PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)
(Estd. under the Panjab University Act VII of 1947-enacted by the Govt. of India)

FACULTY OF SCIENCE

SYLLABI

FOR

M.Sc. (Honours School) ANTHROPOLOGY

1st to 4th Semester

EXAMINTIONS 2012-2013
Outlines of Tests, Syllabi and Courses of Reading for M. Sc. (Hons School) In Anthropology–Semester and Choice-Based-Credit System

NOTE: The Core Course Papers are compulsory for the students admitted to the department of Anthropology. For Elective Course Papers, students can either choose the entire Elective Course Papers Group1 or choose any one paper from the Group 1 and any two papers from the Elective Course Papers Group 2, subject to the availability. For the list of papers of the respective classes taught by the respective university departments, contact the concerned department or P.U. Web site. However, no change in the time table will be made in this respect. Students of Master’s degree from other departments can opt any of the core/elective course papers taught by the department.

M. Sc. (H.S.) Semester-I

Core Course Papers

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>Title</th>
<th>Teaching Marks</th>
<th>Hrs</th>
<th>Credits Per week</th>
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<tbody>
<tr>
<td>AHS- 411</td>
<td>Physical Anthropology and Race Biology</td>
<td>15</td>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>AHS- 412</td>
<td>Prehistoric Archaeology</td>
<td>15</td>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>AHS- 413</td>
<td>Social Anthropology</td>
<td>15</td>
<td>50</td>
<td>65</td>
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<tr>
<td>AHS- 414</td>
<td>Practical in Physical Anthropology-I</td>
<td>11</td>
<td>44</td>
<td>55</td>
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<tr>
<td>AHS- 415</td>
<td>Practical in Palaeoanthropology</td>
<td>11</td>
<td>44</td>
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Elective Course Papers Group1

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>Title</th>
<th>Teaching Marks</th>
<th>Hrs</th>
<th>Credits Per week</th>
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<tbody>
<tr>
<td>AHS- 416</td>
<td>Palaeoanthropology</td>
<td>15</td>
<td>50</td>
<td>65</td>
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<tr>
<td>AHS- 417</td>
<td>Transmission &amp; Molecular Genetics</td>
<td>15</td>
<td>50</td>
<td>65</td>
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<td>AHS- 418</td>
<td>Research Methods and Descriptive Statistics</td>
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Elective Course Papers Group 2

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<td>Primatology</td>
<td>15</td>
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<td>AHS- 422</td>
<td>Paleolithic Cultures</td>
<td>15</td>
<td>50</td>
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<tr>
<td>AHS- 423</td>
<td>Social Structure and Culture Change</td>
<td>15</td>
<td>50</td>
<td>65</td>
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<td>AHS- 424</td>
<td>Practical in Physical Anthropology II</td>
<td>11</td>
<td>44</td>
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<tr>
<td>AHS- 425</td>
<td>Practical in Pre-historic Archaeology</td>
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Audit Course Papers (shall not carry any credit)

German/French/Persian/Russian Languages or any other course of Panjab University

Semester-II

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>Title</th>
<th>Marks</th>
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<td>AHS- 422</td>
<td>Paleolithic Cultures</td>
<td>15</td>
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<td>AHS- 423</td>
<td>Social Structure and Culture Change</td>
<td>15</td>
<td>50</td>
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<tr>
<td>AHS- 424</td>
<td>Practical in Physical Anthropology II</td>
<td>11</td>
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<tr>
<td>AHS- 425</td>
<td>Practical in Pre-historic Archaeology</td>
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<td>44</td>
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Elective Course Papers Group 1
AHS- 426  Palaeoprimatology  15  50  65  4  3
AHS- 427  Cytogenetics and Classical Genetic Methods  15  50  65  4  3
AHS- 428  Inferential Statistical Methods  15  50  65  4  3

Elective Course Papers Group 2

Human genome; System Biology & Bioinformatics; Biochemistry; Biophysics; Biotechnology; Geology; Botany; Zoology; Chemistry; Mathematics, Statistics; Computer Science; Physics; Geography; Sociology; Economics; UIAMS, Forensic Science & Criminology, Fashion Technology. Environmental Science, Psychology, Political Science, Any of the Master’s level Course of Panjab University. These are subject to availability.

Audit Course Papers (shall not carry any credit)
German/French/Persian/Russian Languages or any other course of Panjab University

Compulsory Internship in Anthropology: Each student after finishing his/her M. Sc. I examination would undergo a four-week compulsory internship in Anthropology.

M. Sc. (H.S.) 2\textsuperscript{nd} year

Semester-III

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>Title</th>
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<th>Hrs</th>
<th>Credits</th>
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<td>Core Course Papers</td>
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<tr>
<td></td>
<td>AHS- 531 Human Growth &amp; Somatotyping</td>
<td>15 45 60 4 2</td>
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<tr>
<td></td>
<td>AHS- 532 Human Ecology</td>
<td>15 45 60 4 2</td>
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<td></td>
<td>AHS- 533 Human Demography</td>
<td>15 45 60 4 2</td>
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<td></td>
<td>AHS- 534 Anthropological Theories</td>
<td>15 45 60 4 2</td>
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<td></td>
<td>AHS- 535 Project Report 1: Project Formulation &amp; Data Collection</td>
<td>- 80 80 4 3</td>
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Elective Course Papers Group 1

PROGRAMME OPTIONS (Students may choose any of the options A or B)
OPTION-A: Biological Anthropology Students may choose any three of the following papers

AHS- 536A Early Human Evolution:
  a) Theory  10 30 40 4 2
  b) Practical  04 16 20 2 1

AHS- 537A Forensic Anthropology:
  a) Theory  10 30 40 4 2
  b) Practical  04 16 20 4 1

AHS- 538A Human Red Cell Polymorphism:
  a) Theory  10 30 40 4 2
  b) Practical  04 16 20 2 1

AHS-539A Population genetics and Speciation:
  a) Theory  10 30 40 4 2
  b) Practical  04 16 20 2 1
OPOTION-B: Socio-Cultural Anthropology (Students may choose any three of the following papers)

AHS-536B Tribal and Rural Anthropology:
   a) Theory 10 30 40 4 2
   b) Practical 04 16 20 2 1

AHS-537B Medical Anthropology:
   a) Theory 10 30 40 4 2
   b) Practical 04 16 20 2 1

AHS-538B Practice in Anthropology:
   a) Theory 10 30 40 4 2
   b) Practical 04 16 20 2 1

AHS-539B Reading in Contemporary Anthropology:
   a) Theory 10 30 40 4 2
   b) Practical 04 16 20 2 1

Elective Course Papers Group 2

Human genome; System Biology & Bioinformatics; Biochemistry; Biophysics; Biotechnology; Geology; Botany; Zoology; Chemistry; Mathematics, Statistics; Computer Science; Physics; Geography; Sociology; Economics; UIAMS, Forensic Science & Criminology, Fashion Technology, Environmental Science, Psychology, Political Science, Any of the Master’s level Course of Panjab University. These are subject to availability.

Audit Course Papers (shall not carry any credit)
German/French/Persian/Russian Languages or any other course of Panjab University

Semester IV

<table>
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<tr>
<th>Paper No.</th>
<th>Title</th>
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<td>CORE COURSE PAPERS</td>
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<tr>
<td>AHS-541</td>
<td>Human Body Composition and Kinanthropology</td>
<td>15</td>
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<td>AHS-542</td>
<td>Energy Flow and Human Ecological Responsiveness</td>
<td>15</td>
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<td>AHS-543</td>
<td>Human Epidemiology and Public Health</td>
<td>15</td>
<td>45</td>
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<td>AHS-544</td>
<td>Contemporary and Indian Anthropology</td>
<td>15</td>
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<tr>
<td>AHS-545</td>
<td>Project Report 2: Data Analysis and Report Writing</td>
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Elective Course Papers Group 1

PROGRAMME OPTIONS (Students may choose any of the options A or B)

OPTION A- Biological Anthropology (Students may choose any three of the followings papers)

AHS-546A Dimensions and Implications of Human Evolution:
   a) Theory 10 30 40 4 2
   b) Practical 04 16 20 2 1
AHS-547A  Forensic Biology:
   a) Theory  10  30  40  4  2
   b) Practical  04  16  20  2  1
AHS-548A  Enzyme, Serum proteins & other Genetic Variation:
   a) Theory  10  30  40  4  2
   b) Practical  04  16  20  2  1
AHS-549A  Gene flow and Quantitative genetics:
   a) Theory  10  30  40  4  2
   b) Practical  04  16  20  2  1

**OPTION B- Socio-cultural Anthropology** (Students may choose any three of the followings papers)

AHS-546B  Tribal Anthropology and Peasant Movements:
   a) Theory  10  30  40  4  2
   b) Practical  10  10  20  2  1
AHS-547B  Cultural Disease and Illness:
   a) Theory  10  30  40  4  2
   b) Practical  10  10  20  2  1
AHS-548B  Anthropology in Action:
   a) Theory  10  30  40  4  2
   b) Practical  10  10  20  2  1
AHS-549B  Current Anthropology and Policy:
   a) Theory  10  30  40  4  2
   b) Practical  10  10  20  2  1

**Elective Course Papers Group 2**

<table>
<thead>
<tr>
<th>Credits</th>
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<tr>
<td>15</td>
<td>Human genome; System Biology &amp; Bioinformatics; Biochemistry; Biophysics; Biotechnology; Geology; Botany; Zoology; Chemistry; Mathematics, Statistics; Computer Science; Physics; Geography; Sociology; Economics; UIAMS, Forensic Science &amp; Criminology, Fashion Technology, Environmental Science, Psychology, Political Science, Any of the Master’s level Course of Panjab University. These are subject to availability.</td>
</tr>
<tr>
<td>50</td>
<td>Audit Course Papers (shall not carry any credit)</td>
</tr>
<tr>
<td>65</td>
<td>German/French/Persian/Russian Languages or any other course of Panjab University</td>
</tr>
</tbody>
</table>
Objectives: This paper introduces the student to two areas of Physical Anthropology, namely, the basic concept of the Subject, Conceptualization of Evolution (since the course is open for students from non-biology backgrounds) and Human ethno-biology. The paper lays the basis for the student to understand further course work in Anthropology. This paper will increase the skill of its pursuant in the area of working with and using concepts to work in the context of human ethno-biological diversity. The paper will help the student to use a holistic approach while working in human situations.

SECTION-I

Introduction to Anthropology; Different Branches of Anthropology, various thematic approaches in Anthropological studies; History and scope of Physical Anthropology, its relationship with other branches of Anthropology. Interaction of Anthropology with other disciplines that study humans.

SECTION-II


SECTION-III

Race concept-historical development, formation of race, morphological and genetical definition of race, UNESCO statement of race; Racial differences in Physical characters such as skin, eye, hair, nose, head and variations in other bodily proportions.

SECTION-IV

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS

Montagu, M.F.A. : Concept of Race.
Sarkar, S.S. (1954) : Aboriginal Races of India.
Comas, Juan. (1960) : Manual of Physical Anthropology (Spring-Fields. C. C. Thomas USA
Guha, B.S. (1964) : Racial Elements in Indian Population.

AHS 412 Prehistoric Archaeology

Objectives: This introductory course is designed to provide students with an understanding of European and Indian prehistory from the time of the earliest hominids to the development of the civilizations. The students will receive both lectures and hands-on-instructions in the principles,
techniques, methods and theory of Prehistoric Archaeology with actual artifacts and other material remains from various archaeological sites. The course teaches basic archaeological concepts and methods and post-glacial environments in Europe and India. The main goal of the course is to instill an understanding and appreciation of the record of European and Indian prehistory through artifacts and archaeological sites.

SECTION-1

Introduction to Prehistoric Archaeology: Aims and its scope; Major branches of archaeology and its relationship with other social, biological and natural sciences.
Place of Pleistocene in the geological time-scale and its importance. Climatic conditions during Pleistocene in Europe and India. Pleistocene Glaciations: evidences and causes.

SECTION-II

Land forms and the processes involved in their formation. Types and nature of sedimentary deposits- fluvial, glacial, lacustrine, aeolian, spring, cave and marine. Sedimentary deposits as indicative of climate and hydrology.

SECTION-III

Principles of Prehistoric Archaeology. Archaeological sites: Probable Archaeological sites; how a site is formed, and their classification.
Excavation and Recording: Kinds of excavation, excavation records and their importance.

SECTION-IV

Dating Methods in Prehistoric Archaeology: Relative (stratigraphy, fluorine dating); Absolute, varve counting method, dendrochronology).
Natural tools and man-made artifacts; Origin of techniques of Stone Age tools.

Note:

1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All question will carry equal marks.

Essential Reading

Burkitt, M.C. (1956) : The Old Stone Age, New York University Press
Clark, G. (1957) : Archaeology and Society: Reconstructing the Prehistoric Past Harvard University Press


Sankalia, H.D. (1964) : Stone Age Tools—Their Techniques, Name and Probable Functions. Deccan College, Poona


Bhattacharya, D.K. (1997) : Prehistoric Archaeology, Hindustan Publishing Corporation (India), Delhi


Karir, B. S., (1985) : Geomorphology and Stone Age Culture of North West India, Sandeep Parkashan, Delhi

Further Readings


AHS 413 Social Anthropology

Total: 65
Semester Exam.: 50
Internal Assessment: 15

Objectives: Study of man, culture and society in its various hues acquaints students to the story of human civilization. It tells how basic concepts that govern social survival of societies and various social systems are formed over the years. The paper is an introductory course, that introduces students to the basic concepts used in social science research. It also deals with various social institutions namely marriage family and kinship. The paper briefly discusses concept of tribe, caste and civilization. While emphasizing applications of anthropology in society, the course concludes addressing questions of social and cultural change. The course proposes two class seminars at the end of each unit and eight assignments two from four units of the prescribed syllabus.
SECTION-I


SECTION-II

Basic concepts: society, culture, civilization: Ethos and Eidos: Culture Trait, Culture Complex; Community, Caste, Sanctions.

The concept of culture, Culture as an explanatory and a descriptive concept. The reality of culture, explicit and implicit culture; culture and subcultures, culture and the individual; culture and ecology.

SECTION-III

Family, Marriage and Kinship.
Incest, exogamy and endogamy. Theories of incest.

Forms and functions of family; universality of family; typological and processual approaches to the study of family; household and domestic groups; stability and change in the family, impact of industrialization, urbanization, education and feminist movements on the family.

SECTION-IV

The problem of universal definition of marriage; forms and functions of marriage; nature of marriage in small-scale societies; ways of acquiring mates in simple societies; preferential and prescriptive forms of marital alliances. Marriage and rules of residence.

Nature of Kinship; Descent and Filiation; Non-unilineal descent; Kindred; Descent Groups: Lineage, clan, phratry, moiety, Unilineal, Double descent and Bilineal descent, Descent and Alliance theories of kinship. Kinship usages and kinship terminology.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks
ESSENTIAL READINGS


FURTHER READINGS


AHS 414 Practical in Physical Anthropology I

Total: 55
Semester Exam.: 44
Internal Assessment: 11

Objectives: This Practical paper helps the student to understand the gross anatomy of the human skeleton. The work is done on actual skeletal material (of which the department has several).

The student is enabled to acquire knowledge of the human skeleton that is essential in the pursuit of careers and research in human evolution, human growth and development, forensic sciences, primatology and applied Para-medical sciences.

Section A: Human Osteology – General concepts and descriptive terminology, macroscopic and microscopic structures of bone, process of ossification, features and classification of bones.


Vertebral column; Distinguishing features of Cervical, Thoracic and Lumbar Vertebrae; Sacrum, Thoracic cage.

Section B: Somatometry of Cranium and face and determination of Indices, Somatoscopy.

Objectives: In this practical, students are taught scientific methods and techniques for taking various measurements and observations on the living man. The skill acquired by the students will be extremely helpful in carrying out research in the field of human growth and development, forensic science and skeletal biology. The practical will involve study on human beings.
ESSENTIAL READINGS


FURTHER READING


AHS 415 Practical in Palaeoanthropology

Total: 55
Semester Exam.: 44
Internal Assessment: 11

Objectives: The course is aimed to provide practical training in the laboratory and field techniques used in palaeoanthropology. The course includes practical training imparted to the students in various techniques used in the collection, preparation, identification, illustration, moulding and casting and photography of fossil material. Training is also imparted in the identification of various rock types and the use of essential field equipment. The class-room teaching is supplemented with field-trips to palaeoanthropological sites.

How and where to look for fossils. Equipment and techniques for collection, washing & screening, field cataloguing, transportation, etc. of fossils.

Identification of major rock types. Structure and use of clinometer compass (dip and strike, toposheet reading and mapping). Chemical and Mechanical techniques for the preparation of fossils with particular reference to primates, field and laboratory photography, Moulding and casting.

Methods of identification of fossils with particular reference to primates (casts). Dental morphology and taxonomy of selected fossil groups and their illustration, interpretation and reporting style.
ESSENTIAL READINGS


Karir, B. S. (1985) : Geomorphology and Stone Age Culture of North West India, Sandeep


Yakushova, A.F. (1986) : Geology with the Elements of Geomorphology, Moscow: Mir Publishers

FURTHER READINGS


AHS 416 Palaeoanthropology

Total: 65
Semester Exam. : 50
Internal Assessment: 15

**Objectives:** This course is designed to provide basic knowledge about the fundamental concepts of palaeoanthropology. The paper introduces the subject of palaeoanthropology to the beginners by providing conceptual palaeontological, geological and anthropological knowledge necessary to understand the subject of palaeoanthropology. The main aim of the paper is to sufficiently equip a student with fundamental concepts and techniques of palaeoanthropology so that he/she can understand and appreciate the advanced concepts of palaeoprimatology and human evolution to be taught in the 2nd semester and in M.Sc. (Hons.) Second Year.

**SECTION-I**

Introduction: Aims, objectives, problems, affinities with other disciplines and historical development of Palaeoanthropology. Fossils and their preservation and processes of fossilization.

**SECTION-II**

Principles of stratigraphy and correlation. Dating methods- Relative and Chronometric dating.

**SECTION-III**

Taxonomy and rules of nomenclature. Succession of life through ages with stress on Cenozoic Era.
SECTION-IV

Siwalik Group – Nomenclature, stratigraphy, fauna and flora and Palaeoanthropological significance of Siwaliks. Evolution of dentition with special emphasis on primate dentition. Various trends in primate evolution – Continental drift, food habits and alternative interpretation, etc.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All question will carry equal marks

Essential Reading


Further Readings:

AHS 417  Transmission & Molecular Genetics

Objectives: The course is designed to impart basic knowledge of concepts and fundamentals of the science of Human Genetics. The course aims to enhance skills of the students so that they are adequately equipped to pursue research in the field of human genetics. Besides, the knowledge is imparted with emphasis to explain how prevalence of diseases existing in the present day human populations be explained on basis of genetic evolutionary and bio-cultural principles. Each student has to participate in workshops and seminar based on problems relating to human genetics.

SECTION-I

Introduction to Genetics, Mendelism, Mendelism in man, Chromosomal theory and Gene theory of heredity, Genetic nomenclature, testing gene mutations for allelism: complementation test, intragenic recombination

Extension of Mendelian principles: Dominance relations, multiple allelism, Genotype to phenotype: penetrance and expressivity, effect of the environment on phenotype development; Gene interactions and modifying genes, Suppressor genes, Lethal genes

SECTION-II

Linkage, Types of linkage, crossing over and recombination, Interference and coincidence, genetic recombination and construction of genetic maps, genetic mapping of Mendelian traits: Identifying recombinants and non-recombinants in pedigrees, Genetic and physical map distances, Two-point mapping, Multipoint mapping, Linkage in man; Direct and indirect analysis of linkage, pedigree method: y and u statistics, sib pair method, Lod-score method.

SECTION -III

DNA is the genetic material, Evidences in favour of DNA being the genetic material, DNA structure, Organization of eukaryotic gene; Eukaryotic genome: C-value paradox, Repetitive DNA, General concept of a gene, Gene families, Non-coding genes

Replication in bacterial and eukaryotic chromosomes: DNA polymerases, Replicons, origin and termination, Replisome.

SECTION-IV

Transcription: Transcription factors, RNA polymerase, Formation of primary transcript: initiation, elongation and termination, Processing of primary transcript to mature mRNA. Translation: Structure and functions of Ribosomes and tRNAs, General mechanism of translation.

Basics of human gene mapping: Assigning genes to chromosomes and determining the location of genes on the chromosomes, somatic cell genetics and its extensions;
Low resolution mapping – Cell hybridization, mini- and micro-satellites, Radiation hybrid mapping

Note:

1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks

ESSENTIAL READINGS


FURTHER READINGS


AHS 418 Research Methods and Descriptive Statistics

Total: 65
Semester Exam: 50
Internal Assessment: 15

Objectives: This paper introduces the student to the fundamentals of research methods and data analysis for population studies. The main objective is to enable the student to understand how to conduct research and apply statistical techniques in anthropological and population research. This course will also develop necessary skills to make simple analysis and presentations of the data. The skills acquired as a result of this course will enable the student to seek careers in various fields of population research and services.
SECTION-I
Research problems in anthropology; research design; methods of data collections; Sampling Design; Research Methods: Observation as a technique of research; Field work: Participant and non-participant observation; Participatory Reflection and Action Methods (PRA)/Rapid Rural Analysis (RRA); Grounded theory.

SECTION-II
Methods of data collection; Observation and experimental data; Structured and Unstructured approach; Questionnaire and Schedule; Interviewing and focus group; Key informant method. Case study and extended case study method. Action Research

SECTION-III
Introduction to Statistics; use of statistics in anthropological research; Levels of measurement nominal, ordinal, interval and ratio scales; Fundamental concepts of population, samples, variables, parameter and statistics, frequency, proportion, percentages and ratios; Graphical representation of data frequency curves.

SECTION-IV
Measures of central tendency, mean, median and mode. Measures of dispersion: range, interquartile range, 10-90 percentile range, standard deviation and variance. Moments-moment coefficients of skewness and kurtosis

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS


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<th><strong>FURTHER READINGS</strong></th>
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<td>Young, P.V.</td>
<td>Scientific Social Surveys and Research, (1992).</td>
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Semester II

AHS 421 Primatology

Total: 65
Semester Exam: 50
Internal Assessment: 15

Objectives: This paper introduces the student to two areas of Physical Anthropology, namely, Taxonomy evolutionary tendencies and social behaviour of Living Primates. The paper lays the basis for the student to understand further course work in Anthropology. This paper will increase the skill of its pursuant in the area of working with biosocial aspects of Primate Diversity. The paper will help the student to use a holistic approach while working in human situations.

SECTION-I

Man in the scheme of evolution. Primatology in the realm of Anthropological Studies. Definition and evolutionary characteristics of Primates. Taxonomy, classification and general survey of living primates with respect to their geographical distribution, activity patterns and diet.

SECTION-II


SECTION-III


SECTION-IV


Note:

1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.

2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS


Le Gross Clark. (1949) : History of the Primates. Printed by the order of the Trustees of the British Museum

AHS- 422 Palaeolithic Cultures

Total: 65

Semester Exam.: 50
Internal Assessment: 15

Objectives: This introductory course is designed to provide students with an understanding of European and Indian prehistory from the time of the earliest hominids to the development of the civilizations. The students will receive both lectures and hands-on-instructions in the principals, techniques, methods and theory of Prehistoric Archaeology with actual artifacts and other material remains from various archaeological sites. The course includes the prehistoric record of cultural achievements of early man. The main goal of the course is to instill an understanding and appreciation of the record of European and Indian prehistory through artifacts and archaeological sites.

SECTION-I

Palaeolithic Cultures:

Material culture of early hominids- Olduwan Culture, Abbevillian-Acheulian developments in Europe and allied developments in India (Didwana, Soan Valley, Hunsgi) (Lower Palaeolithic).

SECTION-II

Material culture of Neanderthaloids-Levallois and Mousterian cultures in Europe and allied developments in India (Bhimbetka, Nevasa) (Middle Palaeolithic).
Material culture and art of *Homo sapiens*-Development of Advance-Hunter Culture in Western Europe and allied developments in India (Renigunta, Billa Surgam (Upper Palaeolithic). Upper Palaeolithic art of Europe.

**SECTION-III**

Evolution of Early Holocene cultures in Europe (Mesolithic Culture). Prehistoric Art in India.

Neolithic Cultural Developments: Origin and development of food production in West Asia and Near East. Neolithic cultural pattern of India

**SECTION-IV**

Bronze Age Civilization in India: Harappan Civilization – Extent, town planning, architecture, art, seals, Mesopotamian contact, dockyard at Lothal and decline of Harappan Civilization.

**Note:**
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

**Essential Reading**

Burkitt M.C. (1956) : The Old Stone Age, New York University Press
Clark G. (1957) : Archaeology and Society: Reconstructing the Prehistoric Past Harvard University Press
Sankalia, H.D. (1964) : Stone Age Tools-Their Techniques, Name and Probable Functions. Deccan College, Poona
Further Readings


AHS- 423 Social Structure and Culture Change

Objectives: Human societies are complex systems that are defined by the normative principles of social structure and are continuously subjected to processes of cultural change. This paper introduces students to the diverse nature of institutions that constitute the complexity called society.

SECTION-I

Groups and Institutions; Folkways, Status and Role, Tribe,
Economic Anthropology: Characteristics of simple small-scale economies and peasant economies; Formalist, Substantivist and Marxist approaches to the study of economic phenomena among non-agricultural societies and peasant communities. Concepts of ownership, production, distribution and exchange in simple societies.

SECTION-II

Political Anthropology: Meaning and Scope; Locus of power, State and stateless Societies.
Legal Anthropology: Meaning and scope: Law and sanctions, Customs and Mores; Norms and Values.

SECTION-III

Anthropology of Religion: Meaning and function of religion; Theories of origin of religion; Animism, Animatism, Totem and Taboo, Magic, Science and Religion. Witchcraft and Sorcery; Symbolism and Religion.
SECTION-IV

Social and Cultural Change and usage of anthropological knowledge in its understanding.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS


FURTHER READINGS


AHS- 424 Practical in Physical Anthropology II

Total: 55
Semester Exam. : 44
Internal Assessment: 11

Objectives

This Practical paper helps the student to understand the gross anatomy of the human skeleton. The work is done on actual skeletal material (of which the department has several). The course also helps to develop an understanding of the age changes and the sex differences in the human skeleton.

The student is enabled to acquire knowledge of the human skeleton that is essential in the pursuit of careers and research in human evolution, human growth and development, forensic sciences, primatology and applied Para-medical sciences.
The practical work will involve study on human and non-human primate skeletal material.

**Section-A:**

Pectoral girdle – Humerus, Radius, Ulna, Articulated skeletal of the hand.
Hipbone, lower limb, Femur, Tibia, Fibula, Tarsals, Skeleton of foot (articulated)
Determination of age and sex from Human skeleton.
Comparative Osteology of the skull of Man, Ape, Monkey and Loris.

**Section: B**

Somatoscopy and Somatometry on the human Body

**ESSENTIAL READINGS**


**Further reading**


**AHS- 425    Practical in Pre-historic Archaeology.**

**Total:** 55
**Semester Exam. : 44**
**Internal Assessment: 11**

**Objectives:** The course is aimed to provide practical training in the laboratory and field techniques used in palaeoanthropology and prehistoric archaeology. The course provides hands-on information about the identification, illustration and description of various stone tools, seals, pottery, and other objects of various prehistoric periods. Information about the identification of common raw materials used in the fabrication of artifacts is also provided. In addition, practical training is imparted to the students in various techniques used in the collection, preparation, identification, illustration, moulding and casting and photography of fossil material. Training is
also imparted in the identification of various rock types and the use of essential field equipment. One of the aims of the course is to train students in basic dental morphology of important mammalian groups with an emphasis on primate dentitions. The class-room teaching is supplemented with field-trips to archaeological sites.

Identification, illustration and description of various tools of Palaeolithic, Mesolithic, Neolithic cultures. Seals, Pottery, Terracotta figurines and other objects of Indus Valley civilization. Identification of rocks commonly used as raw materials in the fabrication of artifacts of different periods.

**ESSENTIAL READINGS**

Karir, B. S. (1985) : Geomorphology and Stone Age Culture of North West India, Sandeep Parkashan, Delhi
Yakushova, A.F. (1986) : Geology with the Elements of Geomorphology, Moscow: Mir Publishers

**FURTHER READINGS**


**AHS- 426 Palaeoprimatology**

**Total: 65**
**Semester Exam.: 50**
**Internal Assessment: 15**

**Objectives:** This course is designed to provide basic knowledge about the fundamental concepts of palaeoprimatology and palaeoanthropology. The course deals with the taxonomy, morphology, fossil material, chronology, behaviour, adaptations, affinities, ecology and geographical distribution of major Palaeocene to Pliocene fossil prosimian, anthropoid and hominoid fossil primates from India (with particular reference to the Siwaliks) and other parts of the world. The main aim of the paper is to sufficiently equip a student with fundamental concepts and techniques of palaeoanthropology so that he/she can understand and appreciate the advanced concepts of human evolution to be taught in M.Sc. (Hons.) Second Year.
SECTION-I

Diagnosis, description, spatial and temporal distribution and phylogenetic status of families: Plesiadapidae (*Plesiadapis*) and Adapidae (*Northaractus, Adapis*)

SECTION-II

Diagnosis, description, spatial and temporal distribution and phylogenetic status of families: Adapidae (*Indraloris* and *Sivaladapis*), Lemuridae (*Megaladapis*) and Lorisidae (*Mioeoticus* and *Nycticeboides*).

SECTION-III

Fossil Monkeys and apes of the world- Diagnosis, description, distribution in time and space and phylogenetic status of the following: *Pondaungia, Amphipithecus, Aegyptopithecus* and *Oreopithecus*.

SECTION-IV

Diagnosis, description and distribution of *Macaca, Presbytis, Theropithecus, Gigantopithecus* and *Sivapithecus*.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

Essential Reading


Further Readings:


AHS- 427 Cytogenetics and Classical Genetic Methods

Total: 65
Semester Exam.: 50
Internal Assessment: 15

Objectives: The course is designed to impart basic knowledge of concepts and fundamentals of the science of Human Genetics. The course aims to enhance skills of the students so that they are adequately equipped to pursue research in the field of human genetics. Besides, the knowledge is imparted with emphasis to explain how prevalence of diseases existing in the present day human populations be explained on basis of genetic evolutionary and bio-cultural principles. Each student has to participate in workshops and seminar based on problems relating to human genetics.

SECTION I

Chromatin structure and organization: Histones, DNA; Nucleosome and higher level organization; Metaphase chromosome morphology: centromere and kinetochore, telomere.
Human karyotype: Classification of human chromosomes, Chromosomal banding techniques, nomenclature of banding; Nomenclature of aberrant karyotypes.

**SECTION-II**

Chromosomal Aberrations: Numerical; Common syndromes due to numerical chromosome changes; Structural; Common syndromes due to structural alterations (translocations, duplications, deletions, inversions and fragile sites)

Gene mutation: Types; molecular basis of gene mutations, causes of gene mutations

**SECTION III**

Pedigrees- gathering family history, pedigree symbols, construction of pedigrees, Mode of inheritance from pedigree data: Autosomal inheritance-dominant, recessive; Sex-linked inheritance, Sex-limited and sex-influenced traits, mitochondrial inheritance, Genetics of Red-green colour vision anomalies.

**SECTION-IV**

Twins and twinning in man: Type of twins, Biology of twinning, Frequency of twinning in human population, diagnosis of zygosity, genetic inference from twin studies

Genetics and disease susceptibility, Evolutionary significance of disease: Diabetes mellitus.

**Note:**

1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

**ESSENTIAL READINGS**

FURTHER READINGS

Stern, Curt (1973) : Principles of Human Genetics. 3rd edition, San Francisco
W.H. Freeman

AHS- 428 | Inferential Statistical Methods

Objectives: This paper introduces the student to the fundamentals of Univariate Statistics that is necessary for population studies. The paper enables the student to understand and apply inferential statistics. The paper focuses on both parametric and nonparametric statistics. The main objective is to enable the student to understand and apply statistical techniques in anthropological and population research. This course aims to develop in the student the skills to plan surveys and experiments that aim to collect population data. This course will also develop necessary skills to make simple analysis and presentations of the data leading to logical inferences. The course will be the foundation of more complex study of multivariate procedures should be student so wish to pursue. The skills acquired as a result of this course will enable the student to seek careers in various fields of population research and services.

SECTION-I

Concept of probability-properties and uses. Bayes theorem, Normal, Binomial and Poisson distribution. Sampling methods and sampling theory. Confidence limits, levels of significance and critical region Type I and Type II errors. Standard error of a statistic

SECTION-II


SECTION-III


SECTION-IV

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

**ESSENTIAL READINGS**


**FURTHER READINGS**


M. Sc. (H.S.) 1st year Internship in Anthropology

FOCUS GROUP

This programme is for the students of the Department of Anthropology who have appeared for the M.Sc. (Honours School) I year Examination.

SCHEDULE & DURATION

This programme duration would be a period of 30 days after the M.Sc. (Honours School) I year examination ordinarily in the month of June each year. In the event of the re-scheduling of the said examination for any reason whatsoever the internship programme would also be accordingly re-scheduled.

NATURE OF WORK

The students will be expected to carry out work through the organizations where they would be sent. The work that would be expected of them would be in line with the nature of the activity of the various organizations where at the students will be placed for internship.

OPERATIONALIZING

The students would be assigned to supervisors (faculty supervisors) in the department for purposes of academic preparation for internship activity and for purposes of preparation of the work report based on the internship.

The students would report to the organizations where they will be placed by the Department of Anthropology within a designated time. There they will work under work supervisors/ coordinators who are on the staff strength of the said organizations, and appointed by the the said organization for the said purpose.

The work supervisors / coordinators would certify at the end of the internship that the student has actually worked for the required period of time.

During the internship programme the students will be bound by the rules of the Panjab University and the Organizations where they are placed.

Any problems arising in relation to nature of work, discipline, security etc. will be dealt with by the department of Anthropology and the said organization.

The department of Anthropology reserves the right to change the placement of the student at any given time during the internship and for any reason whatsoever.

The student will bear cost of travel to the work place and back, boarding and lodging during the internship and any other charges. However, if the organization makes any payment of any wages / honorarium etc. it will be the credited to the said student.
The student would be entitled to off days in accordance with the rules of the organization wherein the placement is done. Any other longer leave will be sanctioned jointly by the said organization and the Anthropology Department.

**WORK REPORT: PREPARATION AND EVALUATION**

The student in consultation with the work supervisor/coordinator and the Faculty supervisor will prepare a work report giving details of the organization where the internship was located and of work done, giving aims and objectives, after internee details of the work done (and data if any), evaluation of the attainment of the aims and objectives by the internee and recommendations (if any). The same will be submitted as detailed below along with a certificate of work done given by the organization where in the student did the internship.

The student will be required to submit three copies of the report one each to the Department of Anthropology, The organization where the internship was done and the faculty supervisor in the department of Anthropology.

There will be a brief presentation by the student before the faculty of the Department of Anthropology. The report will be evaluated as accepted/not accepted. The successful completion of the internship would be along with attainment of requirements detailed in the existing rules and regulations of the Panjab University be necessary for promotion to the M.Sc. (Honours School) II year in Anthropology.

**LOCATION OF INTERNSHIP**

The internship would be located in Governmental organizations/laboratories, Universities, Autonomous Research organizations, Non Governmental voluntary organizations a list of which the department of Anthropology would prepare and approve.

**OTHER CONDITIONS**

The nature of work done and the allotment of the faculty supervisor will not be necessary determinants for allotment of supervisors in the M.Sc.(Honours School) II year for the purposes of Project Report work to be done there.
AHS- 531 Human Growth and Somatotyping

Total: 60
Semester Exam.: 45
Internal Assessment: 15

Objectives: The objective of this paper is to acquaint the students with patterns of human growth and physique in relation to evolutionary biology.

SECTION-I

Introduction: Concept and basic principles of growth; Human physical growth as a primate characteristic; growth processes; Measurements and Standards of Growth: Longitudinal, Cross-sectional & Mixed-longitudinal growth curves; Phases of growth-pre-natal and post-natal: Infancy Childhood, Adolescence, Puberty and Senescence.

SECTION-II

Developmental processes and measures of maturity like skeletal, dental and sexual maturity and their relationships. Aging Processes: theories of aging/morbidity- mortality relationships/ senescence of specific systems. Hereditary and Environmental Influences on growth; Secular Trends

SECTION-III

Sheldon’s Method of Somatotyping: Endomorphy, Mesomorphy, Ectomorphy, Technique of Somatotyping, Somatochart.

SECTION-IV

Health & Carter Modified Somatotype Method: Concept and background, Somatotype components, measurements used, somatochart and somatotype plotting; somatotype dispersion index, somatotype dispersion distance.

Note:

1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.
ESSENTIAL READINGS


FURTHER READINGS


AHS- 532 Human Ecology

Total: 60
Semester Exam.: 45
Internal Assessment: 15

Objectives: Ecological Anthropology concentrates on basic scientific and academic research on the relationship between human population and ecosystems with an emphasis on the influence of culture. The paper also facilitates understanding of the mechanisms of human adaptation to environmental stress.

SECTION-I

Basic concepts of ecology, ecosystems and organization of ecosystems, Ecology of human populations, Environmental Anthropology, Environmental Determinism, Environmental possibilism, Cultural Ecology, Ecological models, Biological and Evolutionary approaches to human ecology.

SECTION-II

Resources and Community Ecology: Resources, Major types of human subsistence patterns, Community ecology; Human populations and resource distribution; Concept of ecological assessments.
SECTION-III
Stressors: Stress and environmental Physiology, Human Adaptation to temperature variations (hot and cold). Adaptation to High Altitude, Ultra-Violet Radiation, High Activity and other Physical Stressors.

SECTION-IV
Modernization and Chronic Disease; Major chronic diseases in modernized human populations; Pollution, General Stress and Chronic Disease; Adiposity and Chronic Disease.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS

SUGGESTED READINGS


AHS- 533 Human Demography

Total: 60
Semester Exam. : 45
Internal Assessment: 15

Objectives: Demography, Epidemiology and Public Health have both biological and socio-cultural dimensions and are of much value to anthropology. This course on these subjects helps in defining various basic concepts, methods and tools used demographers, epidemiologists and public health specialists to study the health and dynamics of populations. The theories of populations and the concepts form the core content of this course.

DEMOGRAPHY

SECTION-I

Basic concepts, scope and measures in demography; Nature and importance of Demography; Relationship between Demography and Anthropology; Demographic rates, Period rates and Person-years; Concepts of a cohort; Probability of occurrence of events.

SECTION-II

Sources of Demographic data – Census, Registration and Survey Data in India. Population size and composition: Sex ratio and population pyramids.

SECTION-III

Components of demographic processes – Fertility, Mortality, Migration and Marriage: Types, Measurements, Theory and Trends.
SECTION-IV

Tribal Demography in India – its structure and growth.

Theories of Population – Malthusian, Optimum, Socio-cultural and Demographic transition.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS

GOVERNMENT OF INDIA. (2001) : Census of India 2001: Final population totals. New Delhi: Census Commissioner of India


FURTHER READINGS


AHS- 534 Anthropological Theories

Objectives: Theory is essence to learning any discipline. This course is aimed at providing a holistic understanding of anthropological theories and its relevance in constructing empirical realities. Anthropology is a field science. Empirical data that is generated in the field with the help of designed tools has to be interpreted with the help of theoretical models. This course equips students to master art of interpretation and analysis.

Pedagogic Exercise: The course will have four class room seminars after the completion of each section of the syllabus. Students will be required to write eight assignments two from each section of the course.

SECTION-I


Diffusionism – Basic ideas, schools of diffusion, proponents like Schmidt, Rivers, and others, Barnett (innovations).

SECTION-II

Precursors and conditions for the rise of functionalism – Early functionalism (Emile Durkheim) and Functionalism in anthropology and links with psychology and biology (Bronislaw Malinowski).

Historical particularism and cultural relativism: Concept of Enculturation, Franz Boas and his student A.L. Kroeber.

SECTION-III

The rise of structural-functionalism and the scientific approach to anthropological study: the work of Radcliffe-Brown.

Modifications of structural-functionalism by Evans-Pritchard, Fred Eggan (controlled comparison), Meyer Fortes (introduction of the element of time), Raymond Firth (social organization and social change).

SECTION-IV

Mentalist approaches to culture: Structuralism – the work of Claude Levi-Strauss and modifications to the approach by Edmund Leach.

Going beyond social integrationist approaches to theories of conflict: the work and approaches of Max Gluckman.

Social Action as the basis of society rather than a more static view – the basic ideas propagated by Max Weber. Development of the idea of social action and the institutional view of society by Talcott Parsons.

Note:

1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.

2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.

3. All questions will carry equal marks.

ESSENTIAL READINGS


Hasnain, Nadeem : Indian Anthropology.


FURTHER READINGS


AHS- 535  Project Report 1: Project Formulation and Data Collection

Project formulation; Research design/methodology: Data collection, sorting and basic Presentation.

PROGRAMME OPTIONS
(Students may choose any of the options A or B)

OPTION-A: Biological Anthropology
(Students may choose any three of the following papers)

AHS- 536A  Early Human Evolution:

a) Theory

Total: 40
  Semester Exam: 30
  Internal Assessment: 10

Objectives: The course is designed with a view to enhance the understanding and appreciation of the advanced concepts of Human Evolution—the fundamentals of which the students have already studied in the first year. Further, the course also provides information on diagnostic features, description, distribution through time and space as well as the phylogenetic status of early hominids leading to the present day man besides sufficiently equipping the students with information on Palaeopathological as well as paleodemographical processes involved in interpreting the osteological as well as cultural remains—the analysis of such data interpreting it in terms of various demographic variables as well as disease in prehistoric populations.

SECTION-I

Various trends in human evolution. Diagnosis, description, distribution through time and space and phylogenetic status of the following: Australopithecus africanus, A. robustus, A. afarensis, A. ramidus.

SECTION-II

Diagnosis, description, distribution of Homo habilis, Homo erectus—Homo erectus javanesis, H. erectus pekinensis and H. erectus narmadensis.

SECTION-III

Early Homo sapiens – Salient features, distribution and phylogenetic position of 2nd (i.e. Swanscombe and Steinheim) and 3rd interglacial (i.e. Fontechevade, Ethringsdorf, Krapina, Quinzano and Saccopastore) hominids.

SECTION-IV

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS


FURTHER READINGS

Shachley, Myra.(1980) : Neanderthal Man (Gerald Duckworth & Co., London)

b) Practical

Total: 20
Semester Exam.: 16
Internal Assessment: 04

Craniometery, Statistical Analysis of Craniometric Datas.
AHS- 537A  Forensic Anthropology:

a) Theory

Objectives: This course is an introduction to the basic principles of Applied Physical Anthropology. The main focus of the course is on forensic anthropology which is an applied field within the larger discipline of biological anthropology. This course is designed to teach the basic analysis and interpretation of human remains, primarily the determination of personal identity, for the medico-legal profession. The identification process seeks to provide information such as the initial recognition of skeletonized remains, including dentition, as human and the determination of age-at-death, sex, stature, ancestry, and any other characteristics that may lead to a positive identification. It imparts training in for individualization to solve problems of medico-legal significance. Additionally, the course also introduces the basic concepts of human engineering and the application of the techniques of physical anthropology in industry, medicine, nutrition, and sports

SECTION-I

SECTION-II
Forensic Osteology: Determination of sex from human skull, hip bone and long bones. Determination of age of human skeleton from ectocranial suture closure, ossification, etc.

SECTION-III
Identification of race. Reconstruction of stature from long bones (complete and fragmentary), Personal identification from human skull by photographic superimposition technique.

SECTION-IV
Forensic Odontology: Scope, estimation of age from teeth in young and adult; estimation of age from individual tooth; population variations in morphology; utility of dental evidence in personal identification.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.
ESSENTIAL READINGS


FURTHER READINGS


b) Practical

Measurement of long bones and clavicle, scapula, innominate bone.

Total: 20
Semester Exam.: 16
Internal Assessment: 04
AHS- 538A   Human Red Cell Polymorphism:

a) Theory

Objectives: This course aims to impart knowledge regarding various human genetic markers. Most of the markers that are focused are the various blood groups and red cell proteins. The course aims to help the student appreciate the genetic basis, the global distribution and the correlated conditions of health and disease. Many of these markers have forensic uses and these are focused also. This course equips the student with the skills to handle various genetic markers in the human blood and other systems as tools in population genetic research and forensic work. A corollary skill development will enable the student to pursue work in areas of allied medical research

SECTION-I

Blood Groups: Genetics of A1A2BO, MNS, Rh, Kell, Duffy and X2 blood group systems. ABH Secretion and Lewis antigens.

SECTION-II

Erythroblastosis fetalis, ABO blood groups and disease. Geographical distribution of ABO, MNS, Rh and ABH antigens.

SECTION-III

Haemoglobins: Genetics of Haemoglobins, Haemoglobins variants: HBA, Hba, Foetal Haemoglobin, HbS, HbC, HbD, HbE. Thalassemias and related Conditions, Hbs and malarial Hypothesis.

SECTION-IV

Red Cell Enzyme: The Acid phosphatases, Glucose-6 Phosphate dehydrogenase (G6PD); Phosphogluconate dehydrogegenase (6-PGD) and Phosphoglucomutase (PGM), Genetic basis of enzyme defects. Clinical symptoms and Methods for analysis of enzyme defects, Enzyme variants observed in human populations.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.
ESSENTIAL READINGS


FURTHER READINGS


b) Practical

Dermatoglyphics of finger and palms

AHS 539A Population Genetics and Speciation:

a) Theory

Total: 40
Semester Exam.: 30
Internal Assessment: 10

Description: This course surveys population genetics theory as applied to micro-evolutionary change in human populations. We will look at the effects of mutation, selection, mating patterns, recombination, and genetic drift on changes in the genetic composition of human populations. Initial emphasis is on mathematical analyses of these relationships at the micro-level. We will then use this knowledge to examine applications of population genetics theory to human population history and evolution.

Objectives: The objectives of this course are to (1) To provide a solid foundation for understanding the genetic basis of evolution (2) To provide sufficient historical, intellectual, and
mathematical background so that you can evaluate contemporary research in anthropological genetics (3) To provide with tools, concepts, and ways of thinking about quantitative problems in biological anthropology and evolutionary biology;

SECTION I

Concept and application of population; Mendelian Population and Gene Pools, Allele frequencies and genotype frequencies, Hardy-Weinberg equilibrium and conditions for its maintenance, Testing for equilibrium, Extensions of the Hardy-Weinberg Law, Applications.

Elemental forces of evolution: Mutation Selection (Types of selection, selection coefficient, selection in natural populations.

SECTION-II

Kin selection, Sexual selection, Mating patterns, Mate selection, Sex ratio, Nonrandom breeding: Inbreeding and assortative mating, Path diagram construction and inbreeding coefficient, allelic identities by descent, genetic effects of inbreeding.

SECTION III

Genetic polymorphism in natural population: Definition, Human Genetic Variation and methods of its quantification; Heterozygosity: Classical and Balance hypotheses; Genetic Polymorphism and Natural Selection: Balanced, Transient and Neutral.

Mutational/Genetic load: Definition, Types and its Estimation, Extent and impact on human health.

SECTION-IV

Isolating mechanisms, Concept of species and modes of speciation: sympatric, allopatric, stasipatric; Molecular population genetics: Molecular evolution (neutral theory, punctuated equilibrium).

Note:

1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.

2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.

3. All questions will carry equal marks.

ESSENTIAL READINGS

FURTHER READINGS


b) Practical

Collection of bloods and serum samples, storage of samples of red–cell Suspensions; Agglutination, agglutinin titre, A1 A2 B0 and Rh Blood group typing; -ABH-Secretion
Haemotological techniques: Demonstration of Electrophoresis.

ESSNENTIAL READINGS


FURTHER READINGS

OPTION-B: Socio-Cultural Anthropology
(Students may choose any three of the following papers)

AHS-536B Tribal and Rural Anthropology:

a) Theory

Total: 40
Semester Exam.: 30
Internal Assessment: 10

Objectives: Tribes are an important segment of the Indian society but they have remained relatively isolated from the mainstream. This course is intended to acquaint the students of anthropology with the basic attributes of the different people who constitute the Indian population. The scheduled tribes present a wide spectrum of economic and cultural development. The objective of this paper is to familiarize the students with elementary concepts of caste and class and to help them develop a comprehensive knowledge of the tribal communities in India, their problems, the approaches to their development, the changing scene and the future to equip the students to tackle the issue.

Peasants form a minority of present and past populations. Hence, it is important to learn and know about them. An understanding of their class affiliation and social structure will also help to unravel the causes and consequences of the peasant revolts that are so important in understanding the social unrest in the country. The students will thus develop skills in developing ideas regarding the Indian peasantry, which will aid them in further analysis of recent events based on agricultural communities. Their own analysis of the peasant movements and presentation based on these aspects will help them to hone their ideas.

SECTION-I

Definitional problem of a tribe: some definitions – anthropological point of view, confusion, criteria given by T.B. Naik, Ehrenfels, TISS, etc. Definition of Scheduled Tribe, Primitive Tribe. Distinction between tribe and caste.

SECTION-II

Definition of peasants as an economic and sociological category. The concept of folk society. The peasant mode of production. The middle peasant thesis.

SECTION-III


SECTION-IV

Note:
1. For the semester examination a total of nine questions will be set, two each from each of
the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer
type questions covering the whole syllabus. There will be no choice in the compulsory
question.
2. Students will be required to attempt five questions, choosing one question from each of
the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS

Chaudhuri, B. (1982) .. Tribal Development in India. Delhi: Inter-India Publications
Nadeem, Hasnain. (1966) .. Demographic Perspectives on India’s Tribes. New Delhi: Oxford University Press.
Redfield, R. (1960) .. Peasant Society and Culture. Chicago: University of Chicago
Singh, K.S. (1972) .. Tribal Situation in India. Shimla: Indian Institute Of Advance Studies
Verma, R.C. (1990) .. Indian Tribes Through the Ages. New Delhi: Director publications Division, Ministry of Information and Broadcasting, Govt. of India

FURTHER READINGS

Elwin, V. (1960) .. A Philosophy of NEFA. Shillong: North East Frontier Agency
Elwin, V. (1957) .. A New deal for Tribal India. Delhi: Ministry of Home Affairs

b) Practical

Total: 20
Semester Exam.: 16
Internal Assessment: 04

Identification and description of various implements used by tribals in hunting, fishing, agriculture, fire-making, habitation and ornaments, means of transport.

ESSENTIAL READINGS

Hodges, Henry .. Artifacts: An Introduction to Early Materials and Technology. London: John Baker

FURTHER READINGS

AHS-537 B Medical Anthropology:

a) Theory

Total: 40
Semester Exam.: 30
Internal Assessment: 10

Objectives: This paper relates to familiarization of the students with the socio-cultural dimension of health, illness and health care. India is a classic example of co-existence of several systems of medicine-medical pluralism. Through this paper, an attempt has been made to familiarize the students with globally existing different types of medical systems, both indigenous and modern, the socio-cultural contexts of the medical systems and to equip the students in understanding the compatibility of different systems of medicine and evolving projects blending the traditional complimentary nature and biomedicine foci.

SECTION-1

Medical Anthropology: History, Meaning and Scope.

SECTION-II

Concept of Health and Illness; Socio-cultural Dimensions of Illness.

SECTION-III

Medical Anthropology and Ecology: Eco-system and Socio-cultural Systems.

SECTION-IV

Ecological Interests of Medical Anthropologists Epidemiology, Ecology and Development.

Note:

1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

SUGGESTED BOOKS


b) Practical

Total: 20
Semester Exam.: 16
Internal Assessment: 04

- Approaches for individual, group and community-level behavior change.
- Application of meta-narratives and meta-analysis in the medical anthropological context.
**AHS-538 B  Practice in Anthropology**

a) **Theory**

**Total: 40**  
Semester Exam.: 30  
Internal Assessment: 10

**Objectives:** This course is aimed at orienting the students towards an application of the knowledge of anthropology in various socio-cultural fields. It makes provisions for developing skill to practically administer/execute projects beneficial to the society, making use of available technological and human resources. Emphasis is laid on action-oriented programs to equip the students with the practical work and knowledge. This may help them, on one hand to earn their livelihood through their own expertise and skill and, on the other, contribute meaningfully to the welfare and development of the society.

**SECTION-I**

Meaning, definition and scope of applied and action anthropology. Relationship and distinction between applied anthropology and action anthropology.

**SECTION-II**

Acculturation and applied anthropology.

**SECTION-III**

Applied Anthropology and Culture Change: Innovation, Social Acceptance, Performances, Integration. Planned and directed change: Stimulants and barriers to culture change.

**SECTION-IV**

Problems and issues arising out of the impact of modernisation, industrialisation, urbanisation and technological changes in traditional cultures.

**Note:**
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

**SUGGESTED BOOKS**


Elwin, Verrier (1960) : A Philosophy for NEFA, Shillong: Advisor to the Governor of Assam.

b) Practical

Total: 20
Semester Exam.: 16
Internal Assessment: 04

To evaluate models of cultural change, “Necessity is the mother of invention”: The students will take up certain innovations and such examples Indian rural/urban areas and evaluate these in the context of the models taught in your class.

AHS-539B Reading in Contemporary Anthropology:

a) Theory

Total: 40
Semester Exam.: 30
Internal Assessment: 10

Objectives: The course is designed to give students insights in changing perspectives of the subject in the recent past. From classic to contemporary is a journey that defines the context and future course for any discipline. The discipline of social and cultural anthropology is continuously evolving itself. There are fresh issues that confront humanity along with
technological revolutions. Conflict regarded as quintessential to any society acquires different dimensions with changing lifestyles. Assertion of identity has remained critical to man’s instinctive survival. It assumes varied expressions in rapidly transforming social situations.

SECTION-I

Theories in Contemporary perspective:

Post-Modernism – Clifford Geertz
Profit over people – Chomsky
Globalization

SECTION-II

Theories of Development
Reflexive, Critical and Dialogical Anthropology

SECTION-III

Technology and Society:

Corporate Anthropology
Anthropology of Management

SECTION-IV

Non-governmental organizations (NGOs) and other civic society organizations and Anthropology
Media and Anthropology

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

b) Practical

Total: 20
Semester Exam.: 16
Internal Assessment: 04

Qualitative tools used in postmodern researches with examples: case studies, observation, Pile sorting, narratives, Action research.
Data analysis methods for qualitative analysis and its advantages over quantitative research techniques. Theme identification, Hermeneutics, content analysis, cohort analysis.
ESSENTIAL READINGS


**Semester IV**

**Compulsory Papers**

AHS-541  Human Body Composition and Kinanthropology

**Total: 60**

Semester Exam.: 45  
Internal Assessment: 15

**Objectives:** The objective of this paper is to acquaint the students with patterns of human body composition in relation to evolutionary biology, biocultural factors, sports, intrinsic and extrinsic factors such as genes, hormones, the physical and social environment, and mathematics.

**SECTION-I**

Definition and scope of body composition; Methods of studying body composition: Surface anthropometry including Matiegka’s methods; Densitometry, Hydrometry and Roentgenogrammetry; Body composition of the foetus; Body composition changes during infancy, childhood, adolescence and adulthood.

**SECTION-II**

Modern techniques of studying body composition: Gamma Ray spectrophotometry, Computer Axial Tomography (CAT) scanning, Photon absorptiometry, Bioelectrical impedance, The urinary creatinine excretion method; Fat patterning in human body; Obesity: Assessment and Management.

**SECTION-III**

Kinanthropology: meaning and scope; Importance of sports in human society; Role of heredity and environment in body dimensions and proportions; Relationship of different types of sports efficiency and different body proportions.

**SECTION-IV**

Ecological, ethnic and genetic variation of body shape and size in relation to sports efficiency and physical performance; Somatotype and physiological profile of sportsmen and women.

**Note:**

1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.
ESSENTIAL READINGS


FURTHER READIDNGS


AHS-542 Energy Flow and Human Ecological Responsiveness

Objectives: Ecological Anthropology concentrates on basic scientific and academic research on the relationship between human population and ecosystems with an emphasis on the influence of culture. The paper also facilitates understanding of the mechanisms of human adaptation to environmental stress.

SECTION-1

Biomes and Human Populations: Introduction, characteristics and organization of Biomes, major Biomes of the world.

SECTION-II

Nutrient Cycling in Ecosystems, Human populations and nutrient cycles, Human populations and the hydrologic cycles, Salt Requirements & Adaptation,Humans and Protein Requirements.

SECTION-III

Malnutrition: Adaptation to malnutrition, Infectious Disease as a biotic stress, Vector-Borne Diseases, Diseases passed through Direct Contact. Diseases passed through sanitation route,
Disease passed through intimate contact, Interactions of Infectious Disease, malnutrition and other stresses.

SECTION-IV

Human Ecology and the Ecology of Humans; Optimization; Models in Human Ecology.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS


SUGGESTED READINGS

Objectives: Epidemiology and Public Health have both biological and socio-cultural dimensions and are of much value to anthropology. This course on these subjects helps in defining various basic concepts, methods and tools used by epidemiologists and public health specialists to study the health and dynamics of populations.

SECTION-I

Basic epidemiological concepts and approaches, uses and aims, subdivisions and scope of epidemiology; Dynamics of disease transmission: Agents and modes of transmission of human infectious diseases; Natural history of disease (prognosis)

Basic measurements of morbidity; Incidence and prevalence rates, Disease outbreaks, Surveillance; Descriptive epidemiology

SECTION-II

Analytical and Experimental Epidemiology:

Associations and Causation; Epidemiological methods: Randomized trials, Cohort studies, Case-Control studies, Cross-Sectional studies, Crossover design

Methods used to estimate individual’s risk for a disease: Absolute Risk, Relative Risk, Odd Ratio

SECTION-III

Concept of health and wellbeing; International statistical classification of Disease and Related Health Problems (RHP) Dimensions of health; Indicators of health; Components of wellbeing, Determinants of health, Responsibility for health

Concepts, principles, philosophy, purpose, organization, functions and tools used in public health care and practice. Health Care Systems
SECTION-IV

Health Planning and Management: Basic concepts and theoretical foundations to the principles of management and planning with an emphasis on public health and health care settings.

Health care of the community; Levels of health Care; The Millennium Development Goals (MDG); Concepts and definition of MDG indicators, Evaluation of public health interventions

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS


FURTHER READINGS

AHS-544: Contemporary and Indian Anthropology

Total: 60
Semester Exam.: 45
Internal Assessment: 15

Objectives: This course is aimed at providing a holistic understanding of anthropological theories and its relevance in constructing empirical realities. Anthropology is a field science. Empirical data that is generated in the field with the help of designed tools has to be interpreted with the help of theoretical models. This course equips students to master art of interpretation and analysis.

Pedagogic Exercise: The course will have four class room seminars after the completion of each section of the syllabus. Students will be required to write eight assignments two from each section of the course.

SECTION-I

Psychological approaches in Anthropology and the Culture and Personality school as the legacy of Franz Boas.
Basic ideas of culture and personality in anthropology.
Development of issues in the works of Ralph Linton, Kardiner, Cora du Bois.

SECTION-II

Contemporary Social Theories, including basic ideas of gender theories, feminism and women’s studies.
Deep ethnography, and the work and ideas of Clifford Geertz.
Basic ideas of ethnomethodology.

SECTION-III

The uniqueness of Indian anthropology; Basic ideas in Indian anthropology.
Contributions of Indian Anthropologists: S.C. Roy (the beginning and origin of anthropology in universities), and his students N.K. Bose (further development of the subject and relationship with Indian nationalism), D.N. Majumdar (uplifting and creating standards of Indian anthropology).

SECTION-IV

Anthropology in India as a practical discipline: basic ideas.
Contribution of S.C. Dube in development of tribes and communities and in study of Indian villages.
The contributions of Verrier Elwin in the mapping of tribal India ethnographically and in terms of maintaining and protecting their culture.

ESSENTIAL READINGS

Hasnain, Nadeem : Indian Anthropology.

FURTHER READINGS


**AHS-545 Project Report 2: Data Analysis and Report Writing**

Data analysis, Report writing; Defence through viva voce.

**PROGRAMME OPTIONS**
(Students may choose any of the options A or B)

**OPTION A- Biological Anthropology**
(Students may choose any three of the followings papers)

**AHS-546A Dimensions and Implications of Human Evolution:**

a) Theory

**Total: 40**

Semester Exam.: 30
Internal Assessment: 10

**Objectives:** The course is designed with a view to enhance the understanding and appreciation of the advanced concepts of Human Evolution—the fundamentals of which the students have already studied in the first year. Further, the course also provides information on diagnostic features, description, distribution through time and space as well as the phylogenetic status of early hominids leading to the present day man besides sufficiently equipping the students with information on Palaeopathological as well as paleodemographical processes involved in interpreting the osteological as well as cultural remains—the analysis of such data interpreting it in terms of various demographic variables as well as disease in prehistoric populations.

**SECTION-I**

Emergence of Modern Man—Osteological evidences from Europe, Africa, Asia, Australia, and Americas, their development, life-ways, dwellings, aesthetic expressions, tool inventory, migration routes and subsistence patterns, etc.

**SECTION-II**

Antiquity of man and various view points of Hominid evolution (Asia versus Africa).
SECTION-III

Demography of early human population—Palaeopathology-traumatism, malformation and non-specific osteological variables (i.e. osteoarthritis, spondylitis, rickets, symmetrical osteoporosis and tumors), dental pathology.

SECTION-IV

Palaeodemography – skeletal analysis and determination of demographic variable in Prehistoric populations (i.e., migration, fertility, morbidity and mortality) and post-neolithic population growth.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS


Swedlund, A.C.and Armelagos (1976): Demographic Anthropology (B. George, J. Publishers)

FURTHER READINGS


Shachley, Myra.(1980) : Neanderthal Man (Gerald Duckworth & Co., London)
b) Practical

Craniograms; Mandibulometry

Total: 20
Semester Exam.: 16
Internal Assessment: 04

AHS-547A  Forensic Biology:

a) Theory

Total: 40
Semester Exam.: 30
Internal Assessment: 10

Objectives: This course is an introduction to the basic principles of Applied Physical Anthropology. The main focus of the course is on forensic anthropology which is an applied field within the larger discipline of biological anthropology. One of the objectives the course is to impart to the students basic knowledge about the analysis, interpretation and use of crime scene evidence of fingerprints, blood and some body fluids, hair and dentitions for individualization to solve problems of medico-legal significance. Additionally, the course also introduces the basic concepts of human engineering and the application of the techniques of physical anthropology in industry, medicine, nutrition, and sports.

SECTION-I


SECTION-II

Hair: Morphology of hair, distinction between human and animal hair. Differentiation of scalp, body and pubic hair. Age, sex and population differences, in brief.

SECTION-III

Forensic serology: Nature of human blood; identification of blood stain and determination of its species and blood group; identification of seminal stains. Application of blood groups in personal identification and disputed paternity.

SECTION-IV

Human engineering (Human Factors): Seats, work space and gear (such as anti-gravity suits, oxygen masks, readymade garments for mass use). Anthropology and medicine, including growth, nutrition, and sports.
Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS


FURTHER READINGS

New Jersey:
b) Practical

Total: 20
Semester Exam.: 16
Internal Assessment: 04

Personal identification from skeletal material.

ESSENTIAL READINGS


FURTHER READINGS


AHS-548A Enzyme, Serum proteins and other Genetic Variation:

a) Theory

Total: 40
Semester Exam.: 30
Internal Assessment: 10

Objectives: This course aims to impart knowledge regarding various human genetic markers. Most of the markers that are focused are the various serum proteins. The course aims to help the student appreciate the genetic basis, the global distribution and the correlated conditions of health and disease. Many of these markers have forensic uses and these are focused also. This course equips the student with the skills to handle various genetic markers in the human blood and other systems as tools in population genetic research and forensic work. A corollary skill development will enable the student to pursue work in areas of allied medical research.

SECTION-I


SECTION-II

Immunoglobulins; Molecular Structure, Types and Chemical properties. Role of Immunoglobulins in immunity. The Gm and Inv groups, Methods of detection and global distribution.

SECTION-III

Histocompatibility antigen (HLA): History of discovery, subtype, genetics, inheritance and linkages with other genetics treats. Association of HLA and various critical diseases of skin, renal conditions, spondilytis and other neurological conditions. Assessment of risk factors.
SECTION-IV

Miscellaneous variations: Inheritance and distribution of taste deficiency for Phenylthiourea, Colour vision abnormalities and Finger and Palm prints.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS

Mourant, A. E., Kopec, A. C. The Distribution of the Human Blood Groups and and

FURTHER READINGS

Stanbury, J. B. Wyngaarten, J. B. The metabolic Basis of Inherited Diseases 5th edn. and

b) Practical

Dermatoglyphics of Soles, Physiological Variables.

Total: 20
Semester Exam. : 16
Internal Assessment: 04
ESSENTIAL READINGS

FURTHER READINGS

AHS-549A   Gene Flow and Quantitative Genetics:

a) Theory

Total: 40
Semester Exam.: 30
Internal Assessment: 10

Description: This course surveys population genetics theory as applied to micro-evolutionary change in human populations. We will look at the effects of mutation, selection, mating patterns, recombination, and genetic drift on changes in the genetic composition of human populations. Initial emphasis is on mathematical analyses of these relationships at the micro-level. We will then use this knowledge to examine applications of population genetics theory to human population history and evolution.

Objectives: The objectives of this course are to (1) To provide a solid foundation for understanding the genetic basis of evolution (2) To provide sufficient historical, intellectual, and mathematical background so that you can evaluate contemporary research in anthropological genetics (3) To provide with tools, concepts, and ways of thinking about quantitative problems in biological anthropology and evolutionary biology.

SECTION I

Genetic Migration and Drift: Types of migrations and their genetic effects, models to study genetic effect of migration: one-way model, island model, Estimation of migration rates; how does migration limit genetic divergence?

Gene flow, effects of gene flow, genetic clines, racial admixture, calculation of admixture.

SECTION-II

Founder effect, Isolate breaking (The Wahlund Principal), Random genetic drift, Effective population size; fluctuations in population size.

SECTION III

Quantitative Genetics: Multifactorial inheritance, Types of quantitative traits: continuous, meristic and threshold traits; Phenotypic variation and components of phenotypic variation –
Genotypic and environmental. Estimation of quantitative genetic parameters: genetic kinship, identical by descent, resemblance between relatives, calculating the number of polygenes, quantitative trait loci (QTL).

SECTION-IV

Twin study method-concordance rates and analysis of variance approach. Assumptions underlying the classing twin method. Concept of heritability, broad-sense and narrow-sense heritability; Estimates of heritability from twin and family studies; Artificial selection and realized heritability; Norm of Reaction and Phenotypic plasticity.

Note:

1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS


FURTHER READINGS


b) Practical

Total: 20
Semester Exam.: 16
Internal Assessment: 04
PTC tasting ability, Colour-vision abnormalities analysis, Exercises on gene and genotype frequencies in random mating populations, numerical exercises on estimation of heritability from given data.

Identification of some common genetic diseases/syndromes and variable expression of genes from photographs/karyotypes/slides; and mode of inheritance from pedigree data.

**ESSNENTIAL READINGS**


**FURTHER READINGS**


**OPTION B- Socio-cultural anthropology**

*(Students may choose any three of the followings papers)*

AHS-546B Tribal Anthropology and Peasant Movements:

a) Theory

**Total: 40**

**Semester Exam.: 30**

**Internal Assessment: 10**

**Objectives:** Tribes are an important segment of the Indian society but they have remained relatively isolated form the mainstream. This course is intended to acquaint the students of anthropology with the basic attributes of the different people who constitute the Indian population. The scheduled tribes present a wide spectrum of economic and cultural development. The objective of this paper is to familiarize the students to help them develop a comprehensive knowledge of the tribal communities in India, their problems, the approaches to their development, the changing scene and the future to equip the students to tackle the issue.

**SECTION-I**

The constitutional safeguards for the Scheduled Tribes and Scheduled Castes: Protective, Developmental, Political, and others.

**SECTION-II**
Tribal problems and welfare measures relating to: Forests, shifting cultivation, Land alienation, Health and sanitation/nutrition, Indebtedness, Bonded labour, Education. Development programmes during different Five-year Plans. Anthropological approach to tribal development.

SECTION-III

Tribal movements for autonomy, revivalistic/nativistic.

SECTION-IV

Peasant movement in India – some case studies – Bardoli, Telengana, Tebhaga, Malabar).

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS

Chaudhuri, B. (1982) .. Tribal Development in India. Delhi: Inter-India Publication
Kumar, A. (2002) .. Tribal Development in India. New Delhi: Sarup and Sons
Maharatna, Arup (2005) .. Demographic Perspectives on India’s Tribes. New Delhi: Oxford University Press.
Singh, K.S. (1972) .. Tribal Situation in India. Shimla: Indian Institute Of Advance Studies
Verma, R.C. (1990) .. Indian Tribes Through the Ages. New Delhi: Director publications Division, Ministry of Information and Broadcasting, Govt. of India


FURTHER READINGS


Elwin, V. (1960) .. A Philosophy of NEFA. Shillong: North East Frontier Agency

Elwin, V. (1957) .. A New deal for Tribal India. Delhi: Ministry of Home Affairs


b) Practical

Total: 20
Semester Exam.: 16
Internal Assessment: 04

OBJECTIVES: This course is designed to develop and appreciate the material culture of simpler societies. This skill is necessary for employment in many organizations like museums, etc.

- Mapping of various settlements of tribal peoples in India.
- Developmental schemes and strategies (Plan/Sub Plan): Large-Scale Agricultural Multipurpose Societies (LAMPS), Integrated Tribal Development Project (ITDP), Community Development Project (CDP), Integrated Rural Development Project (IRDP), Component Plan for SC, Tribal Youth Self-Employment Scheme (TRYSEM), Reservation for Women in Panchayati Raj, Role of Voluntary Organizations in Development.

ESSENTIAL READINGS


Objectives: This paper relates to familiarization of the students with the socio-cultural dimension of health, illness and health care. India is a classic example of co-existence of several systems of medicine-medical pluralism. Through this paper, an attempt has been made to familiarize the students with globally existing different types of medical systems, both indigenous and modern, the socio-cultural contexts of the medical systems and to equip the students in understanding the compatibility of different systems of medicine and evolving projects blending the traditional complimentary nature and biomedicine foci.

SECTION-I

Medical Systems: Medical Systems as Socio-cultural Adaptive Strategies; Disease Theory and Health Care Systems.

SECTION-II

Traditional and Modern Systems of Medicine; Strength and Weaknesses of Traditional Systems of Medicine.

SECTION-III

Ethno-medicine-Terminological problems; disease etiology causality concepts; Shaman, Witchcraft and other curers. Ethno-psychiatry-Cultural definition of Normal and Abnormal.

SECTION-IV

Cultural specific disorders; Cultural Modes of handling mental illness. Tribal Health in India: Concept of disease and cure. Socio cultural issues: Health, Nutrition and Demography, Interaction of Traditional and Modern Medical practices with case studies, Tribal medicine and their Modern Use.
Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

SUGGESTED BOOKS


b) Practical

Total: 20
Semester Exam.: 16
Internal Assessment: 04

- Planning and evaluation for community health programmes, including proposal development and evaluation.
- Preceptor-guided field experience in public health practice through an association or public health-oriented community programme.
AHS-548B  Anthropology in Action:

a) Theory

Total: 40
Semester Exam.: 30
Internal Assessment: 10

Objectives: This course is aimed at orienting the students towards an application of the knowledge of anthropology in various socio-cultural fields. It makes provisions for developing skill to practically administer/execute projects beneficial to the society, making use of available technological and human resources. Emphasis is laid on action-oriented programs to equip the students with the practical work and knowledge. This may help them, on one hand to earn their livelihood through their own expertise and skill and, on the other, contribute meaningfully to the welfare and development of the society.

SECTION-I

Application of anthropological knowledge in programmes sponsored administered by governmental and non-governmental agencies.

SECTION-II

Community development; tribal development; other poverty alleviation programmes.

SECTION-III

Anthropological approaches in community, health, natural health promotion and disease control programmes such as population control, nutrition, mother and child health, health education.

SECTION-IV

Anthropology in relation to Leprosy, TB, AIDS, etc. Anthropology in education and communication.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of
the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

**SUGGESTED BOOKS**


Elwin, Verrier (1960) : A Philosophy for NEFA, Shillong: Advisor to the Governor of Assam.


Kedia, Satish and John Van Willigen (Editors) (2005):


**b) Practical**

**Total:** 20

**Semester Exam.:** 16

**Internal Assessment:** 04

To evaluate the current situation of disease like T.B., AIDS and Leprosy and their impact on society using recent concepts.
AHS-549B  Current Anthropology and Policy:

a) Theory

Objectives: The course is designed to give students insights in changing perspectives of the subject in the recent past. From classic to contemporary is a journey that defines the context and future course for any discipline. The discipline of social and cultural anthropology is continuously evolving itself. There are fresh issues that confront humanity along with technological revolutions. Conflict regarded as quintessential to any society acquires different dimensions with changing lifestyles. Assertion of identity has remained critical to man’s instinctive survival. It assumes varied expressions in rapidly transforming social situations.

SECTION-I

Policy Issues:

Nations Boundaries and Mobility.
Anthropology of Diaspora Populations.

SECTION-II

Anthropology of Traditional Art and Craft.
Public Policy and Anthropology.

SECTION-III

Some Current Research Concerns:

HIV/AIDS in anthropological researches.
Gender in anthropological researches.

SECTION-IV

Human rights issues in the domain of Anthropology.
New Social movements (Feminist and Environment movement).
Ethnicity and Identity concerns, Religion and Politics, pluralism and Multi-Culturalism.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the sections I, II, III, IV. There will be one compulsory question of 8 to 10 short answer type questions covering the whole syllabus. There will be no choice in the compulsory question.
2. Students will be required to attempt five questions, choosing one question from each of the sections I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.
b) Practical

Secondary source collections, use of primary materials as text, its analysis and interpretation. Analysis of data: use of softwares, internet data, networking (especially to understand aspects of globalization) and peer-reviewing, making policy summaries, compiling area reports, etc. Presentation of data. Report-writing/File – Handwritten/typed.

**ESSENTIAL READINGS**


eds. (2000)


Goldin, Ian and : *Globalization for Development: Trade, Finance, AID,*


McGee, R. Jon and : *Anthropological Theory: An Introductory History.* New York:

Peter Warms Barnes and Noble (2007)


Pierre-Jean and : *Anthropology and Development: Understanding Contemporary Social*


(2005)


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