ANTHROPOLOGY
UNDER GRADUATE CURRICULUM
UNDER
CHOICE BASED CREDIT SYSTEM
2015
# OVERVIEW OF CURRICULUM

## I. Core course

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## II. Elective Course

### A. Discipline Specific
- Two each in Semester V and VI. To be chosen from the following.
  - DSE-1: Physiological Anthropology
  - DSE-2: Sports and Nutritional Anthropology
  - DSE-3: Human Genetics
  - DSE-4: Neuro Anthropology
  - DSE-5: Forensic Dermatoglyphics
  - DSE-6: Paleoaanthropology
  - DSE-7: Anthropology of Religion, Politics and economy
  - DSE-8: Tribal Cultures of India
  - DSE-9: Indian Archaeology
  - DSE-10: Visual Anthropology
  - DSE-11: Fashion Anthropology
  - DSE-12: Demographic Anthropology
  - DSE-13: Urban Anthropology
  - DSE-14: Anthropology of Health
  - DSE-15: Dissertation (in Semester VI only)

### B. Generic Elective/Interdisciplinary
- One each in Semester I, II, III and IV. To be chosen from the following.
  - GE-1: Health science
  - GE-2: Home science
  - GE-3: Biotechnology
  - GE-4: Psychology
  - GE-5: Animation and Visual Graphics
  - GE-6: Interior Design
  - GE-7: Economics
  - GE-8: Environmental Science
  - GE-9: Fashion Design
  - GE-10: Food Technology
  - GE-11: Forestry
  - GE-12: Neuro Science
  - GE-13: Physical Education
  - GE-14: Tourism Administration
  - GE-15: Insurance and Banking
  - GE-16: Journalism and Mass Communication
  - GE-17: BCA
  - GE-18: BBA
  - GE-19: Hotel Management
  - GE-20: BBA (Health Care Management)
  - GE-21: Marine Science
### III. Ability Enhancement Course

<table>
<thead>
<tr>
<th>1. Ability Enhancement Compulsory</th>
<th>2. Ability Enhancement Elective (Skill Based)</th>
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<tr>
<td>One each in Semester I and II. AECC-1: Environmental Science AECC-2: English/MIL Communication <em>The college will have an option to take either of the two papers in a particular Semester (I or II), while the students have to appear in both the papers.</em></td>
<td>One each in Semester III and IV. To be chosen from the following. AEEC-1: Public Health and Epidemiology AEEC-2: Business and Corporate Anthropology AEEC-3: Media Anthropology AEEC-4: Tourism Anthropology</td>
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</tbody>
</table>
ANTH-101: Introduction to Biological Anthropology

Theory

Credit- 4

Unit I: History and development of understanding human variation and evolutionary thought. Theories of evolution.
1. Human variation and evolution in ancient times pre-19th and post-19th Century.
2. Theories of evolution. Lamarckism, Neo Lamarckism, Darwinism, Synthetic theory, Mutation and Neo-Mutation theory.

Unit II: History of Physical Anthropology and development of Modern Biological anthropology, aim, scope and its relationship with allied disciplines.
1. Difference in the approaches of modern and traditional Biological Anthropology, with emphasis on human evolution.

Unit III: Non human primates in relation to human evolution
1. Classification and characteristics of living primates.
2. Comparative anatomy and behaviour of human and non-human primates.
3. Significance of non-human primate study in Biological Anthropology.

Unit IV: Great divisions of humanity
1. A comparative account of various racial classifications (Hooton, Deniker, Risley and Guha)
2. UNESCO Statement on Race.
3. Recent understanding of human biological categories in the context of human genome research.

Practical

Credit-2

Somatometry
1. Maximum head length 9. Physiognomic facial height
2. Maximum head breadth 10. Morphological facial height
4. Maximum bizygomatic breadth 12. Morphological upper facial height
5. Bigonial breadth 13. Head circumference
7. Nasal length 15. Sitting height

Somatoscopy

Suggested Readings
ANTH-102 Introduction to Socio-cultural Anthropology

Theory
Unit I: Credit- 4
Anthropological perspective and orientation; Scope and relevance of Social Anthropology; Relationship of Social Anthropology with other disciplines

Unit II:
Concepts of society and culture; status and role; groups and institution, social stratification, and civil society

Unit III:
Social fact; social action; social conflict; social system

Unit IV:
Theory and practice of ethnographic fieldwork; survey research; comparative and historical methods

Practical
Credit- 2
Methods and Techniques of Social Anthropology: The practical will include the following techniques and methods in collection of data in Social Anthropology.
1. Observation
2. Interview
3. Questionnaire and Schedule
4. Case study
5. Life history

Suggested Readings

ANTH-201 Archaeological Anthropology

Theory
Credit- 4
Unit I: Introduction
• Definition and scope of archaeological anthropology
• Relation with other disciplines
• Methods of studying archaeological anthropology

**Unit II:** Methods of Estimation of Time and Reconstruction of the Past
• Absolute dating methods
• Relative dating methods
• Methods of climatic reconstruction: palynology, paleontology, soil pH estimation.

**Unit III:** Geochronology of Pleistocene Epoch
• Glacial and Interglacial
• Pluviation and Inter Pluviation
• Different types of geoclimatic events

**Unit IV:** Understanding Culture
• Technique of tool manufacture and estimation of their relative efficiency
• Classification of tools: primary and combination fabrication techniques
• Typology and cultural nomenclature

**Unit V:** Earliest Evidence of Culture in the World
• Konso, Olorgesailie, Olduvai Gorge
• Pirro Nord, Dmanisi
• Attirampakkam, Isampur

**Practical**

Typo-technological Analysis of Prehistoric Tools: Identification, Interpretation and Drawings of the tool Types
1. Core Tool Types
2. Flake Tool Types
3. Blade Tool Types
4. Microlithic Tool Type
5. Neolithic Tool Type

**Suggested Readings**

**ANTH-202 Fundamentals of Human Origin & Evolution**

**Theory**

**Unit-I:**
Primate origins and radiation with special reference to Miocene hominoids: Ramapithecus, distribution, features and their phylogenetic relationships.

**Unit-II:**
1. Australopithecines: distribution, features and their phylogenetic relationships.
2. Appearance of genus Homo (Homo habilis) and related finds.

**Unit-III:**
Homo erectus from Asia, Europe and Africa: Distribution, features and their phylogenetic status.

**Unit-IV:**
The origin of Homo sapiens: Fossil evidences of Neanderthals and Archaic Homo sapiens sapiens

**Unit-V:**
Origin of modern humans (Homo sapiens sapiens): Distribution and features

**Unit-VI:**
Hominisation process

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**Practical**

<table>
<thead>
<tr>
<th>Practical Credit-2</th>
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<tbody>
<tr>
<td>1. Craniometry: Maximum cranial length Maximum cranial breadth</td>
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<tr>
<td>Maximum bizygomatic breadth Maximum frontal breadth</td>
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<tr>
<td>Minimum frontal breadth Nasal height</td>
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<tr>
<td>Nasal breadth Bi-mastoid breadth</td>
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<td>Greatest occipital breadth Upper facial height</td>
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<td>Cranial index Nasal index</td>
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<td>2. Osteometry: Measurements of long bones: lengths, minimum/least circumference and caliber index</td>
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<td>3. Identification of casts of fossils of family hominidae: Drawing and comparison of characteristics</td>
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**Suggested Readings**


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**ANTH-301 Tribes and Peasants in India**

**Theory**

**Credit-4**

**Unit I:** Anthropological Concept of Tribe
1. Problems of nomenclature, definition and classification.
2. Features of tribes in India.

**Unit II:** Tribes and Wider world.
1. The history of tribal administration; Constitutional safeguards
2. Draft National Tribal Policy, Issues of acculturation assimilation and integration. Impact of development schemes and programme on tribal life

**Unit III:** Anthropological Concept of Village
1. The concept of peasantry.
2. Approaches to the study of peasants – economic, political and cultural.
3. Characteristics of Indian village: social organization; economy and changes.
4. Caste system and changes.

**Unit IV**

Ethnicity Issues: Tribal and peasant, movements; Identity issues

**Practical**

Reading of Ethnography: Students are required to read and analyze any two of the ethnographies (as listed below) and prepare a report based upon it. The report should clearly link up the study with the concept of tribe and peasantry and delineate clearly the concept used in the text.

1. Research questions/objectives of the study and their relevance.
2. Theoretical schema.
3. Methods and techniques used in the study.
4. Key findings and their significance in the context of the objectives of the study.
5. Critical analysis of the finding on the basis of contemporary available resources.

**List of Ethnographies:**

**Suggested Readings**


**ANTH-302 Human Ecology: Biological & Cultural dimensions**

**Theory**

**Biological Dimensions**

Unit I: Concepts in Ecology: Definition, ecosensitivity adaptation, acclimation, acclimatization, biotic and abiotic component.
Unit II: Methods of studying human ecology.
Unit III: Adaptation to various ecological stresses; Ecological rules and their applicability to human populations.
Unit IV: Impact of urbanization and industrialization on Man.

**Cultural Dimensions**

Unit V: Culture as a tool of adaptation; Various modes of human adaptation in pre-state societies.
  i. Hunting and food gathering
  ii. Pastoralism
  iii. Shifting cultivation

Unit VI: Ecological themes of state formation: i. Neolithic revolution, ii. Hydraulic civilization

Unit VII: Agriculture and peasantry; Industrial civilization and growth of urban societies

**Practical**

Biological Dimensions

**Size and Shape Measurements**

1. Stature
2. Sitting Height
3. Body Weight
4. Total Upper Extremity Length
5. Total Lower Extremity Length
6. Nasal Breadth
7. Nasal Height

**Size and Shape Indices**

1. Body Mass Index
2. Ponderal Index
3. Relative Sitting Height
4. Relative Upper Extremity Length
5. Relative Total Lower Extremity Length
6. Nasal Index

**Cultural Dimensions**

1. Make a research design pertaining to any environmental problem and do a project based on it.

**Suggested Reading**


**ANTH-303 Biological Diversity in Human Populations**

**Theory**

Unit I: Concept of Biological Variability; Race; Hardy-Weinberg Law; Sources of Genetic Variation; Structuring Genetic Variation; Interpretation of Human Variation, Genetic Polymorphism (Serological, Biochemical and DNA Markers); Human Adaptability –Adaptive Mechanisms determining the types of adaptation.

Unit II: A critical appraisal of contribution of Risley, Guha, Rickstett and Sarkar towards understanding ethnic elements in the Indian populations.
Unit III: Pre and Proto historic racial elements in India. Linguistic classification of Indian population.

Unit IV: Role of Bio-cultural Factors
Cultural Biology; Bio-cultural factors influencing the diseases and nutritional status. Evolution of Human diet, biological perspectives of ageing process among different populations.

Unit V: Demographic Perspective
Demographic Anthropology; Sources of Demographic Data, Demographic Processes, Demographic profile of Indian populations and its growth structure; Inbreeding and Consanguinity – Biological consequences of inbreeding, frequency of inbreeding in world populations; Methods of counselling.

Unit VI: Genetic diversity among Indian Population

Practical Credit- 2
1. Craniometric Measurements (Skull & Mandible)
2. Determination of A1, A2, B, O; M N; and Rh (Test with five Anti-Rh sera) blood groups of ten subjects.
3. Analysis and interpretation of finger ball pattern types, palmar main lines and pattern index; Finger print classification and development of chance prints and statistical treatment of the data collected (Ten Subjects)

Suggested readings:
ANTH-401 Theories of Culture and Society

Theory Credit- 4
Unit I: Emergence of Anthropology: Interface with evolutionary theory and colonialism, changing perspectives on Evolutionism, Diffusionism and Culture area theories
Unit II: Emergence of fieldwork tradition, Historical Particularism, American Cultural Tradition
Unit III: Durkheim and social integration, Functionalism and Structural-functionalism and British Social Anthropology
Unit IV: Structuralism: Claude Levi-Strauss and Edmund Leach
Unit V: Symbolic and Interpretative approach

Practical Credit- 2
As a part of the practical following exercises will be undertaken by the students so as to enable them to connect the theories they learn with things of everyday living.
1. To identify a topic relating to contemporary issue and formulate research questions and clearly identify the theoretical perspectives from which they are derived.
2. Identification of variables of a study.
3. Various types of hypotheses.
4. Formulation of hypothesis.
5. Distinction between hypothesis testing and exploratory research.
6. Identification of universe and unit of study with justifications.
7. Choice of appropriate research technique and method in the context of theoretical framework.
8. Data collection and analysis

Suggested Readings

ANTH-402 Human Growth and Development

Theory Credit- 4
Unit I: Concept of human growth, development, differentiation and maturation. Evolutionary perspective on human growth (including living primates and fossil human ancestors)
Unit II: Prenatal (conception till birth) and postnatal (birth till senescence) period of growth, pattern of normal growth curves, variation from normal growth (canalization, catch-up growth and catch-down growth), ethnic and gender differences in growth curves, secular trend
Unit III: Bio-cultural factors (genetic, social, and ecological factors) influencing patterns of growth and variation, methods and techniques to study growth, significance/applicability of growth studies
Unit IV: Nutritional epidemiology-concept of balanced diet, impact of malnutrition (over and under) with special reference to obesity, Kwashiorkor and Marasmus. Assessment of nutritional status.
Unit V: Human physique and body composition – models and techniques; gender and ethnic differences

Unit VI: Somatotyping and human physique with reference to Sheldon, Parnell, Heath and Carter methods

Unit VII: Bio-cultural adaptation to environmental stresses- heat, cold and altitude. Homeostasis and thermoregulation, ecological rules and their applicability among human beings

Practical Credit- 2
1. Growth status: Somatometry (stature, body weight, mid upper arm circumference etc), assessment of chronological age, percentile, z-score, height for age, weight for age, BMI for age
2. Obesity assessment: General (BMI, body fat %, Conicity index, body adiposity indices) and regional adiposity indices (WC, WHR, WHtR)
3. Estimation of body composition (fat percentage and muscle mass) with skinfold thickness and bioelectric impedance
4. Nutritional assessment through dietary pattern and anthropometric indices

Suggested Readings

ANTH-403 Research Methods

Theory Credit- 4

Unit I: Research Design
Review of literature, conceptual framework, formulation of research problem, formulation of hypothesis, sampling, tools and techniques of data collection, data analysis and reporting, guiding ideals and critical evaluation of major approaches in research methods, basic tenets of qualitative research and its relationship with quantitative research.
Unit II: Field work tradition in Anthropology
Ethnographic approach, contribution of Malinowski, Boas and other pioneers; cultural relativism, ethnocentrism, etic and emic perspectives, comparative and historical methods, techniques of rapport establishment identification of representative categories of informants, maintenance of field diary and logbook

Unit III: Tools and techniques of data collection
Concept of survey, relationship of survey method with ethnographic method, construction of questionnaire and interview schedule, validation and internal consistency of questionnaire
Observation - Direct, Indirect, Participant, Non-participant, Controlled
Interview - Structured and unstructured, Focussed Group Discussion, key informant interview
Case Study and life history
Genealogy - Technique and application

Unit III: Ethics and Politics of Research
1. Identify, define, and analyze ethical issues in the context of human subject research.
2. Reasons for conducting ethical review of research, theories and concepts related to ethical decision-making including consequentialism, deontology, respect, dignity, discourse ethics, communitarianism, liberalism and the four principles approach.
3. Ethical importance of consent, privacy and confidentiality in research
4. Issues of academic fraud and plagiarism, conflicts of interest, authorship and publication

Unit IV: Analysis and Writing Up
1. Chapterization, preparing a text for submission and publication, concepts of preface, notes (end and footnotes), glossary, prologue and epilogue, appendix, bibliography (annotated) and references cited, review and index.
2. Similarities and differences between qualitative and quantitative data analysis; introduction of software for data analysis.

Unit V: Bio-Statistics
1. Types of variables, presentation and summarization of data (tabulation and illustration).
2. Descriptive statistics- Measurers of Central Tendency, Measure of Variation, Skewness and Kurtosis, Variance and standard deviation, Normal and binomial distribution.
3. Tests of Inference- Variance ratio test, Student’s ‘t’ tests, Chi-square test and measures of association, Analysis of variance, Estimation of confidence interval, Correlation, Regression Analysis, Study design issues: Sample size and Power,
4. Pedigree Analysis- Importance and implication.

Practical Credit: 2
2. Observation: Direct, Indirect, Participant, Non-participant, Controlled
3. Questionnaire and Schedule, Interview- Unstructured, Structured, Key informant interview, Focussed Group Discussion, and Free listing, pile sorting
4. Case study and life history
5. Project report writing- preparation of research problem, study design, data collection techniques, analysis and report writing based on somatometric, dermatoglyphic and serological data or social problem.

Suggested Readings
• Garrard E and Dawson A. What is the role of the research ethics committee? Paternalism, inducements, and harm in research ethics. Journal of Medical Ethics 2005; 31: 419-23.
ANTH-501 Human Population Genetics

Theory Credit- 4

Unit I: Essentials of Genetics
Landmarks in the history of genetics, principles in human genetics, single locus (Mendelian) versus multilocus (quantitative/complex) inheritance, chromosome theory of inheritance (segregation and independent assortment) Mendelian inheritance (single factor and multifactorial inheritance, polygenic inheritance), Non-Mendelian inheritance (multiple allelism, Co-dominance; sex linked, epistasis; penetrance and expressivity; Cytoplasmic inheritance).

Unit II: Ecological Genetics and Polymorphism
phenotypic & genotypic polymorphisms, transient polymorphism, balanced polymorphisms, models explaining the maintenance of genetic polymorphism (Relationship between sickle cell and malaria, X-linked polymorphism, selection due to infectious diseases and its association with blood groups and other)

Unit III: Hardy-Weinberg principle
Genotypic and allelic frequencies, assumptions of Hardy-Weinberg equilibrium, its applications and exceptions

Unit IV: Mechanism for dynamics in Gene Frequency
mutation, selection (pattern and mechanism), Genetic drift (bottle neck and founder effect), Gene flow/migration, inbreeding (inbreeding co-efficient and its genetic consequences)

Unit V: Population structure and admixture in human populations
random & non-random mating (positive and negative assortative mating), heritability, linkage disequilibrium, genetic markers utility of genetic markers in forensic, population and disease association studies.

Unit VI: Human evolutionary genetics
From Mendel to molecules: A brief history of evolutionary genetics, Epistasis and the conversion of genetic variances, Human-Ape comparisons.

Practical Credit- 2
1. Blood group typing-A1, A2, B, O, MN and Rh (D) blood groups
2. Color Blindness
3. Glucose-6-phosphate dehydrogenase deficiency(G6PD)
4. PTC tasting ability
5. Biochemical markers-DNA isolation and polymerase chain reaction (PCR)
Suggested Readings

ANTH-502 Anthropology in Practice

Theory

Credit- 4

Unit I: Academic Anthropology

Unit II: Role of Anthropology in Development
Anthropology and Public Policy, Need Assessment and Community Development, Anthropology of NGO’s, Management Anthropology, Environment and Community Health, Social and economic sustainability, Cultural resource management

Unit III: Future Dynamics in Anthropology
Trends in Anthropology: Anthropology of Tourism, Anthropology In Census; Designing And Fashion, Visual Anthropology

Unit IV: Constitutional Perspective and Human Rights

Unit V: Biosocial anthropology in practice
Bio-social elements of human development at national and international level, application of conceptual framework of Forensic Anthropology in judicial settings both criminal and civil, Population Dynamics and relationship between population growth and various aspects of culture such as means of subsistence, kinship, social
complexity, social stratification and political organization, Bio-social counselling of an individual or population

Practical Credit- 2
1. The students will visit a NGO or corporate office or census office in Delhi and its adjoining areas and write principal observations on the same.
2. Write a project on constitutional provisions or evaluation of any development project/report.
3. Draw a scene of crime and identify the various evidences in a portrayed crime scene.
4. Write a project on Religious Tourism / Tribal Tourism / Health Tourism / Fashion / Human Rights / Ecotourism.
5. Write a project on the demographic profile from secondary data.
6. Collect data on bio-social problem and design counselling and give the analysis and interpretation.

Suggested Readings
ANTH-601 Forensic Anthropology

Theory

Unit-I
Introduction to Forensic Anthropology: Definition, Brief History, Scope, Applications and Integration of Forensic Anthropology.

Unit-II

Unit-III
Personal Identification, Complete and Partial Identification, Methods of Identification in Living Persons: Somatometry, Somatoscopy, Occupational Marks, Scars, Bite Marks, Tattoo Marks, Fingerprints, Footprints, Lip Prints, Nails, Handwriting, Deformities and Others.

Unit-IV
Serology: Identification and Individualization of bloodstain, urine, semen and saliva. Patterns of Bloodstains.

Unit-V
Individualization: Forensic Odontology-Tooth Structure and Growth, Bite Marks, Facial Reconstruction, DNA Profiling.

Practical

2. Somatometric and Somatoscopic Observation on living persons.
3. Identification of bloodstain, urine, semen and saliva.
4. Examination of Fingerprints and Handwriting.

Suggested Readings:


**ANTH-602 Anthropology of India**

**Theory**

**Unit I:**
1. Origin, history and development of Anthropology in India, approaches to study Indian society and culture- traditional and contemporary
2. Racial and linguistic elements in Indian population
3. Understanding the diversity of Indian social structure - concept of Varna, Jati, Caste, Ashram or purusharatha, gender hierarchies - their economic and cultural impact, origin and evolution of social structures and their underlying philosophies.

**Unit II:**
1. Critical appraisal of contribution of Risley, Guha, Rickstett and Sarkar towards understanding ethnic distinctness in the Indian populations
2. Contribution of contemporary biological, social and archaeological anthropologists in India.

**Unit III:**
1. Aspects of Indian Village –social organisation, agriculture and impact of market economy on villages
2. Tribal situation in India- biogenetic variability, linguistic and socio-economic characteristics; Problems of tribal peoples, land-alienation, indebtedness, lack of educational facilities, shifting-cultivation, migration, forests and tribal unemployment, health and nutrition, tribal movement and quest for identity
3. Developmental projects- tribal displacements and rehabilitation problem
4. Impact of culture-contact, urbanization and industrialization on tribal and rural population
5. Basic concepts -Great tradition and little tradition, sacred complex, Universalization and parochialization, Sanskritization and Westernization, Dominant caste, Tribe-caste continuum, Nature-Man-Spirit complex, pseudotribalism,

**Unit IV:**
1. Problems of exploitation and deprivation of scheduled caste/ tribe and Other Backward Classes.
2. Constitutional safeguards for the Scheduled caste and scheduled tribes.

**Practical**

1. Identify various traits/variables which can be used in racial classification and comment on its relevance.
2. Review a book/edited volume on Indian social structure such as caste, religion, tribe or rural population and give its salient features.
2. Explore the biological diversity of any population group considering a minimum of five genetic traits.
3. Highlight the contributions of any two contemporary Indian anthropologists.

**Suggested Reading**

5. Gupta D. Social Stratification. Delhi: Oxford University Press.
12. Majumdar DN. (1901). Races and Culture of India. Asia Publishing House, Bombay
ELECTIVE COURSES
Credits: Any four papers = Theory + Practical = (4+2)*4 = 24

DSE-1: Physiological Anthropology

Theory

Unit I: Fundamentals of work physiology- homeostasis; metabolism and energy and systems; exercise, respiratory system and haemodynamics (blood pressure, pulse rate, heart rate and oxygen- transporting system, blood flow ,Hb, hematocrit etc)

Unit II: Acute physiological adjustments during transition from resting homeostasis to sub-maximal and maximal exercise; chronic physiological adaptations to exercise training; age, sex and population variation in the physiological characteristics

Unit III: Cardio-vascular and respiratory endurance, physical working capacity and physical fitness- evaluation of response and assessment; relationship of body measurements with cardio-vascular and respiratory functions, aerobic and anaerobic exercise training, health related fitness in gender and ethnic group. Principles of effective physical conditioning techniques

Unit IV: Impact of smoking, alcohol, drug, pollution and occupation on cardio-respiratory functions; physical performance and environmental stress, chronic diseases, malnutrition, lifestyle disease

Unit V: Ageing and health related aspects of exercise

Practical

1. Cardiovascular function (Blood pressure, heart rate, pulse rate)
2. Respiratory function (Tidal volume, vital capacity, forced vital capacity, minute ventilation etc.)
3. Haemoglobin estimation
4. Step-test
5. Treadmill test

Suggested Readings:

DSE-2. Sports and Nutritional Anthropology

Theory
Unit I: Anthropology of sports- Physical fitness, component of physical fitness
Unit II: Physical conditioning, training-techniques and physiological effects, environmental effects on physical performance: effect of heat stress, cold stress and high altitude on physiological response and performance.
Unit III: Body composition and Athletes, sports selection and monitoring
Unit IV: Human biological variability, health and nutrition; doping and performance; cultural constructions and physiologic implications of food across time, space and society; an integrated bio-behavioural perspective towards food preference.

Practical
1. Assessment of daily nutrient intake
2. Evaluate association of nutritional status and physical performance
3. Demonstrate cultural perspective for preference of specific food of a population

Suggested Readings

DSE-3. Human Genetics

Theory
Unit I: Structure, Function and Inheritance of the human genome- gene, DNA structure and replication, DNA repair and recombination, gene expression, coding and non-coding region
Unit II: Expression of genetic information: from Transcription to Translation – the relationship between genes and protein, transcriptions; transcription and RNA processing, encoding genetic information, decoding the codons: the role of transfer RNAs
Unit III: Genomic Variation: Genomic Polymorphisms (SNPs, VNTR, CNVs, etc); haplotypes and haplogroups; genotype-phenotype correlations, epigenetics
Unit IV: Methods of Genetic Study in Human: Pedigree analysis and expressivity; Chromosomal Basis of Genetic Disorders (Karyotypes and identification of chromosome variation; Nucleic Acid Hybridization Assays, cytogenetic mapping), Genetic mapping (Microsatellite and other DNA polymorphisms), LOD score; sequencing strategies (PCR
based Sanger sequencing to Exome sequencing), concept of non-mendelian inheritance and complex diseases

**Unit V: Genomic Diversity & Human Evolution**
1. Peopling of the Indian Subcontinent: Evidence from mtDNA and Y-chromosome; evolutionary genetics; Molecular evolution; DNA sequence variation and human origins

**Practical**
1. Blood Collection, transportation and storage in field
2. DNA Extraction from whole blood
3. DNA Quantification, Aliquoting and sample preparation
4. PCR and electrophoresis
5. Gel Documentation

**Suggested Readings:**

**DSE-4. Neuro Anthropology**

**Theory**
Unit 1: Encultured Brain
  - The Basics of Neuroanthropology
  - The Nature of Variation
  - Evolution by Natural Selection

Unit 2: Overview of Neural Systems & Their Interconnections
  - Niche construction
  - Primate Social Cognition, Human Evolution
  - Evolution and the Brain

Unit 3: Memory & Medicine; Balancing Between Cultures
  - Balancing between Cultures: Equilibrium in Capoeira
  - Human Capacities, Skills and Variation
  - Stone Age Body Image :Male embodiment in subsistence societies

Unit 4: Overcoming Mind/Body Dualism
  - Addiction and Neuroanthropology
Ritual and Emotion
War and Dislocation: Neuroanthropological model of trauma
Autism, theory of mind and religious development
Cultural consonance, consciousness and depression

Unit 5: Neuroconstructivism and Embodied Learning
Human Development: A Biocultural Process
Enculturation and Memory
The Neuroanthropology of Stress
The Neuroanthropology of PTSD (Post traumatic stress disorder)
Psychiatry in Neuroanthropological Perspective

Unit 6: Neurological and Anthropological Methods
Neuroanthropology Applied
Critical Neuroscience
The Social and Personal Uses of Neuroscience

Practical:
• Case Studies on Human behavior, Capacities, Skills, and Variation
• Prepare a report on socio-cultural and biological perspective of human behavior and inter-individual variation.
• Somatometric measurements of human skull and relation with neural activity.
• Class blog participation: Once every week, each student will be responsible for finding one source in the popular/lay press that’s related to the topic for that week (e.g., from newspapers, news magazines, science magazines), and introducing a brief online discussion about what it says and why it’s relevant

Suggested Reading:
  • http://jcc.sagepub.com/content/41/4/546.abstract
  • http://www.nature.com/neuro/journal/v15/n5/full/nn.3093.html
• Bonanno et al., (2011) Weighing the Costs of Disaster: Consequences, Risks, and Resilience in Individuals, Families, and Communities. Association for psychological science
• Luhrmann, (2012) Beyond the Brain
  • http://www.wilsonquarterly.com/article.cfm?AID=2196
DSE-5. Forensic Dermatoglyphics

Theory
Unit-I: Introduction to Dermatoglyphics: History and Development, scope and Applications. 
Unit-IV: Basis of Fingerprint Comparison: Class Characteristics and Individual Characteristics, Determination of Identity. 
Unit-V: Other Dermatoglyphic Patterns: Palm Print, Sole Prints and Toe Prints. 
Unit-VI: Recent advances: Fingerprint and Palmprint Recognition, Automated Fingerprint Identification System.

Practical
1. Recording and Study of Finger and Palm Prints 
2. Determination of palmar main line formula, Ridge count and indices 
3. Comparison of Fingerprints and Palmprints on the basis of class and individual ridge Characteristics 
4. Development of latent fingerprints using different chemical and powder methods.

Suggested Readings:
DSE-6. Paleoanthropology

Unit I: Dating methods, geological time scale, taphonomy and interpretation of the paleontological and archaeological records, taxonomic and chronological problems of fossils records.

Unit II: Primate speciation and extinctions: a geological perspective, adaptive primate radiation, differential rate of somatic evolution.


Unit IV: Primate and Non-Primate Models for Early Hominid Behaviour; hominization process- Evolution of hominid-human bipedalism

Unit V: Palaeodemography- reconstruction of population patterns from skeletal analysis, determination of demographic variables in prehistoric populations and post-neolithic population growth, theory and techniques in paleodemography, methodological issues for reconstructing demographic structure, demographic models of mortality and their interpretation

Unit VI: Palaeopathology- bioarchaeological approach of disease; effects of agriculture, urbanization and slavery on health and disease; colonization and disease with special emphasis on the New World; dispersion of modern humans - molecular and morphological patterns of relationship

Practical
1. Comparative primate osteology
2. Description and identification of the disarticulated skeleton of non-human primates
3. Identification and description of fossil casts
4. Excursion to a site for seven days for collection of fossil material and its report

Suggested readings


DSE-7. Anthropology of Religion, Politics and Economy

Unit I:
Anthropological approaches to understand religion- magic, animism, animatism, totemism, naturism; witchcraft and sorcery; Religious specialists: shaman, priests, mystics; Overview of Anthropological Theories of Religion; Religion as the sacrality of ecological adaptation and socialness

Unit II:
Economic institutions: principles of production, distribution, and consumption in simple and complex societies; critical examination of relationship between economy and society through neo-classical, substantivist, and neo-marxist approaches, various forms of exchange: barter, trade and market; Forms of currencies; reciprocities: generalized, balanced and negative.

Unit III:
Political institutions: concepts of power and authority; types of authority; state and stateless societies; law and justice in simple and complex societies; the prospects for democracy and tolerance among and within the world’s diverse civilizations; the meaning and sources of identity in complex contemporary societies; the origins of modern politics, its institutions, and cultures, both Western and non-Western

Unit IV:
Interrelationship between religion, politics and economy; religious conversion and movements, emergence of new religious sects in the global order.

Practical

1. Case study of any of the social institute (religion, economic, political) with respect to culture perspective

Suggested Readings:

DSE-8. Tribal cultures of India

Unit I: Concept of tribes and its problematic nature, General and specific characteristics of tribes, Tribes in India: Antiquity, historical, academic, administrative and anthropological importance, Denotified tribes.
Unit II: Tribe- caste continuum, Constitutional safeguard/provisions, Gender and Tribe, Distribution of tribes in India
Unit III: Tribes: Nomenclature- emic and etic differences, Classification of tribes based on their economy, occupation and religion, Racial elements among the tribes, Scheduled and non-scheduled categories of tribes
Unit IV: Tribal movements, Tribal monographs, Problems of tribal development
Unit V: Forest policies and tribes, Migration and occupational shift, Tribal arts and aesthetics Displacement, rehabilitation and social change Globalization among Indian tribes.

Practical
Distribution of Indian Tribes: PTG, ST
Location of different tribes on the map of India
Write an annotated bibliography on any one tribe
Write the social structure of any one tribe of India

Suggested Readings:

DSE-9. Indian Archaeology

Unit I: Understanding culture
a. Technique of tool manufacture and estimation of their relative efficiency;
b. Classification of tools: primary and combination fabrication techniques;
c. Typology and cultural nomenclature.

Unit II: Methods of climatic reconstruction: palynology, paleontology, soil pH estimation.

Unit III: Prehistoric India
Pleistocene chronology of India: A critical assessment
Unit IV: Character, distribution and interpretation of habitat and economy of:
   i Lower palaeolithic
   ii Middle palaeolithic
   iii Upper palaeolithic
   iv Mesolithic culture
   v Art, ritual and belief

Practical
1. Identification of tools:
   (a) Handaxe varieties, chopper/chopping tools
   (b) Cleaver varieties
   (c) Side scraper varieties
   (d) Knives
   (e) Burins
   (f) End scrapers
   (g) Borers
   (h) Microlithic tools
   (i) Bone tools

2. Identification of lithic technology.

Suggested reading:

DSE-10. Visual Anthropology

Theory

UNIT 2: Theory and Representation. Anthropology and Images: Ethnophotography and ethnographic films and mass media. Theories of representation, modern media and political advocacy.
UNIT 3: Early Ethnographic Photography: Contexts and Trends. Anthropology of Art and Aesthetics: Critical reflection on the relation of images, objects and persons. Objects and images from other societies valued as 'art'.
UNIT 5: Ethnographic Films: Theoretical issues concerning ethnographic film, ethical dimensions of ethnographic film, Interdependency of technology and culture.
UNIT 6: Cinema Studies with emphasis on key feature, documentary and ethnographic films with a focal theme - the examination of the 'language of film'.

Practical:
This paper deals with analysis of visuals such as photographs and films pertaining to cultural practices dealing with institutions of religion, economy and politics.

Theory and Representation: Anthropology and Images: Ethnophotography and ethnographic films and mass media. Theories of representation, modern media and political advocacy.
**Anthropology of Art and Aesthetics:** Critical reflection on the relation of images, objects and persons. Objects and images from other societies valued as 'art'.

**Ethnographic Film and Cinema Studies:** This unit consists of screenings followed by seminars. The emphasis will be on key feature, documentary and ethnographic films with a focal theme- the examination of the 'language of film'.

**Practical Implications:** Explore traditional and experimental means of using visual and audiovisual media to research, represent and produce anthropological knowledge. Critical engagement with policy and the use of audio-visual and internet based media in advocacy and activism. The students are required to do the following exercises:
1. Basic principles of producing ethnographic films: text and its focus, camera angles, lighting and decision making behind the camera.
2. Analyze the visual data from classical ethnographies signifying how ‘otherness’ is constituted.
3. A gendered analysis of visuals produced during colonial and postcolonial times.
4. Hypertext and multimedia as analytic end points.
5. Collection, reporting and analysis of photo-ethnographic data.
6. Digital mirror: computer assisted exercises leading to production of ethnographic text.

**Suggested Readings**

1. Marcus Banks and Howard Morphy, 1998, Rethinking Visual Anthropology

**DSE-11. Fashion Anthropology**

**Theory**
Unit-I. Introduction: Fashion, Consumption, and Anthropology: From Evolution to Compassionate Consumption, the Rise and Fall of Evolution in Dress
Unit II: Theoretical and Ethnographic Approaches to Understanding Fashion and Consumer Society
Unit III Colonialism, Dress, and Identity
Colonialism, Consumption, and Civilizing Fashion
Anti-colonial Dress, Clothing Debates in Burma and Africa
Unit IV: Race and Fashion: The 1980s "Japanese Invasion" and 1990s "Asian Chic"
Alternative Approaches to Consumerism
Unit V: Gender, Fashion and Consumption in different Human societies, application of fashion in traditional and modern societies, role of religion in fashion.

Unit VI: Globalization and Dress, leather cosmetic relationships, relationship of tribal clans with reference to embroidery color and designs in ethnic group of India.

Practical:
1. Identification of Pattern making Garment construction and color dynamics.
2. Sewing and Clothing manufacture practical.
3. Surface ornamentation, Textile crafts and Accessories Design in different ethnic group
4. A comparison of Computer aided design versus traditional designs

Suggested Readings
DSE-12. Demographic Anthropology

Theory
Unit I: Demographic Anthropology
1. Introduction, definition and basic concepts
2. Relationship between demography, population studies and anthropology
3. Importance of population studies in Anthropology
Unit II: Population Theories
1. John Graunt
2. Thomas R. Malthus
3. Biological theory of population
4. Theory of demographic transition
Unit III: Tools of Demographic Data
1. Measures of population composition, distribution and growth
2. Measures of fertility
3. Measures of mortality
4. Measures of migration
Unit IV: Population of India
1. Sources of demographic data in India
2. Growth of Indian population
3. Demography of Indian tribal and non-tribal groups
4. Anthropological determinants of population growth
5. Impact of urbanization on the migration of tribal groups
Unit V: National policies
1. National Population Policy
2. National Health Policy
3. National Policy on Reproductive Health Care

Practical
A student will collect and compile demographic data from different secondary sources on any given topic by the concerned teacher and a project report will be submitted for its evaluation.

Suggested Readings
DSE-13. Urban Anthropology

Theory

Unit 1: Emergence of urban anthropology
Introduction, Extension of the anthropological interest in peasants and rural areas, Origins of Cities and Early Sociological Approaches, Urban planning and design

Unit 2: Political economy
Rural-urban migration, kinship in the city, problems that arise from urbanism, poverty and social stratification

Unit 3: Class approach
Culture of Poverty and the Underclass Approach, Comparison between relations function in an urban setting versus function in a rural setting, Race and Class in Urban Ethnography, Urban Dystopia

Unit 4: Urban Inequality and Disasters
Poverty, extended family for urban natives versus migrants, Global Cities and the Production of Space, Community study and urban ecology, Urban Space, Postmodern and Hypermodern City

Unit 5: Global Urban Developments
Urban ethnography research and methodology, Contemporary urban issues: Suburbs, Exurbs and Urban Decline, disciplinary perspectives

Practical

(i) Visit city life among business community and appreciate the role of culture with politics and economics.
(ii) Media-popular culture behaviour
(iii) Photo shoot in any city life, Creating captions and texts relating to urban anthropology findings.

Suggested readings

2. Cities, classes and the social order. Anthony Leeds, Roger Sanjek

DSE-14. Anthropology of Health

Unit-1: Introduction and Overview of the Field of Anthropology & Health.
   A. Health Anthropology within the Context of Anthropology.
      • Anthropology and its subfields
      • The unique place of Health anthropology in anthropology
      • Competing perspectives on the study of anthropology of health.
   B. Defining Health and Illness in Cross-Cultural Perspective.
      Looking at “health,” “illness,” and related concepts in Western culture, including sociological “sick role” models, Some important variations in the process of seeking health care.

Unit – 2: Measuring Health: Morbidity, Mortality, and Epidemiology
Morbidity, Mortality, Epidemiology: Meaning, scope and methods. Epidemiology of common communicable diseases: Malaria, Tuberculosis, Leprosy, Diabetes, Cardiovascular disease and Sexually Transmitted Diseases (STDs), HIV/AIDS,

Reproductive life, child Birth, Family planning adoption, male dominance, Nursing and early nurture, hyper-menstruation and its corollaries. Population variation and its relation to health and disease.

Unit – 4: Chronic Disease, Injury, Stress, and Mental Health
Effect of Chronic Disease in Health, Relationship between mental health, chronic disease, and injury, Understanding Stress and Its Effects Cross-Culturally, Mental Disorders and Related Phenomena, diseases associated with specific sociocultural and environmental contexts: Kuru, osteomalacia, sickle cell anaemia. Adaptations to Health Threats: Genetic Vulnerability and Resistance & Environment, Developmental and Cultural Adaptations to adverse Conditions.


Unit – 6: Healing and Healers in Cross-Cultural Perspectives.
   A. Shamanism, Magic, and Healing.
      Shaman, Magic, Witchcraft and Sorcery,
   B. Folk Healers and “Alternative Medicine.”
      Types of healers and healing, Problems in evaluating efficacy, Sources of dissatisfaction with mainstream medicine.

Unit – 7: Health and Human Rights

Unit – 8: Legal Aspects & Future Prospects for Health
Rules and regulations of international health policy, Medico- Legal Problems in relation to health administration, International health organization / NGOs, Medical Ethics, Critical issues in global health.

Practical

1. Make a Schedule on Health and Demography.
2. Calculation of Infant Sex ratio, Fertility rate, Total fertility rate, Mortality rate, Birth rate, crude birth rate, crude death rate, Mortality rate, life expectancy, immigration rate, population growth rate.

3. Identification and Characteristics of Various diseases.


**Suggested Readings**


**DSE-15 Dissertation**

Student will opt either dissertation or project work or one paper from the elective discipline course in 6th Semester. He/she will be attached with one supervisor or guide.
**Interdisciplinary/Generic elective Course**

Credits: Any four papers = Theory + Practical = (4+2)*4 = 24

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<td>GE-10 Food Technology</td>
<td>GE-21 Marine Science</td>
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<tr>
<td>GE-11 Forestry</td>
<td>GE-12 Neuro Science</td>
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Ability enhancement Compulsory Course

Credits: Two Papers = 2*2=4

AECC-1: Environmental Science
AECC-2: English/MIL Communication

The college will have an option to take either of the two papers in a particular Semester (I or II), while the students have to appear in both the papers.

Ability enhancement elective (skill based) Course

Credits: Any two papers = 2*2=4

AEEC-1. Public health and epidemiology
Unit I: Principles of Epidemiology in Public Health:
Overview of epidemiology methods used in research studies to address disease patterns in community and clinic-based populations, distribution and determinants of health-related states or events in specific populations, and strategies to control health problems
Unit II: Statistical Methods for Health Science
Analysis and interpretation of data including data cleaning, data file construction and management; implementation of analytic strategies appropriate for the type of data, study design and research hypothesis; parametric and nonparametric methods, measures of association, Linear and Logistic regression, Generalized Linear Modeling, and Survival analysis
Unit III: Environmental Health
Effects of biological, chemical, and physical agents in environment on health (water, air, food and land resources); ecological model of population health; current legal framework, policies, and practices associated with environmental health and intended to improve public health
Unit IV: Psychological, Behavioural, and Social Issues in Public Health
Cultural, social, behavioural, psychological and economic factors that influence health and illness; behavioural science theory and methods to understanding and resolving public health problems; assess knowledge, attitudes, behaviours towards disease and patient compliance to treatment.
Unit V: Management of Health Care Program and Service Organizations
Techniques and procedures for monitoring achievement of a program’s objectives, generating evidence of program effectiveness, assessing impacts in public health settings; evaluate framework that leads to evidence-based decision-making in public health. Organizational principles and practices including organizational theory, managerial role, managing groups, work design, and organization design at primary, secondary, and tertiary levels of care
Unit VI: Epidemiology of disease
Contemporary methods for surveillance, assessment, prevention, and control of infectious and chronic diseases, disabilities, HIV/AIDS; understanding etiology; determining change in trend over time; implementation of control measures

Suggested reading

AEEC-2. Business and Corporate Anthropology
1. Business and corporate Anthropology: History and subject matter
2. Applied anthropology in industry, application of the ethnography in business management
3. Anthropology and consumer behaviour,
4. Globalization, international trade and anthropology
5. Techniques for Conducting Fieldwork for Business Organizations

Suggested Readings:

AEEC-3. Media Anthropology
Unit 1: Theoretical Foundations: Introduction to Media Anthropology; Intellectual Antecedents
Unit 2: Audiences, Consumption and Identity Formation: The Social and Material Life of Cinema; Television and the Cultural Politics of Nation; Gender and Subjectivity; the Nation and Temporality; Media as Material Objects.
Unit 3: The Cultural Work of Mass Media Production: Producing “Bollywood”.
Unit 4: The Social Sites of Film and TV Production; the Exigencies of Commercial Filmmaking; the Constraints of Public Television Production.
Unit 5: Producing Reality – Journalism and Advertising; News as Social Practice; the Local and the Global in Advertising.
Unit 6: Small Media: Materiality, Circulation, Everyday Life & Social Transformations; Indigenous Media and Cultural Activism; The Social and Material Lives of Cell Phones; Media as Social Infrastructure – The Case of Facebook; Learning from New Media; The Possibilities & Constraints of YouTube

Suggested readings

AEEC-4. Tourism Anthropology
Unit I: Tourism- aspects and prospects, anthropological issues and theoretical concerns, tourist as ethnographer; pilgrimage and Authenticity Issues
Unit II: Interconnections between tourism history and the rise of the socio-cultural study of tourism including temporary migration, colonial exploration, pilgrimage, visiting relatives, imagined and remembered journeys, and tourism
Unit III: understand the implications of tourism as a major mechanism of cross-cultural interaction; role of symbolism, semiotics, and the imagination in tourism; tourism and the commodification of culture or cultural degradation
Unit IV: understand the global and local political economy of contemporary tourism, particularly in relation to international development; explore dynamic relationships between heritage-making enterprises, revival and preservation projects, the international flow of capital; role of museums and other branches of the cultural industries” (including music, art, and food) in tourism economies; tourism and global mobility; Ecotourism and sustainable development
Unit V: New Directions in the Anthropology of Tourism: Globalization, Tourism and Terrorism; applied aspects of anthropology in tourism development and planning.

Suggested Readings