FACULTY OF SCIENCE

SYLLABI

FOR

B.Sc. (HONOURS) ANTHROPOLOGY

5th & 6th SEMESTER

EXAMINATIONS 2017-2018,
### Semester V

Students may choose all five papers from the major subject papers OR any four papers from the major subject group papers and any one paper from the elective course group papers.

<table>
<thead>
<tr>
<th>Major Subject Paper</th>
<th>Nature</th>
<th>Marks</th>
<th>Credits</th>
<th>hours per week</th>
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</thead>
<tbody>
<tr>
<td>AHS 351 Human AUXOLOGY</td>
<td>Theory</td>
<td>14</td>
<td>56</td>
<td>70</td>
</tr>
<tr>
<td>AHS 352 Fundamentals of Human Genetics</td>
<td>Theory</td>
<td>14</td>
<td>56</td>
<td>70</td>
</tr>
<tr>
<td>AHS 353 Anthropology of Tribes (Theory)</td>
<td>Theory</td>
<td>20</td>
<td>80</td>
<td>100</td>
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<tr>
<td>AHS 354 Fundamentals of Human Ecology (Theory)</td>
<td>Theory</td>
<td>20</td>
<td>80</td>
<td>100</td>
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<tr>
<td>AHS 355 Fundamental of Anatomy (Theory)</td>
<td>Theory</td>
<td>20</td>
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**Elective Course papers Group** (One may be chosen in lieu of any one paper from the Major Subject papers from the following: Biochemistry, Biophysics, Biotechnology, Geology, Botany, Zoology, Chemistry, Mathematics, Computer Science, Physics or any other course of B.Sc. Honours School of the Panjab University subject to availability)

| Theory | 14 | 56 | 70 | 3 | 3 |
| Practical | 6 | 24 | 30 | 1 | 2 |

**Total for the semester** 500 20

**Audit Course papers** (No Credits to be chosen from among German, French, Persian, Russian Languages or any other course of Panjab University)

### Semester VI

Students may choose all five papers from the major subject papers OR any four papers from the major subject group papers and any one paper from the elective course group papers.

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<tr>
<td>AHS 361 Human Body Composition and Physique</td>
<td>Theory</td>
<td>14</td>
<td>56</td>
<td>70</td>
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<tr>
<td>AHS 362 Human Genetics Variations</td>
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<td>AHS 363 Caste and Class in India (Theory)</td>
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<tr>
<td>AHS 364 Human Adaptability (Theory)</td>
<td>Theory</td>
<td>20</td>
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<td>100</td>
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</table>
AHS 365 Fundamentals of Human Physiology
(Theory)  20  80  100  4  3

**Elective Course papers Group** (One may be chosen in lieu of any one paper from the Major Subject papers from the following: Biochemistry, Biophysics, Biotechnology, Geology, Botany, Zoology, Chemistry, Mathematics, Computer Science, Physics or any other course of B.Sc. Honours School of the Panjab University subject to availability)

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<td>3</td>
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<td>Practical</td>
<td>6</td>
<td>3</td>
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</tbody>
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**Total for the semester** 500 20

**Audit Course papers** (No Credits to be chosen from among German, French, Persian, Russian Languages or any other course of Panjab University)
B. Sc. (H.) 3rd year:

Semester-V
Objectives: The main objective of this paper is to teach the students basic concepts, patterns and methods of assessment of human growth. Relation to evolutionary biology, nature-nurture interactions and applications in various fields. This course equips the students to undertake specialized studies in this field at master’s level.

UNIT-I

Concept and basic principles of human growth and development (auxology). Importance of growth studies in public health and other application areas.

UNIT-II


UNIT-III

Methods of studying human growth – longitudinal, cross-sectional and mixed longitudinal. Distance and Velocity Curves, Growth Curves of different tissues and different parts of the body.

UNIT-IV


Note:

1. For the semester examination a total of nine questions will be set, two each from each of the Units 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 Units I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS


FURTHER READINGS

Human Auxology (Practical)

Objectives: This course is designed to provide practical training to students in the techniques of anthropometric and physiological measurements that are essential in the understanding of theoretical aspects of Human Auxology, Body Composition and Physique, and Ecological Anthropology courses that are taught concurrently.

Techniques of measuring child growth and biological maturity.

ESSENTIAL READINGS

AHS- 352: Fundamentals Human Genetics (Theory)

Objectives: This paper initiates the student into the area of human genetics. The student is initiated into the area of the genetic basis and processes. Since the paper is fundamental in nature, the skill development is focused upon the student being enabled to pursue greater quantum of study in human genetics at a master’s degree level. The student is also enabled to diversify from broader Anthropological perspectives into more specialized areas like human genomics.

UNIT-I


UNIT-II

Linkage and crossing over, point mutations, spontaneous and induced.

UNIT-III


UNIT-IV

Structural chromosomal aberrations Eugenics, Euphenics and Human Welfare.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the Units 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 Units I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS

FURTHER READINGS


Fundamentals Human Genetics (Practical):

Time: 3 Hrs
Total marks: 30
Semester Exam. 24
Internal Assessment: 06


AHS- 353: Anthropology of Tribes (Theory)

Time: 3 Hrs
Total marks: 100
Semester Exam. 80
Internal Assessment: 20

8% of India’s population categorized as tribes constitutes an integral and critical component of vibrant Indian democracy. Anthropologists as ethnographers have chronicled these communities from the beginning of the discipline in India. Ethno-histories and problems of these communities relating to the questions of identity and autonomy have occupied intellectual landscape across the globe. This paper with its specific focus on tribes in India is an attempt to introduce beginners in the discipline to comprehend the intricacies of issues confronting this diverse and enriched heritage.

UNIT-I

The problem of defining tribes in India; Tribe-a colonial category, re-defining tribes in India

Weaker sections in Indian Populations: Scheduled Tribes (ST) and “Primitive” Tribal Groups (PTGs), De-notified Communities, Basic of Labelling as ST according to constitution.

Major tribal groups and tribal States in India

UNIT-II

Tribal commissions and its contribution in formulating issues of identity and approaching problems of Tribes in India, Dhebar commission and other tribal commissions reports and recommendations

Constitutional provisions for the protection of tribal rights in India

Tribal Forest Rights Act and problems encountered in its enactment
Tribal Problems and welfare measures relating to Forests, Shifting cultivation, land alienation, housing, health and sanitation/ Nutrition, Indebtedness, bonded labour and Child Labour

**UNIT-III**

**Development strategies (plans / sub-plans)**

Five year development programmes and provisions made for the scheduled tribe populations in these plan document with specific reference to Special programmes, 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)

73rd and 74th Amendment of the constitution and its impact on tribal women; Reservation for women in Panchayati Raj institutions, Gender issues among Tribes in India

Provisions made for the education of tribes in various education schemes since Independence; Ashram Schools, Sarv Shiksha Abhiyan and Right to Education Act

**UNIT-IV**

Tribal Movements and Tribal problems of identity, autonomy, ethnicity in India; Revivalistic/Nativistic movements and a brief history of tribal movements in the North-East and Central India

Tribal movements due to displacement and lack of adequate rehabilitation programmes -such as dam construction; mining and industrial projects

Revitalisation of local history,

Problems of communities trying to obtain status of scheduled Tribes-pseudo- Tribes

Role of Voluntary organisations in addressing tribal issues

**Note:**

1. For the semester examination a total of nine questions will be set, two each from each of the units I, II, III, IV. There will be one compulsory question of 8 to 10 multiple choice type questions covering the entire 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- 354: Fundamentals of Human Ecology (Theory)

Objectives: The objective of this paper is to teach the students how to analyze adjustments necessary for successful existence in varied environments or habitats. These are viewed from two angles, one, adaptability of each of the individual making up the group, and two, adaptability of the group as a whole. Differences/similarities between human groups are analyzed as differences in their total ecological relationships, biological as well as cultural.

UNIT-I

Ecology: Meaning; definitions of essential terms; components of ecosystem; ecosystem homeostasis: biochemical ‘cycles’ and energy ‘flow’.

UNIT-II

Human ecology and adaptation. Adaptation and acclimatization; individual and population adaptation; genetic and non-genetic factors.

UNIT-III

Classification of ecosystems; populations and their subsistence ways.

UNIT-IV


Note:

1. For the semester examination a total of nine questions will be set, two each from each of the Units 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 Units I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS

Harrison, G. A., : Human Biology – An Introduction to Human Evolution,
Tanner, N.A. Barnicot London.

FURTHER READINGS


AHS.355: Fundamentals of Human Anatomy (Theory) 

Time: 3 Hrs
Max. Marks: 100
Theory Semester Exam: 80
Internal Assessment: 20

INSTRUCTION FOR THE PAPER-SETTER

The question paper will consist of five Units: I, II, III, IV and V. UNIT I, II, III and IV will have two questions from the respective Units of the syllabus. UNIT V will consist of 8-10 short answer type questions which will cover the entire syllabus uniformly.

AIM
To understand the anatomy and functioning of various body systems.

OBJECTIVES:
The course objectives are: To impart basic information concerning the structure and function of the human body; to develop the critical thinking skills necessary to predict how the body responds to homeostatic imbalances. The other objective of teaching this course is to ensure that the students learn human anatomy well enough to be successful in future classes, professional exams, careers and to understand human morphological variations.

UNIT-I

Introduction to Human Body: Basic anatomical terminology

Types of tissues: Epithelial, connective, muscular and nervous
UNIT-II

Skeletal system — Classification and functions of bones; Ossification and growth of bone, Histology of bone, Fracture and repair; Types of joints.

Muscular system — Classification of muscles, Structure of smooth, cardiac, skeletal muscle, neuromuscular junction.

UNIT-III

Integumentary system — Skin, hair, nail, touch receptors.
Brain Organization and structure

UNIT IV

Sensory, motor and integrative systems
Special Senses: Sense of smell, vision, Hearing and equilibrium

ESSENTIAL READINGS

John Willey and Sons.

Livingstone, USA.

FURTHER READINGS


USA. 40th ed.


Semester-VI

AHS-361: Human Body Composition and Physique (Theory)  
Time: 3 Hrs
Total marks: 70
Semester Exam: 56
Internal Assessment: 14

Objectives: The main objective of this paper is to teach the students basic concepts, patterns and methods of assessment of human physique and body composition in relation to evolutionary biology, nature-nurture interactions and applications in various fields. This course equips the students to undertake specialized studies in this field at master’s level.

UNIT-I


UNIT-II


UNIT-III

Human physique and somatotypes – Hippocrates, de Viola, Kretschmer, Parnell, Sheldon and Heath-Carter methods. Critical evaluation of Sheldon’s and health Carter Anthropometric somatotype methods.

UNIT-IV

Applications of physique and physical activity with special reference to sports like Gymnastics, Weight lifting, Football and Hockey.

Note:

1. For the semester examination a total of nine questions will be set, two each from each of the Units 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 Units I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS

Cambridge University Press. New York

FURTHER READINGS

Human Body Composition and Physique (Practical):

Time: 3 Hrs
Total marks: 30
Semester Exam. 24
Internal Assessment: 06

Objectives: This course is designed to provide practical training to students in the techniques of anthropometric and physiological measurements that are essential in the understanding of theoretical aspects of Human Auxology, Body Composition and Physique, and Ecological Anthropology courses that are taught concurrently.

Body composition, somatotyping, physiological measurements and measurements for operational designing.
ESSENTIAL READINGS


AHS- 362: Human Genetics Variations (Theory):

Time: 3 Hrs
Total marks: 70
Semester Exam: 56
Internal Assessment: 14
Objectives: This paper initiates the student into the area of human genetics. The student is initiated into the areas of the genetic markers in man and population genetic models. Since the paper is fundamental in nature, the skill development is focused upon the student being enabled to pursue greater quantum of study in human genetics at a master’s degree level. The student is also enabled to diversify from broader Anthropological perspectives into more specialized areas like human genomics, environmental studies and forensic studies.

UNIT-I
Genetics basis, variation and geographical distribution of ABO, MN and Rh blood group systems. PTC tasting ability and colour blindness in Man.

UNIT-II
Dermal ridge configuration of fingers and palm – classification and inheritance.

UNIT-III
Concepts of Mendelian population, gene frequencies and gene pool.

UNIT-IV
Hardy-Weinberg Law-fundamental principles, conservation of gene frequencies, attainment of equilibrium frequencies in natural populations.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the Units 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 Units I, II, III, IV and the compulsory question.
3. All questions will carry equal marks.

ESSENTIAL READINGS

FURTHER READINGS


Human Genetics Variations (Practical):

Time: 3 Hrs
Total marks: 30
Semester Exam: 24
Internal Assessment: 6


AHS-363: Caste and Class in India (Theory)

Time: 3 Hrs
Total marks: 100
Semester Exam: 80
Internal Assessment: 20

Objectives: India’s social reality for centuries has contended with questions of caste stratification. The notion of egalitarian societies remains elusive in almost all the societies found since the advent of civilization. This paper introduces students to the theoretical issues required to re-construct the concept of inequality through various phases of human history and technological development.

UNIT-I

Basic concepts:

Social Stratification and theories of stratification

Caste as a group and system of social segmentation and integration,

Scheduled castes and constitutional provisions for scheduled castes in India; Problems faced by scheduled castes in India

Basis for defining other backward classes in India

Mandal Commission and its impact on policies of protective discrimination

UNIT-II

Varna and caste hierarchies-contributions made by Louis Dumont, M.N.Srinivas
Dominant Caste, Sacred Complex

Economic aspects of the Caste system: Jajmani relationships;

Caste among Non-Hindus with special reference to Muslims, Sikhs and Christians

UNIT-III

Caste mobility: Concepts of:

- Sanskritisation- Contributions made by Louis Dumont, D.F. Pockock
- Westernisation,
- Modernisation-contributions made by Yogendra Singh; Rudolph & Rudolph
- Globalization

Tribe – Caste continuum

UNIT-IV

Caste and Indian Politics; Democracy and caste

Dalit movements and its impact on Indian polity

Class in India: Theoretical and conceptual issues- Karl Marx, Max Weber

Caste and class in agrarian and industrial society in India

Note:

1. For the semester examination a total of nine questions will be set, two each from each of the Units I, II, III, IV. There will be one compulsory question of 8 to 10 multiple choice 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 units I, II, III, IV and the compulsory question.

3. All questions will carry equal marks.

ESSENTIAL READINGS


FURTHER READINGS


AHS- 364: Human Adaptability (Theory)

Objectives: The objective of this paper is to teach the students how to analyze adjustments necessary for successful existence in varied environments or habitats. These are viewed from two angles, one, adaptability of each of the individual making up the group, and two, adaptability of the group as a whole. Differences/similarities between human groups are analyzed as differences in their total ecological relationships, biological as well as cultural.

UNIT-I

Human adaptability: Man’s physiological responses to various environmental stimuli.

UNIT-II

Concept of stressors climate, high attitude, desert, disease and nutrition, their effect on
human adaptability.

UNIT-III

Human life-support systems-Structure of human life-support: response structures; population control and resource-management strategies.

UNIT-IV

Urban ecology-urbanization (“Westernization”), demographic stress, epidemiology of diseases. Malnutrition, nutritional deficiency disease, non-infectious disease, etc.

Note:
1. For the semester examination a total of nine questions will be set, two each from each of the Units 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.
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ESSENTIAL READINGS

Tanner, N.A. Barnicot London.

FURTHER READINGS

INSTRUCTION FOR THE PAPER-SETTER

The question paper will consist of five Units: I, II, III, IV and V. UNIT I, II, III and IV will have two questions from the respective Units of the syllabus. UNIT V will consist of 10 short answer type question which will cover the entire syllabus uniformly.

AIM

To understand the functioning of various body systems.

OBJECTIVES:

The course objectives are: To impart basic information concerning the functioning of the human body; To develop the critical thinking skills necessary to predict how the body responds to homeostatic imbalances. The other objective of teaching this course is to ensure that the students learn human physiology well enough to be successful in future classes, professional exams, careers and to understand human physiological variations.

UNIT-I

DIGESTIVE SYSTEM: Organization of GI system, Digestion and absorption – Movement of GI tract.

REPRODUCTIVE SYSTEM: Male and female reproductive system.

UNIT-II

REPRODUCTORY SYSTEM


UNIT –III

Body fluids: Blood and Lymph; Significance of Body fluids, distribution of body fluids, Composition and functions of blood; Plasma proteins and their functions, RBCs, PCV, Hemoglobin, WBCs and their functions, Platelets and functions.

Cardiovascular system: Structure of Heart, Cardiac Cycle (Cardiac Muscle), Heart sounds, Cardiac Output, Arterial and Diastolic Blood Pressure.
UNIT-IV


ENDOCRINOLOGY: Hormonal action, Secretion of pituitary, thyroid, parathyroid, pancreas and adrenal glands.

ESSENTIAL READINGS


FURTHER READINGS


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