropology; definition, scope, and history of development of the subdiscipline; theoretical approaches in medical anthropology; critical Medical Anthropology; Applied Medical Anthropology.

28.2 Concept of health, disease, and illness in cross-cultural perspectives and their social – cultural dimension; culture specific diseases/illness; mental health – anthropological approach; reproductive and child health.

28.3 Ethno-medicine: meaning and practices; ethno-medicine practitioners and healers; magico-religious aspect of health and healing; epidemiology of selected diseases (HIV/AIDS, leprosy, cholera, cancer).

28.4 Medical Anthropology in India: history and major concern; tribal pharmacopeia; cultural factors of health in rural India; medical pluralism and medical systems: Ayurveda, Unani, Siddha, Naturopathy, Homeopathy, and Allopathy; Yoga – Anthropological perspective.

28.5 Contemporary issues in Medical Anthropology: bio-politics, Pharmaceutical Anthropology, global trafficking of human organs, organ trade and transplantation, health narratives, care and nursing, public health policy, globalization, and Health.

Recommended readings:

1. Brown, P. J., Barrett, R. J. and Padilla, M. B. (1998). Understanding and Applying Medical Anthropology. USA: Mayfield Publishing Company.
2. Chowdhury, A. N. (2012). Culture, Psychiatry and Cultural Competence, INTECH Open Access Publisher.
3. Foucault, M. (1963). The Birth of the Clinic: An Archaeology of Medical Perception, New York: Routledge.

4. Good, B., Fischer, M. M. J., Willen, S. S., and Good, M. – J. D. V. (2010). A Reader in Medical Anthropology, London: Wiley-Blackwell.
5. Grollig, F.X. and Haley, H.B. (Ed.) (1976). Medical Anthropology, Berlin, New York: De Gruyter Mouton Publishers.
6. Joshi, P. C. and Mahajan, A. (1990). Studies in Medical Anthropology, New Delhi: Reliance Publication House.
7. Kalla, A. K. and Joshi, P. C. (2004). Tribal Health and Medicines, New Delhi: Concept Publishing Company.
8. Mishra, A. (2010). Health, Illness and Medicine Ethnographic Readings, New Delhi: Orient Blackswan.
9. Paul, B. D. and Miller, W. B. (Ed.) (1955). Health, Culture and Community, New York: Russel Sage Foundation.
10. Reddy, K. V. (2011). Tribal Ethno-medicine and Health Care Practices, New Delhi: B.R. Publishing.
11. Sargent, C. F. and Johnson, T. M. (1996). Handbook of Medical anthropology: Contemporary Theory and Method. USA: Greenwood Press (Westport, Conn.).
12. Sujatha, V and Abramham, L. (Eds.) (2012). Medical Pluralism in Contemporary India, New Delhi: Orient Blackswan.

Course outcome:

1. The objective of this course is to acquaint students with the theories, concepts and themes of Medical Anthropology and its subject matters.
2. Through this course, the students will be introduced to the brief discussion of Ethno-medicine and its subject matters.
3. Through this course, the students will be introduced to the historical background and the development of Medical Anthropology in India.
4. The students will also come to know about the brief discussion on contemporary issues in Medical Anthropology.

29 Course Code: ANT DSE 6C

Course Name: Evolution of Culture in India and Regional Archaeology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

29.1 Three Age System; Palaeolithic cultures in India: Lower Palaeolithic cultures in India – Sohanian and Acheulian types (early and late), Middle Palaeolithic culture in India - characteristic features, major tool types, important sites, zone-wise differences, Upper Palaeolithic sites - characteristic features, major tool types, important sites; Post-Pleistocene environment

29.2 Mesolithic cultures in India: Characteristic features, major tool types, important regions and sites, chronology with stratigraphic evidence; function of microlithic tools.

29.3 Neolithic revolution, consequences of domestication; Neolithic culture in India and its distribution in different zones, especial emphasis in Eastern Zone (Bengal, Odisha and Bihar).

29.4 Indus valley civilization: origin, distributions, important sites, chronology, features, town planning, trade, religion, and causes of Decline.

29.5 Chalcolithic culture of India: Ahar, Malwa, Jorwe, Kayatha. Iron Age.

29.6 Megalithic culture of India – types, importance, and significance.

29.7 Prehistoric clusters of West Bengal, especially in Western part of Bengal, Excavated archaeological sites in West Bengal, potential area for prehistoric study in Eastern India.

Recommended Reading:

1. Agrawal, D. P. (1985). The Archaeology of India. London: Curzon Press.
2. Allchin, B. and Allchin, R. (1982) The Rise of Civilization in India and Pakistan, Cambridge: Cambridge University Press.
3. Bailey, G. N. and Spikins, P. (Eds.) (2008). Mesolithic Europe, Cambridge: Cambridge University Press.
5. Bhattacharya, D.K. (1987). Prehistoric Archaeology: A Comparative Study of Human Succession, Delhi: Hindustan Publishing Corporation.
7. Burkitt, M. C. (1963). The Old Stone Age: A study of Palaeolithic Times, London: Bowes and Bowes University Press.
8. Chakraborty, D.K. (1993). Archaeology of Eastern India, New Delhi: Munshiram Manoharlal Publishers.
10. Ghosh, A. (Ed.) (1990). An Encyclopaedia of Indian Archaeology, Vol I & II, Leiden; New York: E. J. Brill.

11. Paddayya, K. and Basak, B. (Eds.) (2017). Prehistoric Research in the Indian Subcontinent: A Reappraisal and New Directions, New Delhi: Primus Books in collaboration with Centre for Archaeological Studies et Training, Eastern India.
12. Possehl, G. L. (2002). The Indus Civilization: Contemporary Perspectives. Lanham, Maryland: Rowman AltaMira.

Course Outcome:

1. Students will learn about evolution of Pleistocene cultures in Indian sub-continent.
2. They will learn about evolution of Holocene cultures in Indian sub-continent.
3. They will learn about current trends and controversies regarding origin and evolution of culture in southern Asia (India).
4. They will also learn about early urbanization and development of urban centres in Indian sub-continent.

30 Course Code: ANT DSE 7A

Course Name: Applied Biological Anthropology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

30.1 Applied Human Genetics: Genetic screening- Cytogenetic test, biochemical test, and molecular test; Occupational screening, Genetic counselling, Gene editing.

30.2 Nutritional Anthropology: Nutritional and diet survey methods. Evaluation of Body Composition.

30.3 Determination of nutritional status: anthropometric, clinical signs, socioeconomic assessment of nutritional levels. Concept of standard and/or reference values of growth and nutritional status.

30.4 Anthropometry: In determination of growth and nutritional status; Predicting disease or abnormalities. Anthropometric indicators; Malnutrition, CED, and Obesity. Malnutrition: Anorexia nervosa, Adiposity, Kwashiorkor, Marasmus.

30.5 Intervention programmes for the improvement of nutritional levels in India: Assessment and evaluation.

30.6 Forensic Anthropology: definition, aims and scope; Personal identification- use of Osteometry, serology and dermatoglyphics; estimation of age and sex; Medico legal aspects; paternity identification, DNA fingerprinting;

- 30.7 Application of Dermatoglyphics: personal identification, relationship with diseases/ disorders.
- 30.8 Definition and concept of Palaeopathology.
- 30.9 Anthropology of Sports: concept of physiological anthropology, Relationship of different types of sports efficiency and different body proportions, Kinanthropometry.
- 30.10 Gender issues- biological and cultural

Recommended readings:

- 1. Bogin, B. (1999). Patterns of Human Growth, Cambridge: Cambridge University Press.
- 2. Cameron, N. (2002). Human Growth and Development, London: Academic Press.
- 3. Falkner, F. and Tanner, J. M. (1986). Human Growth: A comprehensive treatise, New York: Plenum Publishing.
- 4. H, Cummins and C, Midlo. (1976). Finger Prints, Palms and Soles: An Introduction to Dermatoglyphics, Sotuh Berlin, Mass.: Research Pub. Co.
- 5. Harrison, G. A. et.al. (1964). Human Biology: an introduction to human evolution and growth, New York: Oxford University Press.
- 6. Sands, R. R. (1999). Anthropology, Sport and Culture, Westport, Conn: Bergin & Garvey.
- 7. Tanner, J. M. (1990). Fetus into Man: Physical Growth from Conception to Maturity Cambridge, MA: Harvard University Press.
- 8. Thomas, P. (2003). Forensic Anthropology: The Growing Science of Talking Bones, New York: Fact on File.

Course outcome:

- 1. The objective of this course is to introduce the students with applied aspects of Biological Anthropology knowledge.
- 2. Through this course, the students will be introduced to the application of anthropological knowledge in the fields such as applied human genetics, human nutrition and its determinant factors, measuring human growth and nutrition, forensic science, dermatoglyphics, palaeopathology, sports, and gender issues.
- 3. The course will also help the students, with specialization in Biological Anthropology, to find their areas of research in the above-mentioned arenas and beyond.

31 Course Code: ANT DSE 7B

Course Name: Emerging Areas of Social-cultural Anthropology

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

31.1 Media Anthropology; meaning, scope, and development; concepts and methods; media, communication, mass media.

31.2 Anthropology of Performance: performance, folk culture, popular culture.

31.3 Legal Anthropology: Anthropology of human rights, Advocacy Anthropology, public policy, governance, customary laws.

31.4 Business Anthropology: meaning and scope, historical development, corporate social responsibility, Anthropology in corporate culture study, Anthropology in advertisement and design.

31.5 Anthropology of Women: gender issues in anthropological perspectives

31.6 Public and Engaged Anthropology

31.7 Visual Anthropology: photography and films, visual culture.

31.8 Cyber Anthropology: Anthropology and Cyber Culture, Digital Culture, ICT, Egovernance.

31.9 Social Gerontology: biological and cultural dimensions

31.10 Linguistic Anthropology: Language in relation to culture and identity.

Recommended Readings:

1. Das, V. (Ed.) (2003). *The Oxford India Companion to Sociology and Social Anthropology*, New Delhi: Oxford University Press.
2. Donovan, J. M. (2008). *Legal Anthropology: An Introduction*, Lanham; Toronto: AltaMira Press, a division of Rowman & Littlefield Publishers, Inc.
3. Guindi, F. E. (2004). *Visual Anthropology – Essential Methods and Theory*, California: Alta Mira Press.
4. Hedian, E. J. (2016). *Public Anthropology: Engaging Social Issues in the Modern World*, Toronto: University of Toronto Press.
5. Jordan, A. T. (2012). *Business Anthropology*, Illinois: Waveland Press.
6. Korom, F. J. (Ed.) (2013). *Anthropology of Performance: A Reader*, Chichester, England: Wiley.
7. Machin, D. (2002). *Ethnographic Research for Media Studies*, London: Arnold.

8. Miller, D. and Slater, D. (2000). *The Internet: An ethnographic approach*, London: Routledge, Taylor & Francis Group.
9. Rothenbuhler, E. W. and Coman, M. (2005). *Media Anthropology*, Thousand Oaks, California: Sage.

Course outcome:

1. The objective of this course is to introduce the students with the new arenas those are recently emerging in the subject area of Social-cultural Anthropology.
2. Through this course, the students will be introduced to the new subfields such as Media Anthropology, Anthropology of Performance, Legal Anthropology, Business Anthropology, Anthropology of Women, Public and Practicing Anthropology, Visual Anthropology, Cyber Anthropology, and Social Gerontology.
3. The students will learn about the applicability of anthropological knowledge and opportunities of researches in the fields of media, folk art and culture, legal issues, business, gender issues, development, visual culture, digital culture, and issues of elderly persons.

32. Course Code: ANT DSE 7C

Course Name: Emerging Areas of Archaeological Anthropology and Rock Art Studies

Marks: 50 (Theoretical – 40 + Internal Assessment – 10)

Credits: 4; Class Hours: 60

- 32.1 Recent trends in prehistoric archaeology in India,
- 32.2 Recent absolute dating in different prehistoric sites, controversies, raw material exploitation strategies, site formation processes, regional archaeological problems and solution.
- 32.3 Life and work of some notable contributions in archaeologists in India: William Jones, Boucher- de-Perth, Colin Mackenzie, Alexander Cunningham, Robert Bruce Foote, De Terra & Paterson, John Marshall, Mortimer Wheeler, D. Sen, H.D. Sankalia, V. N. Mishra, S. N. Rajaguru.
- 32.4 World Heritage sites in India: Achievement and challenges; Outstanding Universal Value (i-x) Criteria of UNESCO.

32.4 The basic concept, Types of Rock Art (Pictographs, Petroglyphs, Geoglyphs); Rock art study importance, concept of Motif, Panel, site; Morphic type – Anthropomorph, Zoomorph, Phytomorph

32.5 History of rock art, the formative period, the intermediate period and modern stages of research; Rock art sites in abroad (Spain, France, Australia, Africa, America)

32.6 Rock art sites in Eastern, Western, Northern, Central and South India. Chronology of Rock Art, associated artifacts, thematic content, context, style, superimposing, characteristics features of rock art sites of different cultural phases

32.7 Interpretation of Rock art, ethnographic analogies, shamanism, human vandalism, Role of ASI, IGNCA, IGRMS, RASI on Rock art studies; conservation and preservation of rock art, remedial measures against different threads.

Recommended Reading:

1. Chakrabarti, D.K. 1988. A History of Indian Archaeology: From the Beginning to 1947.
2. Daniel, Glyn, E. 1975. A Hundred and Fifty Years of Archaeology. London: Duckworth.
3. Paddayya, K. 1990. New Archaeology and Aftermath: View from Outside the Anglo-American World. Pune: Ravish Publishers
4. Yerkes, R.W. and P.N. Kardulias. 1993. Recent Developments in the Analysis of Lithic Artifacts. *Journal of Archaeological Research.* 1(2): 89-119.
5. Chakraverty, S. (2003). Rock Art Studies in India, A Historical Perspective
6. Chakraverty, S. (2018). Early Rock Art and Tribal Art in India.
7. Chakraverty, K.K. and G.K. Badam (2015). Rock Art and Archaeology of India
8. Howell, F. C. (1969). Early Man.
9. Malla, B.L. (2013). Global Rock Art. IGNCA
10. Malla, B.L. (2014). Rock Art Studies. IGNCA
11. Malla, B.L. (1999). Conservation of Rock Art. IGNCA
12. Malla, B.L. (2013). The World of Rock Art: An Overview of the five Continent. IGNCA
13. Pradhan, S and D. Garnayak (2017). Rock Art in Odisha.
14. Neumayar, E. (2013). Prehistoric Rock Art of India.
15. Varma, R.K. (2012). Rock Art of Central India

Course Outcome:

1. The students will acquaint Recent Development in Prehistoric Archaeology.

2. The students will also come to know some notable contribution by some eminent archaeologists in India.
3. The learner will learn basic idea on Rock Art studies and its development in India and abroad.
4. The student get a fair idea on prehistoric cave paintings with its believe and cultural practices.

33. Course Code: ANT DSC 13

Course Name: Dissertation

Marks: 100

Credits: 8; Class Hours: 240

Each student with specialization in Biological Anthropology or Socio-Cultural Anthropology or Prehistoric Archaeology will have to select a specific problem/community in consultation with her/ his supervisor(s) and conduct fieldwork for about at least one month duration for the collection of data. A report based on data collected in the field (may be supplemented with archival data) would have to be prepared by the student and submitted to the HOD duly forwarded by the concerned supervisor(s) for evaluation and viva-voce.

Course outcome:

1. The objective of this course is to teach students how to conduct individual research before entering into larger research degrees such as M.Phil. and Ph.D. or when they have to handle individual research projects.
2. Through this course, the students will learn to conduct fieldwork on their own especially in remote rural settings or among tribes and Particularly Vulnerable Tribal Groups (PVTGs).
3. The students will also learn how to prepare field report and how to write dissertation/s to obtain a degree.
4. Through this course, the students will also learn how to face viva-voce examinations or interviews for the subject they are specialized in.

OR

Course Code: ANT DSC 13

Course Name: Internship/ Capstone Project/ Applied Field or Industry Project/ Applied Field or Industry Project/ Innovation & Incubation/ Entrepreneurship/ Start-up Proposal or Practice

Marks: 50

Credits: 4

34. Course Code: ANT DSC 14

Course Name: Intellectual Property Right (IPC)/ Skill Enhanced Course

Marks: 25

Credits: 2

DRAFT