

Course of Studies

M.A./M.Sc. in Anthropology

2024-2025

(Under Course Credit Semester System)



P.G. Department of Anthropology
Sambalpur University

Courses of Studies for the M. A. /M. Sc. Anthropology For the Academic Session 2024-2025 Course Scheme

The Post-Graduate course of Anthropology is based on the semester system and will have four semesters spread over two years. The course will consist of 24 papers with a total of 90 Credit Hours (hereafter CH). Each semester, consisting of five to six papers shall have a maximum 20/26 CH. The total teaching hours in a semester shall be 44 hours per week (excluding 3CH Inter Disciplinary Course).

Specialization Offered:

The course offers two specializations during the third and fourth semesters.

1. AN-BA-Biological Anthropology
2. AN-SA-Social Anthropology

Students will opt for either of these specializations with three compulsory papers and two elective/special papers in each 3rd and 4th semester.

Evaluation:

- 50 per cent of theory papers shall be evaluated by external examiners.
- All practical will be evaluated by an external examiner.
- Fieldwork/ Dissertation shall be evaluated internally by the concerned supervising teacher along with other teachers of the Department during the 3rd semester, while in the 4th semester it will be evaluated by the external examiner.

The total 90 Credit Hours distribution over **4 semesters** has been presented below.

(As per the Higher Education Department directive to introduce MOOC course/Compulsory courses for the students enrolling in the new academic session, 2024-25, the total credit hour enhanced from 80 CH to 90 CH).

FIRST SEMESTER (22 CH)

- AN-C. 411 (4 CH) Social/Cultural Anthropology
- AN-C. 412 (4 CH) Biological Anthropology
- AN-C. 413 (4 CH) Prehistoric Archaeology
- AN-C. 414 (4 CH) Research Methodology
- AN-C. 415 (2 CH) Practical in Anthropometry
- AN-C. 416 (2 CH) Practical in Prehistoric Archaeology and Museology
- AN-C. 417 (2 CH) EVS & Disaster Management (Compulsory)

SECOND SEMESTER (26 CH)

- AN-C. 421 (4 CH) Understanding Society and Culture
- AN-C. 422 (4 CH) Social Exclusion and Inclusive Policy
- AN-C. 423 (4 CH) Demographic Anthropology
- AN-C. 424 (4 CH) Human Genetics and Variation
- AN-C. 425 (4 CH) Practical in Research Methodology
- AN-C. 426 (3CH) Research Ethics and Bibliographic Guidelines
(Interdisciplinary Course)/ Open Elective
- AN-C.C. 427 (3CH) MOOC Course (Online)

THIRD SEMESTER (22 CH)

- Specialization Course: A. Social Anthropology (AN-SA)**
- Compulsory Courses**

AN-SA.C. 511 (4 CH) Tribal Anthropology
 AN-SA.C. 512 (4 CH) Theory and Method in Social-Cultural Anthropology
 AN-SA.C. 513 (4 CH) Fieldwork

Elective Courses

AN-SA.E. 514 (4 CH) Practical in Qualitative Data
 AN-SA.E. 515 (4 CH) Practical in Statistics

Specialization Course: B. Biological Anthropology (AN-BA)

Compulsory Courses

AN-BA.C. 511 (4 CH) Human Biology, Growth and Nutrition
 AN-BA.C. 512 (4 CH) Forensic Anthropology and Criminology
 AN-BA.C. 513 (4 CH) Fieldwork

Elective Courses

AN-BA.E. 514 (4 CH) Practical in Human Biology, Growth and Nutrition
 AN-BA.E. 515 (4 CH) Practical in Statistics

AN-C.C. 516 (2 CH) Entrepreneurship Development (Compulsory)

FOURTH SEMESTER (20 CH)

Specialization Course: A. Social Anthropology (AN-SA)

Compulsory Courses

AN-SA.C. 521 (4 CH) Anthropology of Children and Childhood
 AN-SA.C. 522 (4 CH) Archives of Anthropology
 AN-SA.C. 523 (4 CH) Dissertation and Viva Voce

Elective Courses

AN-SA.E. 524 (4 CH) Anthropology of Human Migration and Trafficking
 AN-SA.E. 525 (4 CH) Practical in Demography

Specialization Course: B. Biological Anthropology (AN-BA)

Compulsory Courses

AN-BA.C. 521 (4 CH) Human Population Genetics
 AN-BA.C. 522 (4 CH) Practical in Serology and Human Genetics
 AN-BA.C. 523 (4 CH) Dissertation and Viva Voce

Elective Courses

AN-BA.E. 524 (4 CH) Human Molecular Genetics and Molecular Anthropology
 AN-BA.E. 525 (4 CH) Practical in Molecular Genetics and Bioinformatics

A student opting for Social Anthropology specialization has to select any two of the following elective (E) courses for course number AN-SA.E.514 and AN-SA.E.515 during the third semester and similarly two more elective courses for course number AN-SA.E.524 and AN-SA.E.525 during the fourth semester.

- E1. Practical in Qualitative Data
- E2. Anthropology of Human Migration and Trafficking
- E3. Practical in Statistics
- E4. Practical in Demography

A student opting for Biological Anthropology specialization has to select any two of the following elective (E) courses for course number AN-BA.E.514 and AN-BA.E.515 during the third semester and similarly two more elective courses for course number AN-BA.E.524 and AN-BA.E.525 during the fourth semester.

- E1. Practical in Human Biology, Growth and Nutrition
- E2. Human Molecular Genetics and Molecular Anthropology
- E3. Practical in Statistics
- E4. Practical in Molecular Genetics and Bioinformatics

The courses mentioned above AN-C. 417, AN-C. 426, AN-C.C. 427, AN-C.C. 516 should be opted by the students as and when implemented with effect from the academic session, 2024-25.

DETAILS OF THE COURSE CURRICULUM

FIRST SEMESTER (22 CH)

Course Code: AN.C-411 (4CH)

Prerequisite: None

Course Name: Social/Cultural Anthropology

Corequisite: None

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Social/Cultural Anthropology Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I	Aim and scope of Social and Cultural Anthropology, History and Development; Major Areas of Interest: Ethnography, Ethnology, Folklore, Economic Anthropology, Political Anthropology, Psychological Anthropology, Linguistic Anthropology, Medical Anthropology, Urban Anthropology, Visual Anthropology, Applied and Action Anthropology
Unit II	Types and characteristics of Family, Types and Laws of Marriage, Ways of Acquiring Mates, Types of Descent and Rules of Residence, Concept of property; Division of labour; Systems of distribution, gift and ceremonial exchange; reciprocity; redistribution and market; Technology; Foraging, Nomadism, Pastoralism, Transhumance, Horticulture, Swidden/Shifting Cultivation, Terrace Cultivation; Dry and Wet Cultivation; Mixed Farming.
Unit III	Concept of Political Organization, State, Stateless Society, Band, Segmentary Society, Forms and Functions of Government, Law and Justice, Customary Law; Concept of Religion, Primitive Religion, Functions and Types of Magic, Magico-religious functionaries, Religion, Magic and Science Comparison.
Unit IV	Concept of Linguistic Anthropology, Differences between Language, Dialect and Idiolect, Ethno-Anthropo-Socio Linguistic, Synchronic and Diachronic study, Syntactic, Sernetic and Symbolic sub-systems of language, Language and Culture, Sapir-Whorf Hypothesis.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Social/Cultural Anthropology
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings / Books Recommended:

1. Ardver, E. (ed.). *Social Anthropology and Language*.
2. Bloomfield, L. *Language*.
3. Bohannan, Paul. 1971, *Social Anthropology*, New York: Holt Rinehart & Winston.
4. Bright, W. *Socio-linguistics*.
5. Burling, R. *Man's Many voices-Language in its Cultural Context*.

6. Clifton, A.J. (ed.) 1968, *Introduction to Cultural Anthropology*. Houghton Mifflin
7. Carol R. Ember, Melvin Ember, Peter N. Peregrine, 2010, *Anthropology*, NJ: Prentice Hall.
8. Evans-Pritchard, E.E. 1979. *Social Anthropology*. London: Routledge and Kegan- Paul.
9. Fox, Robin. 1984, *Kinship and Marriage: An Anthropological Perspective*, London: Cambridge University Press.
10. Gluckman, Max. 1965, *Politics, law & Ritual in Tribal Society*, Oxford: Basil Blackwell
11. Goode, J. 1982, *The Family*, New York: Prentice Hall

Course Code: AN.C-412 (4CH)

Prerequisite: None

Course Name: Biological Anthropology

Corequisite: None

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Biological Anthropology Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Subject matters of biological anthropology and its scope, Difference between biological and physical anthropology, Applications of biological anthropology.

Unit II Distribution, Classification and Characteristics of Order Primate. Living primates: Distribution and characteristics, Primate Evolution with respect to skull, jaw, limb and dentition.

Unit III Theories of Organic Evolution: Lamarckism, Neo Lamarckism, Darwinism, Neo Darwinism and Synthetic theories; Principles of Evolution: Convergence, Divergence, Parallelism, Adaptive Radiation and speciation. Evidence of human evolution from morphological, anatomical, serological, chromosomal and genetic similarities between human and non-human living primates; Adaptation: Meaning and its evolutionary significance.

Unit IV Phylogenetic Status, Characteristics and Geographical distribution of Early Humans: Dryopithecine, Australopithecine, Homo-erectus, Neanderthal, Homosapien sapiens – Chancelede, Cromagnon and Grimaldi; Comparison of Man and Ape.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Biological Anthropology
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings / Books Recommended:

1. Buettner Janusch, J. 1969. *Origins of Man: Physical Anthropology*. Wiley Eastern Pvt. Ltd., New Delhi.
2. Das B.M. 2008. *Outlines of Physical Anthropology*. Kitab Mahal, New Delhi
3. Boaz N.T. and A.J. Almquist. 1997. *Biological Anthropology – A Synthetic Approach to Human Evolution*. Prentice-Hall, New Jersey, USA.

4. Sarkar, R. M. 2004. *Fundamentals of Physical Anthropology* (New Edition). Book World. Kolkata.
5. Shukla B.R.K. & Rastogi, S. 1990. *Physical Anthropology & Human Genetics: An Introduction*. Plaka Prakashan. Delhi.
6. Camilo J. Cela-conde and Francisco J. Ayala(2007) Human Evolution: Trails from the past: Oxford University Press.

Course Code: AN.C-413 (4CH)

Prerequisite: None

Course Name: Prehistoric Archaeology

Corequisite: None

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Prehistoric Archaeology Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I	A brief outline on the origin of earth and life and geological time scale; Pleistocene epoch chronology, Pleistocene Glaciations of Europe, Evidence and Causes of Great Ice Age, Typology and technology: tool-making techniques, tool types.
Unit II	Dating methods: absolute and relative dating: stratigraphy, river terraces, dendrochronology, thermoluminescence dating, pollen dating, Glacial varve analysis, the potassium-argon method, fluorine dating, C-14 dating.
Unit III	Cultural chronology: Palaeolithic, Mesolithic, Neolithic and Megalithic cultures in India and Europe: special salient features of the environment, sites and areas, typology, distribution, artefacts and their physical forms.
Unit IV	Indus valley civilization; Copper and Iron Age, features and distribution. Art in Prehistoric period: Home Art and Cave Art, Different Phases of art and their style.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Prehistoric Archaeology
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Recommended Readings:

1. Agrawal, D.P. (1995) The Archaeology of India, Curzon Press.
2. Allchin, B. & Allchin, F.R. (1982) The Rise of Civilization of India and Pakistan. Cambridge University Press.
3. Banerjee (1965) Iron Age in India. Munshiram Manoharlal.
4. Sakalia, H.D., New Archaeology – Its Scope and Application to India,
5. Sankalia, H.D. (1964) Stone Age Tools, Families and Techniques. Pune, Deccan College.
6. Sankalia, H.D. Pre- and Proto-history of India and Pakistan. Pune, Deccan College.
7. Burkitt, M.C. 1969. Old Stone Age: Study of Palaeolithic Times.

Course Code: AN.C-414 (4CH)
Prerequisite: None

Course Name: Research Methodology
Corequisite: None

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Research Methodology Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Research and its Objectives Formulation and selection of a research problem; Objectivity of Research, Qualitative and Quantitative Research: Concept, Characteristics and differences, Research Design: Concept need and features of a research design. Different types of research design: Exploratory, descriptive Diagnostic and experimental research.

Unit II Research Hypothesis: Types and Characteristics of a good hypothesis; Sampling Design Concept: universe and sample; Criteria for deciding a representative sample. Probability and non-probability sampling: Random, stratified, proportionate, quota, cluster or multistage, purposive and systematic sampling.

Unit III Methods of Data Collection Primary and secondary data; Methods of data collection: observation, questionnaire, interview, case study, genealogy, participatory rural appraisal (PRA), and Focused Group Discussion

Unit IV Statistics in social Research: Measure of Central Tendency: Mean, Median, Mode; Measure of Dispersion: Mean deviation, Standard deviation Range; Measure of Association-Correlation and Regression.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Research Methodology
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings:

1. Fetterman, M.D. 1989, *Ethnography*: Step by Step. London: Sage.
2. Mc cracker, G. 1989, *The long Interview*. London: Sage.
3. Patton, M.Q. 2002, *Qualitative Research and Evaluation Methods*. London: Sage.
4. Kothari, C.R. Research Methodology, Methods and Techniques –Wiley Eastern Limited – New Delhi
5. Silverman, D. 1993, *Interpreting Qualitative Data*. London: Sage.
6. Singha, K. 1993. "Participant Observation and In-depth Interviewing" in B.Y. Attig, et. Al (eds),

Qualitative Methods for Population and Health Research. Bangkok: Mahidol University, pp 120-128.

7. Bryman, A. 2008, *Social Research Methods*. 3rd edition Oxford: OUP.

Course Code: AN.C-415 (2CH)

Prerequisite: None

Course Name: Practical in Anthropometry

Corequisite: None

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Anthropometry Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Drawing and description of various Anthropometry instruments: Anthropometer rod, Rod compass, Spreading Caliper, Sliding Caliper, Weighing machine, Measuring Tape and Skinfold Caliper.

Unit II Somatometric Measurements: Maximum head length, Maximum head breadth, Breath of Bzygomatic Arch, Nasal height, Nasal breadth, Shoulder breadth, Elbow breadth, Wrist breadth, Knee breadth; Somatometric Indices: Cephalic Index (CI); Nasal Index (NI)

Unit III Osteometric Measurements: Human Skeleton and bones: identification, sketching and labelling of the human skull, identification of long, and short bones, irregular bones, girdles and vertebral column.

Unit IV Craniometric Measurements: Maximum Cranial Length; Maximum Cranial Breadth; Bzygomatic Breadth; Nasal Length; Nasal Breath; Length of Foramen Magnum; Breath of Foramen Magnum. Craniometric Indices: Cranial Index, Nasal Index, Foramen Magnum Index.

Practical Record

Viva Voce

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Anthropometry
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings

1. I. P. Singh & M. K. Bhasin. (1989) A Laboratory Manual on Biological Anthropology. Kama-Raj Enterprises, Delhi.
2. D. Mukherjee, D. Mukherjee & P. Bharati. (2009) Laboratory Manual for Biological Anthropology. Asian Book Private Limited, New Delhi.
3. B.M. Das & R. Deka. Physical Anthropology Practical. Kitab Mahal, Allahabad, U.P.
4. S.J. Ulijaszek and C.G.N. Mascie-Taylor. Anthropometry: the individual and the population.
5. B. M. Das. Outlines of Physical Anthropology. New Delhi.

6. Galton F. (1884) Anthropometric Laboratory. London (Also in J. Anthropol. Inst., (Lond.) 1884, 14, 205).

Course Code: AN.C-416 (2CH)

Prerequisite: None

Course Name: Practical in Prehistoric Archaeology and Museology

Corequisite: None

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Prehistoric Archaeology and Museology Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Demonstrate the techniques of manufacture, function and social implications of Artefacts

Unit II Handle stone artefacts, characterizing lower, middle, and upper Palaeolithic, Mesolithic and Neolithic periods

Unit III Drawing and description of prehistoric tools of the Palaeolithic, Mesolithic and Neolithic periods.

Unit IV Drawing and description of any three major tribal technological implements, Techniques of conservation of cultural artefacts.

Note: Periodic maintenance of practical records shall be taken into consideration while awarding grades to the candidates. The students are to perform the experiment on the provided archaeological tools and at least three museum specimens. They are to be familiar with each experiment details such as the experiment's aim, required tools and museum specimens, procedure, handling and precautions.

Practical Record

Viva Voce

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Prehistoric Archaeology and Museum artefacts
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings

1. Bhattacharya, D.K. (1979). Old Stone Age Tools: A Manual of Laboratory Techniques of Analysis. Calcutta: K. P. Bagchi and Company.
2. Inizan, M. L.; M. R. Ballinger; H. Roche and J. Tixier. (1999). Technology and terminology of Knapped Stone. Nanterre: CREP.
3. Oakley, K.P. (1972). Man the Tool Maker. London. Trustees of the British Museum Natural History.

4. Sankalia, H.D. (1982). Stone Age Tools: Their techniques, Names and Probable Functions. Poona: Deccan College.
5. Bhattacharya, D. K. (2006). An outline of Indian Prehistory. Delhi: Palaka Prakashan.
6. Indrani Basu Roy (2012). Anthropology: The Study of Man. S. Chand & Company Ltd., Ram Nagar, New Delhi.
7. Gaya Pandey (2010). Bio-Cultural Evolution. Concept Publishing Company Pvt. Ltd. New Delhi.
8. Sankalia, H. D. (1977). Prehistory of India. Delhi: Munshiram Manoharlal Publishers Pvt. Ltd.

Course Code: AN-C.C 417 (2CH)

Prerequisite: None

Course Name: EVS and Disaster Management

Corequisite: Compulsory

The above course is a Compulsory Course offered at the University level and designed commonly for all students of all disciplines. The Course content will be supplied by the expert committee while delivering the course.

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Environmental Science and Disaster Management Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Course Content will be provided by the Environmental Science Department, Sambalpur University

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Environment and Disaster Management
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

SECOND SEMESTER (26 CH)

Course Code: AN.C-421 (4CH)
Prerequisite: None

Course Name: Understanding Society and Culture
Corequisite: None

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Understanding Society and Culture Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I	Culture: Concept, Definition; Nature of Culture, Characteristics of Culture; Culture Change: Innovation, Diffusion, Acculturation, Assimilation, Attenuation, Integration, Cultural Adaptation; Enculturation and Socialization; Cultural Pattern, Cultural Focus, Cultural System; Culture Shock and Culture Conflict; Cultural Lag, Cultural Relativism. Culture and Civilization: Meaning and characteristics of Society, Community, Institution, Association and Organization.
Unit II	Social Change: Theories and factors of social change, Processes of social change: Sanskritization, Westernization, Urbanization, Industrialization Little tradition and great tradition, Universalization & parochialization.
Unit III	Social Stratification: Basis of stratification, Social Differentiation and Ranking, Social Evolution and Social Progress
Unit IV	Caste system: Meaning and characteristics of caste system in India; Status and Role; Caste, Class and Power in India; Changing dimension of caste; Jajmani System; Social mobility;

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Society and Culture
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Recommended Readings:

1. Evans-Pritchard, E.E. (1951) Social Anthropology. London: Cohen & West
2. Fox, Robin. (1984) Kinship and Marriage. Cambridge University Press
3. Sahlins & Service. (2017) Evolution and Culture. The University of Michigan Press, Ann Arbor.
4. Radcliffe Brown, A.R. (1965) Structure and Function in Primitive Society. Free Press
5. Harris, Marvin. (2006) Cultural Anthropology. Pearson

Course Code: AN.C-422 (4CH)	Course Name: Social Exclusion and Inclusive Policy in India
Prerequisite: None	Corequisite: None

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Social Exclusion and Inclusive Policy in India Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I: Social Exclusion: Concept, Meaning and forms of social exclusion, Who is socially excluded and why this matter, Role of culture in social exclusion.

Unit II: Cases of Social Exclusion: Dalit, ST, Religious minorities, Children, Women, Aged, Physically and mentally challenged people.

Unit III: Specific areas of Social Exclusion and marginalization: People affected by HIV/AIDS, Displaced people of mega development projects, Poverty leading to social marginalization, Caste system, inequality and social exclusion, social exclusion and exploitation, Reducing poverty by tackling social exclusion.

Unit IV: Inclusive Policy: Current policies of protective discrimination, Public policies to reduce social exclusion, Constitutional safeguards, Panchayati Raj and women empowerment, Convention on the Rights of the Child, Sub-plan approach to tribal development, Possible improvement in current policies and strategies relating to weaker section.

Recommended Readings:

1. Thorat, 2006. Social Exclusion in India. Oxford
2. DFID Report.2005. Tackling Poverty by Reducing Social Exclusion
3. Contemporary Society: Tribal Studies (Vol. I to X). New Delhi: Concept Publishing Company
4. Fuchs, S.(1973): The Aboriginal Tribes of India. Delhi: The Macmillan Co. of Ind. Ltd

Course Code: AN.C-423 (4CH)	Course Name: Demographic Anthropology
Prerequisite: None	Corequisite: None

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Demographic Anthropology Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Meaning, Definition and Scope of Population Studies, Theories of Population: Pre-Malthusian, Malthusian and Post-Malthusian theory, Theory of Demographic Transition,

	Factors contributing to Population growth, Anthropological Demography.
Unit II	Basic Demographic Variables, Sex Ratio, Fertility, Mortality (including Infant, Child Mortality and Maternal Mortality in India), Migration, Morbidity; Sources of Population Data: Census, NFHS, NSS, DHS, International Year Book.
Unit III	Dynamics of Age-Sex Structure: Present levels and past trends in the sex and age structure of the population of the world and developed and developing countries. Present levels and past trends in the sex and age structure of India's population. Sex ratio of India's population & the role of different factors in changing sex ratio. Factors affecting the age structure of the population and Ageing of the population.
Unit IV	Demographic profile of India; Growth and Distribution of Tribal Population in India, Population problems with special reference to India; National Population Policy.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Demographic Anthropology
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings

1. Agarwal, S. N. India's Population Problem.
2. Arora, Gomti. Social Structure & Fertility.
3. Bhenda, Asha, A. & Kanetkar Tara. Principles of Demography.
4. Bose, Ashish. India's Urbanization 1901-2001.
5. Chand, Gyan. Population in Perspective.
6. Council for Social Development Publication. Aspects of Population Policy in India.
7. Davis-Kingsley. The Population of India and Pakistan.
8. Driver, E. R. Differential Fertility in Central India.
9. Kesarwani, Baburam. Fertility and Differential Fertility.
10. Kumarg, T. K. Vimala. Infant Mortality among the Fishermen.
11. Mahadevan, K. Fertility and Mortality.
12. Mahadevan, K. Sociology of Fertility.
13. Mitra, Ashok. India's Population Vol. I & II.
14. Sandhya, S. Socio-Economic and Cultural Correlates of Infant mortality.
15. Senapati RN, P.K. Nayak, P.K.Das. Population profile of Orissa.
16. Sinha, V. Dynamics of Indian Population Growth.
17. Srivastava,O. Demography.
18. Donald J. Bogue. Principles of Demography.

Course Code: AN.C-424 (4CH)

Prerequisite: None

Course Name: Human Genetics and Variation

Corequisite: None

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Human Genetics and Variation
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Relating to the MA/M.Sc. Degree in Anthropology	
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I	Meaning and Scope of Human Genetics; Structure and function of Human Cell, DNA and RNA, Genetic Code; Cell Division- Mitosis and Meiosis and its significance.
Unit II	Mendel's law of Inheritance and its application; Pattern of Inheritance- Autosomal-Dominant and Recessive, co-dominance, Sex Linked and Sex-limited inheritance.
Unit III	Methods of Studying Heredity; Chromosomal aberrations-Structural & Numerical
Unit IV	Human variation: Morphological and Genetic basis of Human Variation; Concept of Race, Distribution and Characteristics of Major races of the World: Caucasoid, Mongoloid and Negroid. Classification of the Indian population according to Risley, Guha and Sarkar. Blood group variation in Human Population- ABO, MN, Rh, & ABH (Secretor factor)

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Human Genetics and Variation
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Reading:

1. Buettner Janusch, J. 1969. *Origins of Man: Physical Anthropology*. Wiley Eastern Pvt. Ltd., New Delhi.
2. Das B.M. 2008. *Outlines of Physical Anthropology*. Kitab Mahal, New Delhi
3. Cavalli-Sforza, L., P. Menozzi, and A. Piazza. 1996. *The History and Geography of Human Genes*. Princeton University Press.
4. Klung S. W, M. R. Cummings and C. A. Spencer. 2007. *Essentials of Genetics*, Sixth
5. Edition. Pearson Education International. Crawford, M. (Ed). 2006 *Anthropological Genetics*. Cambridge University Press.
6. Cummings, M. R. 2009. *Human Genetics*. Cengage Learning.

Course Code: AN.C-425 (4CH)

Prerequisite: None

Course Name: Practical in Research Methodology

Corequisite: None

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Practical in Research Methodology Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I	Preparation of study objectives, Hypotheses, and Research Design-Types
Unit II	Preparation of tools for qualitative data collection: Household census schedule, preparation of structured and unstructured questionnaire, Interview schedule and Case studies, Focus Group Discussion
Unit III	Analysis of Quantitative field data; Coding of data, Quantitative tools and techniques; Scaling techniques, Data presentation; Drawing tables and Diagrams
Unit IV	Quantitative and Qualitative data analysis, Writing Dissertation / Report.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Research Methodology
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings

1. Srivastava, V (Ed.). Methodology and Fieldwork. Oxford India Paperbacks, New Delhi.2005.
2. Srinivash, M. N. (Ed.), Methods in Social Anthropology. Hindustan Publishing Corporation, New Delhi, 1995.
3. Krishnaswami, O. R. and Ranganatham, M. Methodology of Research in Social Sciences. Himalaya Publishing House, Mumbai, 2009.
4. Kothari, C.R. Research methodology: methods and techniques. 2 ed., New Delhi: Vishwaprakashan, 1990.
5. Bernard, H.R., Research Methods in Anthropology. London: Sage, 1994.
6. Coffey, A. The Ethnographic Self: Field Work and the Representation of Identity. London: Sage.
7. Dey, I., Qualitative Data Analysis, London: Routledge, 1993.
8. Eller, R (ed). Ethnographic Research: A Guide to General Conduct. London: Academic Press, 1984.
9. Fetterman, M.D., Ethnography: Step by Step. London: Sage, 1989.
10. Hammersley, M. And Alkinson, P., Ethnography: Principles in Practice. London: Tavistock, 1983.
11. Mc cracker, G., The long Interview. London: Sage, 1989.
12. Patton, M.Q., Qualitative Research and Evaluation Methods. London: Sage, 2002.
13. Silverman, D., Interpreting Qualitative Data. London: Sage, 1993.
14. Srivastava, V (Ed.). Methodology and Fieldwork. Oxford India Paperbacks, New Delhi.2005.
15. Hardy, M. And Bryman. A (eds). Handbook of Data Analysis. London: Sage, 2004
16. Agar, M. The professional stranger, an informal introduction to Ethnography. New York: Academic Press, 1980.
17. Srivastava, V (Ed.). Methodology and Fieldwork. Oxford India Paperbacks, New Delhi.2005.

Course Code: AN.C-426 (3CH)

Prerequisite: None

Course Name: Research Ethics and Bibliographic Guidelines

Corequisite: Interdisciplinary Course

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Research Ethics and Bibliographic Guidelines Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Introduction to Research Ethics, Principles and Guidelines, Ethical issues in Research and Challenges: Compliance and Ethics, Ethical considerations: Informed consent, Understanding vulnerability, Privacy and Confidentiality, Anonymity; Ethical issues in International Research involving human subjects.

Unit II To develop the skills in writing (1) Review of Literature (2) Plan Proposal (3) Project Report (4) Organizational Brochure (5) Resume (6) Citation and References, Annotated Bibliography, Preparation of bibliography for a given topic of research.

Unit III Abilities to learn (1) Skill of Participating in group – discussion (2) Making scholarly presentation with proper style of documentation (3) Preparing text for power point presentation.

Unit IV Students will be given orientation to prepare and present: Term Paper1, Term Paper2, and Term Paper3.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Research Ethics and Bibliographic Guidelines
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Note: The knowledge of the students on the above item shall be examined by an external examiner in consultation with the internal examiner.

Suggested Readings:

1. Stern, Judy E. and Elliott, Deni, 1997. The Ethics of Scientific Research: A Guidebook for Course Development.
2. Elliott, Deni and Stern, Judy E., 1997. Research Ethics: A Reader.
3. David B Resnik, 2018. The Ethics of Research with Human Subjects
4. Gary Comstock, 2012. Research Ethics: A Philosophical Guide to the responsible Conduct of Research, Cambridge University Press.
5. Ron Iphofen, 2020. Handbook of Research Ethics and Scientific Integrity, Springer Nature.
6. Henriikka Mustajoki, Arto Mustajoki, 2017. A New Approach to Research Ethics (Using guided dialogue to strengthen Research Communities), Routledge.
7. Adil Shamoo, David B Resnik, 2021. Responsible Conduct of Research Training.
8. Rose Wiles, 2012. What are Qualitative Research Ethics, Bloomsbury Publishing India Private Limited.
9. Jaap Bos, 2020. Research Ethics for students in the Social Sciences, Springer

Course Code: AN-C.C 427 (3CH)
Prerequisite: None

Course Name: MOOC Course
Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of MOOC Course Relating to the M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Note: A student is supposed to select an online course of their choice from SWAYAM platform or as directed thereafter by the department guidelines.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of a selected online course in line with the subject.
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

THIRD SEMESTER (22 CH)

Specialization Course: A. Social Anthropology (AN-SA)

Course Code: AN-SAC.511 (4CH)
Prerequisite: None

Course Name: Tribal Anthropology
Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Tribal Anthropology Relating to the MA Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I The Concept of Tribal Society
 Anthropology as a field in understanding tribal society, Concept of Tribe, Tribal situation in India, Tribal Situation in Orissa.

Unit II Forest and Tribe
 Forest-tribe interaction, Deforestation and its impact on tribal population, Tribal rights on forest and land, Role of State and NGOs to protect and promote the tribals.

Unit III Tribal Problems
 Major Tribal Problems; Structural constraints to tribal education, Social and economic constraints to their development, Migration.

Unit IV Tribal Development
 Sustainable Tribal development, Pre-independence and post-independence era of tribal development; Nehru's perspectives on tribal development. PESA Act.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Tribal Anthropology
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Recommended Readings:

1. Behera, D.K and Georg Pfeffer. Contemporary Society Tribal Studies, Volume I to X. New Delhi: Concept Publishing Company
2. Vidarthy, L.P. (1977) Tribal Culture in India. Concept Publishing House
3. A.K. Pandey. (1997) Tribal Situation in India. New Delhi: Manak
4. Hassnain, Nadim. (1982). Tribal India
5. Xaxa Commission Report, 2013.
6. Bhowmik, K.L. (1971): Tribal India: A Profile in Indian Ethnology. Kolkata: World Press Pvt. Ltd.

Course Code: AN-SAC.512 (4CH)

Course Name: Theory and Method in Social-Cultural Anthropology

Prerequisite: None

Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Theory and Methods in Social and Cultural Anthropology Relating to the MA Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Emergence of Anthropology as an Empirical Discipline; Anthropology as a Social Science; Natural Science and Natural History in Anthropology; Scientific and Historical Methods in Anthropology, Comparative Methods

Unit II Evolutionism: Cultural evolutionism: Unilinear (E.B. Tylor, Morgan, Frazer), Universal (White and Childe) and Multi-linear (Julian Steward)

Unit III Diffusionism: British, German-Austrian and American Schools of thought

Unit IV Functionalism and Structuralism, Malinowski; Structural-functionalism: Radcliffe Brown; Structuralism: Levi Strauss and Leach; Interpretative Approach: Clifford Geertz; Symbolic Anthropology: Victor Turner; Post Modernism in Anthropology

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Theory and Methods in Social and Cultural Anthropology
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in

the course

Recommended Readings:

1. Barth, Frederik. 1981. Models of Social Organization, Royal Anthropological Institute, Occasional Paper-23. London: Routledge and Kegan Paul.
2. Bidney, D. 1964. Theoretical Anthropology, New York: Columbia University Press,
3. Childe, V. Gordon. 1963. Social Evolution, A.A Watt and Co Ltd, 1951, First Meridian printing,
4. Durkheim, E. 1938 (1895). The Rules of the Sociological Method (S.Solovay and J. Meuller, trans,) New York: Free Press
5. Geertz, C. 1973. The Interpretation of Culture, New York: Basic Books.
6. Kuper, Adam. 1985. Anthropology and Anthropologists: The Modern British School (rev. Ed), Boston: Routledge & Kegan Paul.

Course Code: AN-SAC.513 (4CH)

Prerequisite: None

Course Name: Fieldwork

Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Fieldwork Relating to the MA Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Each student shall have to undergo training for learning and use of different techniques of scientific data collected during 30 days of fieldwork under the supervision of teachers, as nominated by the head of the department, in a tribal/rural area. The fieldwork for a particular year may be camp-based or non-camp-based depending on the decision of the teachers' council of the department. The exact date of commencement of fieldwork shall be announced by the department. A student failing to complete the fieldwork in a particular year can only clear the paper by completing fieldwork next year. No separate fieldwork shall be arranged for such students during the same semester. There shall be instructional hours or classes per week for every candidate for the preparation of synopsis and questionnaire/schedule for the topic of the study during the semester. Classes shall be taken by the concerned supervisors. The supervising teacher shall be the examiner for the paper.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Fieldwork
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Note: The performance of the candidate will be evaluated on the basis of the field notes and fieldwork performance by the supervising teacher during the fieldwork. The final grading will be done by the supervising teacher at the end of the semester.

Elective Courses for Social Anthropology Specialization (For paper AN-SA.E. 514 and AN-SA.E. 515)

Course Code: AN-SA.E.514 (4CH)
Prerequisite: None

Course Name: Practical in Qualitative Data
Corequisite: Elective

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Practical in Qualitative Data Relating to the MA Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Understanding Reference Writing: APA, MLA, CHICAGO Style of Reference, Bibliography, Annotated Bibliography; Intext citation, Footnote, Endnote, Ibid, Index, Preface.

Unit II Analysis and Interpretation of Evidence: Discourse Analysis and Conversation Analysis, Analyzing Narratives and Story-Telling, Grounded Theory, Ethnography Methods, Secondary Analysis of Qualitative Data, Video and the Analysis of Work and Interaction, Meta-Analysis.

Unit III Understanding how to Write and Publishing Academic Research article. Review of any one Research Article.

Unit IV Writing Dissertation/ Report, Conduction of Group Discussion, PLA and Presentation.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Qualitative Data
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Recommended Readings:

Suggested Readings:

1. America, T.M.L.A. (2021). *MLA Handbook*. Modern Language Association of America
2. Booth, W. C., Colomb, G. G., Williams, J. M. (2008). *The Craft of Research*, Third Edition. Ukraine: University of Chicago Press.
3. Creswell, J. W., Poth, C. N. (2016). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. United States: SAGE Publications.

4. Fallis, A., Berg, M., Lipson, C., ITCH (Conference), McDaniel, J. G., IOS Press., Tan, J. K. H., Payton, F. C., Khoumbati, K., Jones, S., & Groom, F. M. (2010). Adaptive health management information systems: concepts, cases, and practical applications. In *Journal of Chemical Information and Modeling* (Vol. 8, Issue 9).
5. Flick, U. (2014). *Introducing Research Methodology: A Beginner's Guide to Doing a Research Project*. United Kingdom: SAGE Publications.
6. Publication Manual of the American Psychological Association: The Official Guide to APA Style. (2019). United States: American Psychological Association.
7. The Chicago Manual of Style. (2003). United Kingdom: University of Chicago Press.
8. The SAGE Handbook of Social Research Methods. (2008). United Kingdom: SAGE Publications.

Course Code: AN-SA.E.515 (4CH)

Prerequisite: None

Course Name: Practical in Statistics

Corequisite: Elective

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Statistics Relating to the MA Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Descriptive statistics & Solving Statistical problems: Measurement of Central Tendency (Mean, Median, Mode); Frequency Distribution: Histogram, Bar graph, Pie Chart, Polygraph

Unit II Measures of Dispersion: Standard Deviation (SD), Standard Error (SE)

Unit III Test of Inference: Chi-Square Test, Students 't' test, ANOVA, Z Score.

Unit IV Correlation: Coefficient of Co-variation, Coefficient of Correlation

Practical Record

Viva Voce

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Statistics
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Reading

1. B.L. Agarwal. *Basic Statistics*. New Age International Publishers. Fourth Edition, 2006.
2. Fox and Alan. *Elementary Statistics in Social Research*. Gian Publishing House,
3. Sunder Rao, P.S.S. et al. *An introduction to Biostatistics & Research Method*. New Arrivals-PHI
4. Wackerly Dennis D, Mendelhall III, William et al. *Mathematical Statistics with application* Duxbury Press, Pacific Grove.
5. Gaur AS, Gaur SS. *Statistical Methods for Practice and Research. A guide to data analysing using SPSS*. SAGE Response, New Delhi, India, 2009.

6. Sunder Rao, P.S.S. et al. An introduction to Bio-statistics & Research Method. New Arrivals-PHI.
7. Conover W.J. Practical Nonparametric Statistics. Third Edition. Wiley India (P) Ltd. Ansari Road, Daryaganj, New Delhi. 1999.

Specialization Course: B. Biological Anthropology (AN-BA)

Course Code: AN-BA.C.511 (4CH) Course Name: Human Biology, Growth and Nutrition
Prerequisite: None Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Human Biology, Growth and Nutrition Relating to the M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute themf

Unit I	Balance diet, Nutritional requirements in Man: Carbohydrate, Protein, Fat, Minerals and Vitamins; Carbohydrate and Lipid Metabolism in Man
Unit II	Assessment of nutritional status, National nutritional programmes for elimination of Malnutrition and Food insecurity.
Unit III	Concept of Human Growth; Stages of Human Growth: Prenatal (Fertilization, stages of embryonic and fetal development) & Postnatal (Infancy, Childhood, Adolescence, adulthood and old age. Catch-Up Growth, Maturation, Methods of studying Growth – Cross-sectional, Longitudinal, Mixed-longitudinal; Growth Curve
Unit IV	Human Adaptation: Human Adaptation to Heat, Cold, High altitudes, Factors affecting Growth: Genetical, Hormonal, Environmental & Physiological

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Human Biology, Growth and Nutrition
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings

1. Beglin, B. 1988. Patterns of Human Growth. Cambridge University Press, Cambridge.
2. Mader, S.S. (6th Ed.). (2000) Human Biology. Mc Graw Hill, New Delhi.
3. Campbell, N.A, J.B. Reece and E.J. Simon (2nd Eds.). 2010. Essential Biology with Physiology. Pearson, New Delhi.
4. Harrison, G.A., J.S. Weiner, J.M. Tanner and N.A. Barnicot. (1964) Human Biology: An Introduction of Human Evolution, Variation and Growth. Clarendon Press, Oxford.
5. Jobling M. A., M. E. Hurles and C. Tyler-Smith. (2004) Human Evolutionary Genetics: Origins, Peoples & Disease. Garland Science. New York.
6. Yong J. Z. (1971) Introduction to the Study of Man. The English Language Book Society and Oxford University Press, Oxford.

7. Malina, R. M.; C. Bouchard and O. Bar-Or. (2004) Growth, maturation & physical activity. Human Kinetics.
8. Harrison, G.A. and H. Morphy. (1998) Human Adaptation. Berg Publisher, Oxford.
9. Damon, A. (Ed.). 1975. Physiological Anthropology. Oxford University Press, London.
10. Shephard, R. J. 1991. Body composition in biological anthropology. Cambridge University Press, Cambridge.
11. Champe, P. C. And R. A. Harvey (3rdEd). 2005. Lippincott's Illustrated Reviews: Biochemistry, Lippincott Williams & Wilkins, Philadelphia.
12. Nelson, D. L and M. M. Cox. 2008. Lehninger Principles of Biochemistry, Fifth Edition. W. H. Freeman Company, New York.
13. Harlin, J.; G. Bertoni, L. J. Kleinsmith (8thEd.). 2012. Becker's World of the Cell. Pearson Benjamin Cumminga, San Francisco.
14. Tanner, J. M. 1978. Growth at Adolescence. Blackwell Science Ltd. London.
15. Carter, J. and B.H. Heath. 1990. Somatotyping – Development and Application. Cambridge University Press, Cambridge.
16. Lasker, G. W. and C. G. N. Mascie-Taylor (Ed.). 1993. Research strategies in human biology: field and survey studies. Cambridge University Press, Cambridge.
17. Weiss, K. M. 1993. Genetic variation and human disease: Principles and evolutionary approaches. Cambridge University Press, Cambridge.
18. Growth, maturation & physical activity (2004) Malina, Robert M; Bouchard, Claude, Bar-Or, Oded. Human Kinetics.
19. Human growth and development by Cameron Noel (20U2). St. Louis, Academic Press.
20. Proceeding on Human Physical Growth and Maturation by eds. Johnson, FE, Roche, AF, Susanne, C, (1980). Plenum Publishing Corporation.
21. Applied body Composition Assessment (2009) Heyward, VH; Wagner DR. Human Kinetic.

Course Code: AN-BA.C.512 (4CH) Course Name: Forensic Anthropology and Criminology

Prerequisite: None

Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Forensic Anthropology and Criminology Relating to the M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I	Meaning and Scope of Forensic Anthropology and Criminology.
Unit II	Crime against Children, Women, Schedule Caste and Schedule Tribes; Punishment and Treatment of Offenders; Definition, Theories and Types of Punishment; Institutional and Non-Institutional treatment of Offenders – Probation, Parole, and Temporary Release; Death investigation: Types of death, medico-legal causes.
Unit III	Applications of finger and palmer Dermatoglyphics; Poroscopy; Composition and analysis of Blood and Semen; DNA Finger Printing.
Unit IV	Scientific investigation of un-natural death; Age, Sex and Stature estimation; Forensic

Odontology, Superimposition and Facial Physiognomy; Polygraphs, Narco-analysis, Cyber Crime.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Forensic Anthropology and Criminology
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings

1. Aggrawal, A. Twisted Evidence (Science Reporter, August, 1992)
2. Bass, W. M. Human Osteology
3. Bhasin, M. K & Surinder Nath. Role of forensic Science in the New Millennium
4. Boorman and Dodd. Blood Group Serology
5. Bridges, B.C. Practical Finger printing
6. Chatterjee. Finger, Plam and Sole Prints
7. Chatterjee, J.B. Haematological Techniques
8. Chaurana. Human Osteology
9. Cherril, F.R. Finger print systems at Scotland
10. Field. Finger Print Hand Book
11. Gustafson. Forensic Odontology
12. Kind, Stuart & Michael. Science against Crime
13. Kirby, L.T. DNA Finger Printing: An Introductions
14. Kirk, P.L. Crime investigation
15. Krogman. The Human Skeleton in Forensic Medicine
16. Modi. Text Book of Medical Jurisprudence and Toxicology
17. Najjar, E.L. Forensic Anthropology
18. Saferstein, R. Criminalistics
19. Sharma, B.R. Forensic Science in Criminal Investigation and Trials
20. Simhadri, Y.C. Ex-Criminal Tribes of India
21. Steward, T.D. Forensic Anthropology
22. Sudha, T. Molecular Signatures (Science Reporter, August, 1992)
23. Surender Nath. Introduction to Forensic Anthropology
24. Surender Nath. Finger Print Identification
25. Symans, J. Crime and Detection
26. Turner. Forensic science and Laboratory Techniques
27. Yunis, J.J (Ed.) Biochemical Methods in Red cell Genetics

Course Code: AN-BA.C.513 (4CH)

Prerequisite: None

Course Name: Fieldwork

Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Fieldwork Relating to the M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Each student shall have to undergo training for learning and use of different techniques of scientific data collection during 30 days of fieldwork under the supervision of teachers, as nominated by the head of the department, in a tribal/rural area. The fieldwork for a particular year may be camp-based or non-camp-based depending on the decision of the teachers' council of the department. The exact date of commencement of fieldwork shall be announced by the department. Students failing to complete the fieldwork in a particular year can only clear the paper by completing fieldwork next year. No separate fieldwork shall be arranged for such students during the same semester. There shall be instructional hours or classes per week for every candidate for the preparation of synopsis and questionnaire/schedule for the topic of the study during the semester. Classes shall be taken by the concerned supervisors. The supervising teacher shall be the examiner for the paper.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Fieldwork
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Note: The performance of the candidate will be evaluated on the basis of the field notes and fieldwork performance by the supervising teacher during the fieldwork. The final grading will be done by the supervising teacher at the end of the semester.

Elective courses for Biological Anthropology Specialization (For Paper AN-BA. E. 514 and AN-BA. E. 515)

Course Code: AN-BA.E.514 (4CH) **Course Name: Practical in Human Biology, Growth and Nutrition**

Prerequisite: None

Corequisite: Elective

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Human Biology, Growth and Nutrition Relating to the M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I: Measurements on Anthropometric Variables: (i) Standing height vertex; (ii) Sitting height vertex; (iii) Body weight; (iv) Head circumference; (v) Mid-upper arm circumference; (vi) Chest circumference; (vii) Waist circumference (viii) Hip circumference

Unit II: Skinfold Measurements: (i) Skinfold at biceps; (ii) Skinfold at triceps; (iii) Subscapular skin fold; (iv) Supra-iliac skinfold; (v) Medial calf skinfold.

Unit III: Measurements on Physiological Variables: Blood Pressure (BP): Systolic and Diastolic Pressure (SBP & DBP)

Unit IV: Indices: Body Mass Index (BMI); Body Adiposity Index (BAI); Waist Hip Ratio (WHR); Waist Height Ratio (WHTR); Percent Body Fat (PBF), Basal Metabolic Rate (BMR), Assessment of Nutritional Status & Growth: (i) Diet Survey Methods - Family and Individual.

Practical Record

Viva Voce

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Human Biology, Growth and Nutrition
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings

1. Das, B. M.: Outline of Physical Anthropology
2. Sarkar, S.S.: Aboriginal Races of India
3. Sarkar, R.M.: Fundamentals of Physical Anthropology
4. Comas, J. Manual of Physical Anthropology
5. Montagu, A.: An Introduction to Physical Anthropology
6. Laskar, G.W.: Physical Anthropology
7. Hooton, E.A.: Up from the Ape
8. Jannush, J. Buettner: Origins of Man
10. UNESCO: Race Question of Modern Science
11. Coon, C.S.: Anthropology from A to Z
15. Sing, I.P. & Bhasin, M.K.: Anthropometry
16. Das, B. M.: Manab Gosthi
17. Das, B.M. & R. Das: Manab Parajati Parichaya
18. Das, B.M. & P.B. Das: Prathamik Abayabik Nritattwa
19. Das, P.B.: Jibasma Manab.
21. Winchester, M.A.: Genetics
22. Rothwell, N.V.: Human Genetics
23. Mange, E.J. & Mange, Arthur: Basic Human Genetics.
24. Singh IP & Bhasin A Laboratory Manual on Biological Anthropology - Anthropometry. Kamal-Raj Enterprises, Delhi, 1989.

Course Code: AN-BA.E.515 (4CH)

Prerequisite: None

Course Name: Practical in Statistics

Corequisite: Elective

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Statistics Relating to the M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I	Descriptive statistics & Solving Statistical problems: Measurement of Central Tendency (Mean, Median, Mode); Frequency Distribution: Histogram, Bar graph, Pie Chart, Polygraph
Unit II	Measures of Dispersion: Standard Deviation (SD), Standard Error (SE)
Unit III	Test of Inference: Chi-Square Test, Students 't' test, ANOVA, Z' Score.
Unit IV	Correlation: Coefficient of Co-variation, Coefficient of Correlation

Practical Record

Viva Voce

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Statistics
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Reading

1. B.L. Agarwal. Basic Statistics. New Age International Publishers. Fourth Edition, 2006.
2. Fox and Alan. Elementary Statistics in Social Research. Gian Publishing House,
3. Sunder Rao, P.S.S. et al. An introduction to Biostatistics & Research Method. New Arrivals-PHI
4. Wackerly Dennis D, Mendelhall III, Wiliam et al. Mathematical Statistics with application Duxbury Press, Pacific Grove.
5. Gaur AS, Gaur SS. Statistical Methods for Practice and Research. A guide to data analysing using SPSS. SAGE Response, New Delhi, India, 2009.
6. Sunder Rao, P.S.S. et al. An introduction to Bio-statistics & Research Method. New Arrivals-PHI.
7. Conover W.J. Practical Nonparametric Statistics. Third Edition. Wiley India (P) Ltd. Ansari Road, Daryaganj, New Delhi. 1999.

Course Code: AN-C.C 516 (2CH)

Prerequisite: None

Course Name: Entrepreneurship Development Programme

Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Entrepreneurship Development Programme Relating to the MA/M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

The above course is a Compulsory Course offered at the University level and designed commonly for all students of all disciplines. The Course content will be supplied by the expert committee while delivering the course.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Entrepreneurship Development Programme
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

FOURTH SEMESTER (20 CH)

Specialization Course: A. Social Anthropology (AN-SA)

Course Code: AN-SA.C.521 (4CH) Course Name: Anthropology of Children and

Superimposition

Prerequisite: None

Corequisite: Elective

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Anthropology of Children and Childhood Relating to the MA Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Situation of Children in India: Child labour in India, Female working children, Street children, Impact of poverty and drought on children, Child domestic workers.

Unit II Children Under difficult Situations: Overburdened school-going children, Growing up in slums, Plight of the girl-child in India, Children in the Cyber environment.

Unit III Rights of the Child: UN Convention on the Right of the Child, What is children's participation? Why should children participate? Children's independent mobility

Unit IV Corporal Punishment: Strategy to address the physical punishment, emotional abuse of children, and corporal punishment, National Policy for Children. Children in 21st Century: Children's Creativity, Children's Competency, Children's Use of Social Space.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Children and Childhood
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Recommended Readings:

1. Verhellen, Eugeen, 1991. Understanding Children's Right.
2. Verhellen, Eugeen, 1981 Monitoring Children's Right.
3. Pfeffer, George & D.K. Behera, 2006. Contemporary Society: Childhood and Complex Order.
4. James, Alison and Allan Prout, 1991 Structuring and Restructuring of Childhood
5. Behera, D.K., 1996. Children and Childhood in our Contemporary Societies.
6. Qvortrup, J. et al. 1995. (Eds), Childhood Matters, Social Theory, Practice and Politics.

Course Code: AN-SA.C.522 (4CH)

Prerequisite: None

Course Name: Archives of Anthropology

Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Archives of Anthropology Relating to the MA Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the basic concepts learned to execute them

Unit I Reading and noting of monograph of: Irawati Karve, Margaret Mead, Ruth Benedict, Evans- Prichard

Unit II The report of each anthropologist should contain- the basic concept and objective of their study, Theoretical schema, Methods and techniques used in the study, Key findings

Unit III Distribution of STs and PVTGs in Odisha:
Draw to show the location of different tribes in the map of Odisha

Unit IV Write the social structure of four PVTGs in Odisha

Note: Periodic maintenance of practical records shall be taken into consideration while awarding grades to the candidates. The students are to collect the information from the library and internet. The students are exposed to diversification amongst the tribal community as they unearth how their traditions and practices interpenetrate almost all the aspects of culture. It will help the students to gain in-depth knowledge of some eminent anthropologists

Practical Record

Viva Voce

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Archives of Anthropology
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the project or field assignment as per the knowledge gained in the course

Course Code: AN-SA.C.523 (4CH)
Prerequisite: None

Course Name: Dissertation and Viva Voce
Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Dissertation and Viva Voce Relating to the MA Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

The dissertation shall be based on the data collected by the candidate in the course of a month-long fieldwork conducted during the third semester. The dissertation is to be prepared by the student under the supervision of the concerned teacher. The student is required to submit the dissertation through the supervising teacher to the Head of the Department for its evaluation at least fifteen days in advance of the date notified for examination. The dissertation shall be evaluated by an external examiner in consultation with the internal examiner (Supervisor).

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Presenting the study objectives in the form of a Dissertation
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Note: The candidate shall be awarded grades both by the internal and external examiners on the basis of his/her dissertation and performances in the viva-voce.

Elective Courses for Social Anthropology Specialization **(For paper AN-SA. E. 524 and AN-SA. E. 525)**

Course Code: AN-SA.E.524 (4CH)

Course Name: Anthropology of Human Migration and Trafficking

Prerequisite: None

Corequisite: Elective

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Human Migration and Trafficking Relating to the MA Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Concepts, patterns and determinants of migration. Sources and quality of migration data.

Unit II Internal Migration: Determinants of internal migration in developing countries with a

special focus on India, Causes of migration at the place of origin and at the place of destination. Consequences of internal migration. International migration: Patterns of international migration.

Unit III Migration theories and models - Ravenstein's Laws of Migration, Everett Lee's Theory of Migration, Neoclassical economics: Macro theory, Neoclassical economics: Micro theory, The new economics of migration, Dual labour market theory.

Unit IV Introduction to Human Trafficking; Causes and Types of Human Trafficking in World with special reference to India. Theories of Human Trafficking: Bronfenbrenner's Ecological System Theory, Conflict theory, Maslow's Hierarchy of needs, and Demand theory. Human Trafficking Laws in India. International Conventions and Declarations Related to Human Trafficking.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Human Migration and Trafficking
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Recommended Readings:

1. Thozama Mandisa Lutya and Mark Lanier (2012). *An Integrated Theoretical Framework to Describe Human Trafficking of Young Women and Girls for Involuntary Prostitution*, Public Health - Social and Behavioral Health, Prof. Jay Maddock (Ed.), ISBN: 978-953-51-0620-3. InTech, Available from: <http://www.intechopen.com/books/public-health-social-and-behavioral-health/an-intergrated-theoreticalframework-to-describe-human-trafficking-of-young-women-and-girls-for-invo>
2. Acharya, Arun Kumar (2015). *Trafficking of women for sexual exploitation: a study from Mexico*, Pearson
3. Acharya, Arun Kumar, Bryson, Clark Jennifer and Martinez Sanchez, Maria Luisa (2022). *Contemporary slavery and Trafficking in Persons: Global narratives*, Maya Publication.
4. Burk, Mary C (2013). *Human Trafficking: Interdisciplinary perspectives*, Routldege Publication.
5. Maeshelemiah, Jacquelyn, C.A and Lynch, Raven E (2019). *The cause and consequence of Human Trafficking: Human Rights violations*, Columbus.
6. Oberai, A.S. (1987). *Migration, Urbanization and Development*, International Labour Office, Geneva
7. Gavin Jones and Visaria, Pravin, (Eds.), (1997). *Urbanization in large developing countries – China, Indonesia, Brazil and India*, Clarendon Press, Oxford.
8. Kingsley, Davis, (1972). *World Urbanization, 1950-70*, Vol. II, Analysis of Trends, Relationship and Development, Population Monograph Series 4 and 9, University of California, Berkeley.
9. Mitra R. G., (2002). *Understanding Patterns of Migration from Census 2001 Data*, Population Stabilization and Development, Council of Cultural Growth and Cultural Relations, Cuttack
10. Todaro, Michael P.(1976). *Internal Migration in Developing Countries*, International Labour Office, Geneva.
11. United Nations, (1979). Trends and Characteristics of International Migration Since 1950, *Demographic Studies* No. 64, UN, New York.
12. United Nations, (1983). *Determinants and Consequences of Population Trends*, Vol 1, UN, New York, Chapter-VI.

13. Douglas S. Massey, Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino and J. Edward Taylor (1993). Theories of International Migration: A Review and Appraisal, *Population and Development Review*, Sep., 1993, Vol. 19, No. 3 (Sep., 1993), pp. 431-466
14. Harris, J. R., and Michael P. Todaro. (1970). Migration, unemployment, and development: A two-sector analysis. *American Economic Review* 60: 126-142.
15. Hodson, Randy, and Robert L. Kaufman. (1981). Circularity in the dual economy: A comment on Tolbert, Horan, and Beck, 1980. *American Journal of Sociology* 86: 881-887.
16. Thozama Mandisa Lutya and Mark Lanier (2012). *An Integrated Theoretical Framework to Describe Human Trafficking of Young Women and Girls for Involuntary Prostitution*, Public Health - Social and Behavioral Health, Prof. Jay Maddock (Ed.), ISBN: 978-953-51-0620-3. InTech, Available from: <http://www.intechopen.com/books/public-health-social-and-behavioral-health/an-intergrated-theoreticalframework-to-describe-human-trafficking-of-young-women-and-girls-for-invo>
17. Acharya, Arun Kumar (2015). *Trafficking of women for sexual exploitation: a study from Mexico*, Pearson
18. Acharya, Arun Kumar, Bryson, Clark Jennifer and Martinez Sanchez, Maria Luisa (2022). *Contemporary slavery and Trafficking in Persons: Global narratives*, Maya Publication.
19. Burk, Mary C (2013). *Human Trafficking: Interdisciplinary perspectives*, Routldege Publication.
20. Maeshelemiah, Jacquelyn, C.A and Lynch, Raven E (2019). *The cause and consequence of Human Trafficking: Human Rights violations*, Columbus.
21. Oberai, A.S. (1987). *Migration, Urbanization and Development*, International Labour Office, Geneva
22. Gavin Jones and Visaria, Pravin, (Eds.), (1997). *Urbanization in large developing countries – China, Indonesia, Brazil and India*, Clarendon Press, Oxford.
23. Kingsley, Davis, (1972). *World Urbanization, 1950-70*, Vol. II, Analysis of Trends, Relationship and Development, Population Monograph Series 4 and 9, University of California, Berkeley.
24. Mitra R. G., (2002). *Understanding Patterns of Migration from Census 2001 Data*, Population Stabilization and Development, Council of Cultural Growth and Cultural Relations, Cuttack
25. Todaro, Michael P.(1976). *Internal Migration in Developing Countries*, International Labour Office, Geneva.
26. United Nations, (1979). Trends and Characteristics of International Migration Since 1950, *Demographic Studies* No. 64, UN, New York.
27. United Nations, (1983). *Determinants and Consequences of Population Trends*, Vol 1, UN, New York, Chapter-VI.
28. Douglas S. Massey, Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino and J. Edward Taylor (1993). Theories of International Migration: A Review and Appraisal, *Population and Development Review*, Sep., 1993, Vol. 19, No. 3 (Sep., 1993), pp. 431-466
29. Harris, J. R., and Michael P. Todaro. (1970). Migration, unemployment, and development: A two-sector analysis. *American Economic Review* 60: 126-142.
30. Hodson, Randy, and Robert L. Kaufman. (1981). Circularity in the dual economy: A comment on Tolbert, Horan, and Beck, 1980. *American Journal of Sociology* 86: 881-887.

Course Code: AN-SAC.525 (4CH)
Prerequisite: None

Course Name: Practical in Demography
Corequisite: Elective

Programme Education Objectives

PEO1	Understand the nature and basic concepts of the Practical in Demography Relating to the MA Degree in Anthropology
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PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study

Unit I Preparation of Charts and Graphs (Pie Chart, Bar Chart, Histogram, Pedigree Analysis): Fertility, Mortality (Infant, Child, and Maternal), Migration, Morbidity using Report of Census, NFHS, NSS, SECC, NCRB.

Unit II Understanding global Indices: SDG Index, HDI, Gender Inequality Index, World Happiness Report, Global Multidimensional Poverty Index, and Global Hunger Index.

Unit III Data Integration: Combining qualitative and quantitative data, finding patterns and interpretations. Data analysis through SPSS.

Unit IV Preparation of Report and Presentation of any topic using above units.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Demography
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings

Suggested Readings:

1. Srinivasan, K. (2017). Population Concerns in India: Shifting Trends, Policies, and Programs. India: Sage Publications India Private Limited.
2. Alho, J., Spencer, B. (2005). Statistical Demography and Forecasting. Germany: Springer NY.
3. Shryock, H. S. (2013). The Methods and Materials of Demography. United Kingdom: Elsevier Science.
4. Carmichael, G. A. (2015). Fundamentals of Demographic Analysis: Concepts, Measures and Methods. Germany: Springer International Publishing.
5. Stehlík-Barry, K., Babinec, A. J. (2017). Data Analysis with IBM SPSS Statistics. India: Packt Publishing.
6. Narayanasamy, N. (2009). Participatory Rural Appraisal: Principles, Methods and Application. India: SAGE Publications.
7. Modern Indices for International Economic Diplomacy. (2022). Switzerland: Springer International Publishing.
8. The Sustainable Development Goals Report 2020, <https://sdgs.un.org/publications/sustainable-development-goals-report-2020-24686>

Specialization Course: B. Biological Anthropology (AN-BA)

Course Code: AN-BA.C.521 (4CH)

Prerequisite: None

Course Name: Human Population Genetics

Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Human Population Genetics Relating to the M.Sc. Degree in Anthropology
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PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Scope of human population genetics, its relevance in anthropology; the concept of gene frequency and gene pool. Mendelian population.

Unit II Models to study gene flow – ‘island’ model, ‘diffusion’ model, ‘isolation by distance’ model. Types of Mating systems, Inbreeding and outbreeding. Inbreeding coefficient.

Unit III Principles of genetic equilibrium, Hardy-Weinberg law and its application, Causes for changes in gene frequencies in a population.

Unit IV Genetic polymorphism – Balanced and transient polymorphism with reference to Haemoglobins-Sickle cell gene and Thalassemia, Red cell enzymes-Haptoglobin, G6PD. Inborn error of metabolism- biochemical pathways and inheritance of Phenylketonuria (PKU), Alkaptonuria, Galactosemia and Albinism.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Human Population Genetics
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Reading:

1. Gardener, A.; R. T. Howell and T. Davies. 2008. *Human Genetics*. Viva Books Private Limited, New Delhi.
2. Tamarin, R. H. 2002. *Principles of Genetics*. Tata Mc Graw-Hill Edition.
3. Gelehort, T.D, F. S. Collins and D. Gineburg. 1998. *Principle of Medical Genetics*. Williams & Wilkins, USA
4. Malhotra, K.C. & ISHG, Calcutta, Statistical Methods in Human Population Genetics, IBRAD, ISI.
5. Templeton, AR. 2006. *Population Genetics and Micro-evolutionary Theory*. Wiley Liss, New York.
6. Daniel Hartl & A.G. Clark 1997. *Principles of Population Genetics* Sinauer Associates, Inc.

Course Code: AN-BA.C.522 (4CH)

Course Name: Practical in Serology and Human Genetics

Prerequisite: None

Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Serology and Human Genetics Relating to the M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic concepts learned to execute them

Unit I Identification of Blood Group System: ABO and Rh Blood group system. ABH Secretion in the Saliva.

Unit II Identification of sickle cell test status of the given subjects, Estimation of Haemoglobin content of given subject using Sahli's method, Blood sugar test.

Unit III Method of Identification of colour-blindness status of the given subject, Method of Identification of taster or non-taster status of the given subjects using PTC taste sensitivity test.

Unit IV Estimation of allele frequencies for multiple allelic locus-ABO blood group locus, Dermatoglyphics- Finger print patterns, palm prints, Angle atd and formula.

Practical Record

Viva Voce

Note: The students are to perform the serological and biochemical tests on at least three subjects and record the results. They are to be familiar with the details of each experiment such as the aim of the experiment, apparatus required, chemicals needed, procedure, precaution and results of the experiment.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Serology and Human Genetics
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings

1. Bhasin MK and Chahal. (1996) A Laboratory Manual for Human Blood Analysis. Kamla Raj Enterprises. Gali Bari Paharwali, Chawri Bazar, Delhi.
2. Harris H. (2010) Human Biochemical Genetics. Cambridge University Press.
3. Strachan, T and Read, AP. (2003) Human Molecular Genetics. Garland Publishing Inc, NY
4. Templeton AR. (2006) Population Genetics and Microevolutionary Theory. John Wiley & Sons, Inc., Hoboken, New Jersey.
5. Relethford JH. (2012) Human Population Genetics. A John Wiley & Sons, Inc., Publication.
6. Gaur A.S. and Gaur S. S. (2009) Statistical Methods for Practice and Research. SAGE Response, New Delhi.
7. Wilson K. and Walker J. Principles and Techniques of Biochemistry and Molecular Biology (7th Edition). Cambridge University Press.
8. Bhasin M.K., Nath S., Sehgal. (2007) Human Blood Analysis. Kamla Raj Enterp, Delhi, India.
9. Singh I.P. and Bhasin M.K. (2006) A Manual of Biological Anthropology. Kamla-Raj Enterprises, Delhi, India.

Course Code: AN-BA.C.523 (4CH)

Prerequisite: None

Course Name: Dissertation and Viva Voce

Corequisite: Compulsory

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Dissertation and Viva Voce Relating to the M.Sc. Degree in Anthropology
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PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

AN-BA.C. 523 (4 CH) Dissertation and Viva Voce

The dissertation shall be based on the data collected by the candidate in the course of a month-long fieldwork conducted during the third semester. Dissertation is to be prepared by the student under the supervision of the concerned teacher. The student is required to submit the dissertation through the supervising teacher to the Head of the Department for its evaluation at least fifteen days in advance of the date notified for examination. The dissertation shall be evaluated by an external examiner in consultation with the internal examiner (Supervisor).

Note: The candidate shall be awarded grade both by the internal and external examiners on the basis of his/her dissertation and performances in the viva-voce.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Dissertation and Viva Voce
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Elective Courses for Biological Anthropology Specialization

(For paper AN-BA. E. 524 and AN-BA. E. 525)

Course Code: AN-BA.E.524 (4CH) **Course Name: Human Molecular Genetics and Molecular Anthropology**

Prerequisite: None

Corequisite: Elective

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Human Molecular Genetics and Molecular Anthropology Relating to the M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Human Molecular Genetics: meaning and scope; Human Molecular Cytogenetics: Karyotypes and Banding Techniques.

Unit II Replication of DNA. Mechanisms of Gene Expression: Transcription, Translation, Synthesis of protein; Mechanisms of Gene Regulation.

Unit III Organization of the human genome: Nuclear and Mitochondrial; Coding genes; Non-coding genes: Repetitive DNA and Transpose Repeats (LINE, SINE), SNPs, VNTR; Mapping of genes: Physical & Genetic; Biology of stem cell and its application.

Unit IV Molecular Anthropology: Meaning and scope; Origins of modern humans and their genomic diversity: evidence from molecular markers. Molecular basis of Haemoglobinopathy, Genetics of Complex Diseases.

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Human Molecular Genetics and Molecular Anthropology
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings

1. Gardner A. and Davies T. Human Genetics, 2/E. Viva Publication.
2. Hancock J.T. Molecular Genetics. Scion Publishing Limited (Indian Edit.)
3. Heather Skirton. Genetics for the Health Sciences. Christine Patch Scion Publishing Ltd.
4. Cavalli-Sforza L.L., Menozzi P. and Piazza A. The History and Geography of Human Genes. Princeton University Press
5. Rutter M and Malden MA. Genes and behavior: Nature-nurture interplay explained. Blackwell.
6. Diagnostic and statistical manual of mental disorders, Fifth Edition (DSM-V). American Psychiatric Association. American Psychiatric Press, Washington, DC.
7. Mange E.J. and Mange A.P. Basic Human Genetics. Sinauer Associates Inc.
8. Watson, J.D. et al. Molecular Biology of the Gene (5th edition). Benjamin Cummings.
9. Guttman, B Griffiths, A Suzu. D. Genetics: A Beginner's Guide. ONE World Publications.
10. Daniel L. Hartl. Genetics, 8th Edition. Jones & Bartlett Learning.
11. Hugh Fletcher, Ivor Hickey & Paul Winter. Genetics, 3rd Edn. Taylor & Francis Limited
12. James Wynbrandt & Mark D. Ludman. Encyclopedia of Genetic Disorders and Birth Defects. Facts on File, Incorporated.
13. Ammar Al-Chalabi & Laura Almasy. Genetics of Complex Human Diseases. Cold Spring Harbor Laboratory Press, U.S.
14. Andrew Read. New Clinical Genetics, 2nd Edition. Scion Publishing Ltd.
15. Alderson, M. An introduction to Epidemiology. Macmillan.
16. Brown T.A. Genome 3. Garland Science.
17. Klug W.S. and Cummings M.R. Concepts of Genetics. Benjamin Cummings.
18. Anne Gardner. Human Genetics. Scion Publishing Ltd.
19. Michael R. Cummings. Human Genetics in Society. Cengagge Learning
20. Peter Sudbery & Ian Sudbery. Human Molecular Genetics. Prentice Hall.
21. Joceylyn E Krebs. Lewins Genes X. Jones and Bartlett Publisher.
22. Verma and Agrawal. Cell Biology, Genetics, Molecular Biology, Evolution. S. Chand Publication.
23. Goyal S. Molecular Biology and Biochemistry. S. Chand Publication.
24. Strachan, T and Read, AP. Human Molecular Genetics. Garland Publishing Inc, New York, 2003.
25. Vogel, F. and Motulsky, G. Human Genetics: Problems & Approaches
26. Lewis, R. 2009. Human Genetics: Concepts & Applications, 9th edition. Mc Graw-Hill Primis, USA.

Course Code: AN-BA.E.525 (4CH)

Prerequisite: None

Course Name: Practical in Molecular Genetics and Bioinformatics

Corequisite: Elective

Programme Education Objectives

PEO1	Understand the nature and basic concepts of Practical in Molecular Genetics and Bioinformatics Relating to the M.Sc. Degree in Anthropology
PEO2	Analyse the relationships among different concepts
PEO3	Perform procedures as laid down in the areas of study
PEO4	Apply the Basic Concepts learned to execute them

Unit I Molecular Analysis Techniques: Collection and preservation of biological sample (blood); Extraction of genomic DNA using standard protocol; DNA Quantification

Unit II DNA amplification by PCR - RFLP/allele-specific PCR; Restriction enzyme digestion

Unit III Genotyping using Gel Electrophoresis

Unit IV Exploration of Bioinformatic tools & Software packages for genome analysis: Data mining using Bioinformatic tools (NCBI, ENSEMBLE, PRIMER BLAST, HuGE Navigator). Data analysis using MS Excel, and SPSS.

Practical Record

Viva Voce

Course Outcomes

CO-1	Remember and understand the basic concepts/Principles of Molecular Genetics and Bioinformatics
CO-2	Analyse the Various Concepts to understand them through case studies
CO-3	Apply the knowledge in understanding practical problems
CO-4	Execute/create the Project or field assignment as per the knowledge gained in the course

Suggested Readings

1. Bhasin MK and Chahal. A Laboratory Manual for Human Blood Analysis. Kamla Raj Enterprises. Gali Bari Paharwali, Chawri Bazar, Delhi, 1996.
2. Harris H. Human Biochemical Genetics. Cambridge University Press. 2010.
3. Strachan, T and Read, AP. Human Molecular Genetics. Garland Publishing Inc, New York, 2003.
4. Templeton AR. Population Genetics and Microevolutionary Theory. John Wiley & Sons, Inc., Hoboken, New Jersey. 2006.
5. Relethford JH. Human Population Genetics. A John Wiley & Sons, Inc., Publication. 2012.
6. Gaur A.S. and Gaur S. S. Statistical Methods for Practice and Research. SAGE Response, New Delhi. 2009.
7. Wilson K. and Walker J. Principles and Techniques of Biochemistry and Molecular Biology (7th Edition). Cambridge University Press.

A student opting for Social Anthropology specialization has to select any two of the following elective (E) courses for course number AN-SA.E.514 and AN-SA.E.515 during the third semester and similarly two more elective courses for course number AN-SA.E.524 and AN-SA.E.525 during the fourth semester.

- E1. Practical in Qualitative Data
- E2. Anthropology of Migration and Human Trafficking
- E3. Practical in Statistics
- E4. Practical in Demography

A student opting for Biological Anthropology specialization has to select any two of the following elective (E) courses for course number AN-BA.E.514 and AN-BA.E.515 during the third semester and similarly two more elective courses for course number AN-BA.E.524 and AN-BA.E.525 during the fourth semester.

- E1. Practical in Human Biology, Growth and Nutrition
- E2. Human Molecular Genetics and Molecular Anthropology
- E3. Practical in Statistics
- E4. Practical in Molecular Genetics and Bioinformatics

The courses mentioned above AN-C. 417, AN-C. 426, AN-C.C. 516, AN-C.C. 526 should be opted by the students as and when implemented with effect from the academic session, 2024-25.