



West Bengal State University M. Sc. Anthropology Syllabus 2009

Semester	Theoretical	Practical/ Field/ Dissertation	Continuing Evaluation	Total
1 st Semester	150	100	50	300
2 nd Semester	150	100	50	300
3 rd Semester Gr-A: Biological Anthropology	150	100	50	300
3 rd Semester Gr-B: Archaeological Anthropology	200	50	50	300
3 rd Semester Gr-C: Social-Cultural Anthropology	200	50	50	300
4 th Semester Gr-A: Biological Anthropology	100	150	50	300
4 th Semester Gr-B: Archaeological Anthropology	150	100	50	300
4 th Semester Gr-C: Social-Cultural Anthropology	150	100	50	300
Total	Gr-A: 550 Gr-B: 650 Gr-C: 650	Gr-A: 450 Gr-B: 350 Gr-C: 350	Gr-A: 200 Gr-B: 200 Gr-C: 200	1200

1st Semester
Total Marks for 1st Semester: 300

Course ANTH 411: Biological Anthropology Module-I: Evolutionary Background: 25 Module-II: Human Biological Variation: 25	(50 marks)
Course ANTH 412: Archaeological Anthropology Module-I: Geochronology and Field Archaeology: 25 Module-II: Palaeoanthropology: 25	(50 marks)
Course ANTH 413: Social-Cultural Anthropology Module-I: Society and Culture: Concepts and Approaches: 25 Module-II: Study of Culture: Concepts and Approaches: 25	(50 marks)
Course ANTH 414: Practical Module-I: Biological Anthropology: 50 Module-II: Archaeological Anthropology: 25 Module-III: Social -Cultural Anthropology: 25	(100 marks)
Course ANTH 415: Continuing Evaluation Module-I: Class Test: 25 Module-II: Group Discussion: 25	(50 marks)

Total Marks	: 300
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COURSE ANTH 411 : BIOLOGICAL ANTHROPOLOGY

MODULE- I: Evolutionary Background

Unit I: Development of Evolutionary theory: Darwin and Natural selection; Evidence for Evolution, Natural selection in action; Darwin's failures; Genetics and Evolution: Early theories of inheritance, Mendelian Genetics, Genetics of complex physical traits, Mutations – types & rates; Genetics and Behaviour; Ancient DNA and PCR; HGP and ELSI.

Unit-II: Modern theory of Evolution : The modern synthesis, Factors producing and re-distributing variation- Mutation, Migration, Genetic drift, Recombination; Natural selection acts on variation; Modes of Natural Selection (Directional, Stabilizing and Diversifying selection); Neutral mutations; Micro and Macro evolution.

Unit-III: The Origin and Evolution of Species: Species- Biological and Ecological Species Concept; Anagenesis, Palaeospecies and Cladogenesis; Speciation (Allopatric, Sympatric and Parapatric Speciation); Reproductive isolation, Genetic divergence; Gradualism and Punctuationalism; Evolutionary process- Adaptive Radiation, Generalized and Specialized; Convergent and Parallelism; Extinctions, Evolution of Behaviour, Misconception about Evolution.

Unit-IV : Evolution in Modern populations : The population - Population Genetics, Hardy Weinberg Equilibrium; Evolutionary forces, Mutation, Migration (Gene flow), Genetic drift and Natural selection; Interaction of the Evolutionary forces; Human polymorphisms.

MODULE – II: Human Biological Variation

Unit-I: Measuring Human variation: Biochemical Variation- Genetic markers and DNA analysis, mt DNA; Complex Traits Variation- Anthropometrics and other measures; Racial approach to Variation, Evolutionary approach to Variation; Analysis of gene flow and genetic drift (Genetic distance analysis and Demographic measures); Analysis of Natural selection (Genetic associations, Environmental correspondence and Demographic measures).

Unit-II: Microevolution in Human Populations: Case studies of Gene flow and Genetic drift, Case Studies of Natural selection (Hemoglobin, Sickle cell and Malaria, Blood groups, Lactose intolerance, Skin Colour).

Unit-III: Human Adaptation: Type of adaptation, Human adaptation in respect of Thermal Environment (Heat and Cold; Bergman's and Allen's rule), High altitude, Nutrition and Disease; Hazards of modern life- Radiation, Chemicals, Crowding, Noise, Obesity, High BP, Arsenic contamination in ground water.

Unit-IV: Human Diversity: Concept and misconception of Race - Race and Racism, Eugenics; Typological, Populational and Clinal model of human classification; Race and behaviour; AAPA & UNESCO statement on Race.

COURSE ANTH 412: ARCHAEOLOGICAL ANTHROPOLOGY

MODULE-I: Geochronology and Field Archaeology

Unit I: Archaeological Anthropology: aim, scope, historical development and recent emerging trends ; Basic concept: Environmental Archaeology , Cultural Ecology , Ethno-archaeology , Settlement Archaeology , Action Archaeology, Experimental Archaeology, Social and Economic approaches in archaeological Studies , Periodization in Prehistory.

Unit II: Palaeoenvironment: Environmental change during Quaternary –climatic, Geomorphic, Faunal and Floral ; causes of the Ice Age ; Sea core analysis ; Geological framework of the Quaternary period ; Zonal concept- Glacial, Periglacial and Tropical geomorphology ; Pleistocene stratigraphy for reconstruction of palaeoenvironment and chronological framework of prehistoric culture – Moraine, Glacio-fluvial deposits, River Terraces, U- shaped Valley, Loess, Solifluction, Gravel and Silt deposition, Palaeontological, Palaeobotanical evidences.

Unit III: Chronology: Method of dating the events of prehistory ; Relative dating methods- Stratigraphy, Typo-technology, palynology, paleontology, FUN estimation ; Absolute dating method- Radiocarbon, Potassium-Argon, Dendrochronology (Tree ring analysis), Thermoluminescence (TL), Obsidian Hydration, Archaeomagnetism, Fission-Track, Uranium series, Amino acid Racemization, Varve clay analysis and other physical and chemical methods ; Differences between Absolute and Relative methods of dating; recent development of dating methods and their application in archaeology.

Unit IV: Field Archaeology: Prehistoric sites- Alluvial site, Lacustrine site, Aeolian site, coastal site, surface site, Habitational site, Factory site, Butchering site, Cave site, Burial site, seasonal camp site ; Site discovery method- use of literary source, survey, use of geophysical method, potentiality of the site ; Method of exploration- Extensive and Intensive survey, use of maps and aerial photographs, use of GIS, Test pits ; Excavation method – pre excavation stage, actual method of digging-datum point, grid system, Sondage, Horizontal and vertical excavation, excavation of Settlement sites and Burial sites, Recording and analysis of evidences in terms of time and space.

MODULE II: Palaeoanthropology

Unit I: Bio-cultural evolution of man: The relationship between the development of biological characters and cultural advances as shown from concrete data of fossil evidences ; Impact of cultural achievements on human biology ; Meat eating habit and Hunting ; Tools and Intelligence; Expansion of the brain ; Modification in the structure of female body ; Prolonged infant dependency ; Male-female bond ; Division of labour ; Invention and utilization of fire ; Improved organizational skill ; Development of language and symbolic communication

Unit II: Man's capacity for culture – Biological preconditioning determines Man's capacity for culture ; Erect posture and Bipedal locomotion ; Enlarged brain ; Visual acuity ; Manual dexterity ; Opposable thumb ; Power and Precision grip; Capability of abstraction of ideas ; Articulated speech and language.

Unit III: Hominization Process: Structural and Behavioural changes occurred in the hominid line finally leading to Man: *Australopithecus ramidus*, *Australopithecus afarensis*, *Australopithecus africanus*, *Australopithecus robustus*, *Australopithecus boisei* ; *Homo habilis* ; *Homo erectus*-*Homo erectus javanensis*, *Homo erectus pekinensis*, Narmada man ; Neandertal man - La chapelle-aux-saints, Rhodesian Man, Steinheim, Mount Carmel ; *Homo sapiens sapiens*-Cromagnon, Grimaldi, Chancelade.

Unit IV: Evolution of the early Human Culture and Society: *Homo habilis*, the first tool maker, Oldwan culture, Hunting and cooperation, development of home base, band formation ; *Homo erectus*, Biface technology, the use of fire, Acheulean culture, Big game hunting, expansion of human habitat ; Archaic *Homo sapiens*, Neandertal man and development of flake tool technology, economic implication of evolution of flake tools, Mousterian culture, first burials, human expansion in temperate region; *Homo sapiens sapiens*, development of blade tool technology, use of bone and antler as raw materials for the manufacture of tools, cave and open air settlements, Mammoth hunting, Development of art.

COURSE ANTH413: SOCIAL-CULTURAL ANTHROPOLOGY

Module I: Society and Culture: Concepts & Approaches

Unit-I: Social Cultural Anth- Definition, Subfields, Distinctive features, approaches of study, Nature and position of Social Cultural Anthropology-Global and Indian Context.

Unit-II: Society, Social units & Institution, Social structure , Social Organisation , anthropological concepts and theoretical issues; society and culture differences and interrelationship.

Unit-III: components of social structure and social organization : Family, Domestic group and Household, Marriage, Kinship in cross-cultural perspective; Impact of Urbanization, Industrialization and Globalization (Indian context).

Unit –IV: Economic system: Primitive ; Pre-industrial and industrial- Production, Consumption and Distribution pattern.

Module II: Study of Culture: Concepts and Approaches

Unit –I: The Core concept of Culture: Definition and anthropological concepts . the basic characteristics of culture: Culture is commonly shared ; learned ; transmitted ; not the same as nature ; generally adaptive ; based on symbols ; Integrated ; Interact and change

Components of culture: Material and Nonmaterial culture ; Values ; Beliefs ; Norms ; Symbols ; Ideal vs Real Culture.

Concepts of Subculture; Micro and Macro culture.

Levels of culture: Regional, National International, Global

Unit-II: Approaches of Studying Culture: Culture as Evolutionary progress ; as Historical processes ; as Functionally Related system ; as Personality Configuration ; as Cognitive Systems; as Structural Systems ; as Symbolic Systems; as Adaptive Systems ; as Global World System (Political Economic) as Interpretive System.

Unit-III: Multiple cultural worlds- Class ;Race ; Ethnicity; Gender ; Age; Region ; Institution.

Unit-IV: Types of research in Cultural Anthropology: Brief Outline

Ethnography ; Ethnology ; Within Culture Comparison ; Regional Comparison ; Cross- Cultural Comparison ; Historical research (Ethnohistory).

COURSE ANTH 414: PRACTICAL

MODULE-1: Biological Anthropology

Unit-1: Craniometry (8marks)

1. Cranial Index
2. Length-Height Index
3. Breadth-Height Index
4. Upper Facial Index
5. Nasal Index
6. Orbital Index
7. Palatal Index
8. Mandibular Index

Unit-2: Osteometry: Direct measurement (8marks)

1. Humerus: Max. Length, Breadth of Proximal epiphysis, Breadth of distal epiphysis, Least Girth of Shaft, Caliber Index
2. Radius: Max. Length, Physiological Length, Least girth of Shaft, Transverse diameter of Shaft, Caliber Index
3. Ulna: Max. Length, Physiological length, Least girth of Shaft, Breadth of Olecranon, Height of Olecranon cap, Caliber Index
4. Femur: Max. Length, Physiological length, Trochantric length, Sagittal diameter of middle shaft, Transverse diameter of middle shaft, Robusticity Index
5. Tibia: Max. Length, Physiological length, Mid -shaft circumference, Least Circumference of shaft, Caliber Index
6. Fibula: Max. Length, Mid-shaft Circumference, Minimum Circumference of shaft, Caliber Index

Unit-3 Dermatoglyphics (8marks)

- Finger Print: Identification of Pattern, PII & other indices, TFRC
Palm Print: Main Line Formula, Main Line Index, atd angle

Unit-4 ABO and Rh(D) Blood Grouping (6marks)

Unit-5 PTC Tasting Ability (6marks)

Unit-6 Colour vision test (4marks)

Unit-7 Laboratory Note Book and Viva-Voce (10 marks)

MODULE-II Archaeological Anthropology

Unit-1: Techno metric analysis and functional interpretation of Prehistoric Artifacts
(Selected series) (15 marks)

Unit-2: Laboratory Note Book and Viva-Voce (10 marks)

MODULE-III: Social-Cultural Anthropology

Unit-I: Application of Field Methodology and Writing of Ethnography (15 marks)

Unit-II: Viva-voce (10 marks)

READING LIST

COURSE ANTH 411 : BIOLOGICAL ANTHROPOLOGY

Books:

- Barua Saumitra 2002. *Human Genetics: An Anthropological Perspective*. Kolkata: Classique Books.
- BasuRoy Indrani 2003. *Anthropology: The Study of Man*. New Delhi: S. Chand & Co.
- Delson E with I. Tattersall and JV Couvering (eds.) 2000. *Encyclopedia of Human Evolution and Prehistory*. New York: Taylor and Francis.
- Ember Carol R, with Melvin Ember and Peter N Peregrine 2006. *Anthropology 10th edition*. Delhi: Pearson Education.
- Johnston, F. E. 1973, *Microevolution of Human Populations*, New Jersey: Prentice Hall.
- Jones S with R Martin and D Pilbeam (eds.) 1992. *The Cambridge Encyclopedia of Human Evolution*. Cambridge: Cambridge University Press.
- Jurmain R with H Nelson, L Kilgore and W Trevathan 1999. *Introduction to Physical Anthropology*. Belmont: Wadsworth.
- Lewis Richi 2003. *Human Genetics: Concepts and Applications 5th edition*. Boston: WCB McGraw Hill.
- Little, M. A. and Haas, J. D. 1989, *Human Population Biology*, New York: Oxford University Press.
- Mettler, L. E. and Gregg, T. G., 1969, *Population Genetics and Evolution*, New Jersey: Prentice Hall Inc.
- Nelson H and R Jurmain 1991. *Introduction to Physical Anthropology*, St. Paul: West Publishing Company.
- Relethford JH 2002. *The Human Species: An Introduction to Biological Anthropology 5th edition*. Boston: McGraw Hill.
- Stern Curt 1973. *Principles of Human Genetics 3rd edition*. San Francisco: WH Freeman.
- Strickberger Monroe W 2003. *Genetics 3rd edition*. New Delhi: Prentice Hall.
- Strickberger, MW. 1990. *Evolution*. London: Jones and Bartlett Publishers.
- Turnbaugh, W. with R. Jurmain, H. Nelson and L. Kilgore. 1996, *Understanding Physical Anthropology and Archaeology*, 6th ed. St. Paul: West Publishing Company.

Internet Resources:

- American Anthropological Association: <http://www.aaanet.org/>
- American Association of Physical Anthropologists: <http://www.physanth.org/>
- ESP Foundation of Classical Genetics: <http://www.esp.org/foundations/genetics/classical/>
- Mendel Web: <http://www.mendelweb.org/>
- North Dakota State University, Population and Evolutionary Genetics: <http://www.ndsu.edu/instruct/mcclean/plsc431/popgen/>
- Palomar College: <http://anthro.palomar.edu/tutorials/>
- Ridley Mark. Evolution: <http://www.blackwellpublishing.com/ridles/tutorials/>
- Stanford University Evolutionary Genetics: <http://plato.stanford.edu/entries/evolutionary-genetics/>
- UNESCO: <http://portal.unesco.org/>

COURSE ANTH 412: ARCHAEOLOGICAL ANTHROPOLOGY

Books:

- Braidwood, R. J. 1975, *Prehistoric Man*, Glenview;Scott, Foresman.
- Buettner Janushch, J. 1966, *Origin of Man*, John Wiley and Sons Inc. New York.
- Butzer, K.W. 1966, *Environment and Archaeology- An Introduction to Pleistocene Geography*. Chicago: Aldine publishing Company.
- Campbell, B. G. And Loy, J.D. 1996. *Humankind Emerging* (7th Ed.) New York: Harper Collins.
- Childe, V.G. 1956. *Piecing Together the Past: The Interpretation of Archaeological Data*. London: Routledge and Kegan Paul.
- Clark, Grahame & Stuart Piggott. 1976, *Prehistoric Societies*. Penguin Books.
- Clark, J.G.D. 1952, *Prehistoric Europe, The Economic Base*, NewYork.
- Clark, W. E. Le Gros, 1964, *The Fossil Evidence for Human Evolution- an Introduction to the study of Palaeontology*. Chicago University Press, Chicago.
- Clarke, J.G.D. 1939. *Archaeology and Society*. London: Methune.
- Day, Michael, 1971, *Guide to Fossil Man- A Handbook of Human Paleontology*. Cassell Company Ltd., London.
- Fagan, B.M. *People of the Earth- An Introduction to World Prehistory*. 11th ed. Pearson Education.
- Fagan, Brian M. 1999, *Archaeology- A Brief Introduction*. Prentice Hall, New Jersey.
- Gamble, C. 1986, *The Palaeolithic Settlement of Europe*. Cambridge University Press.
- Greene, Kevin. 2000 *Archaeology - An Introduction*. Routledge publication.
- Haviland, W.A. 1997, *Human Evolution and Prehistory*. Harcourt Brace College Publisher.
- Hester,T, Heizer, R.E.and J.A. Graham 1975. *Field Method in Archaeology*. Mayfield press, California.
- Hodder, Ian. 1992, *Theory and Practice in Archaeology*. London: Routledge.
- Hodder, Ian. 1999, *The Archaeological Process: an Introduction*. Oxford: Blackwell Publisher.
- Hole,F. and Heizer 1973. *Introduction to prehistoric Archaeology*. New York: Holt, Reinhart and Winston.
- Hooton, E. A. 1946, *Up from the Ape*, The Macmillan Company: New York.
- Leaky, R. 1981, *The Making of Mankind*. Dutton, NewYork.
- Parkes, P.A. 1986, *Current Scientific Technique in Archaeology*. Croom-helm, London.
- Pilbeam, D. 1972, *The Ascent of Man- An Introduction to Human Evolution*. Macmillan.
- Renfrew, C and P, Bahn 1991. *Archaeology: Theories and Methods and Practice*, London: Thames and Hudson.
- Turnbaugh, William, R. Jurmain, H. Nelson, L.Kilgore. 1996, *Understanding Physical Anthropology and Archaeology*, 6th ed. West Publishing Company.
- Zeuner, F.E. 1958. *Dating the past: An Introduction to Geochronology*. London: Methune and Company Ltd.

COURSE ANTH413: SOCIAL-CULTURAL ANTHROPOLOGY

Books:

- Banerjee, BN and A Sarkar 2002. *Fundamentals of Social and Cultural Anthropology*. Kolkata: Firma KLM.
- Bates, DG. 1996. *Cultural Anthropology*. Allyn & Bacon, USA
- Dash, KN. 2004. *Invitation to Social and Cultural Anthropology*. New Delhi: Atlantic Publication
- Doshi, SL. And PC Jain 2001. *Social Anthropology*. New Delhi: Rawat Publication
- Ember, CR with M Ember and PN Perigrine 2002. *Anthropology* 12th ed. New Delhi: Pearson Education

- Ferraro, G. 1995. *Cultural Anthropology: An Applied Perspectives*. New York: West Pub. Co.
- Goody, WJ. 2007. *The Family*. New Delhi: Prentice Hall
- Herskovits, MJ. 1956. *Cultural Anthropology*. New Delhi: Oxford IBH
- Kessing, R. 2000. *Cultural Anthropology*. Chicago: Univ. of Chicago Press
- Kottak, CP. 2004. *Cultural Anthropology*. New York: McGraw Hill
- Mair, L. 1972. *An Introduction to Social Anthropology*. Oxford: Clarendon Press
- Millar, Barbara D. 1999. *Cultural Anthropology*. Allyn & Bacon, USA
- Miller, ES and CA Weitz 1979. *Introduction to Anthropology*. New Jersey: Prentice Hall
- Nanda, S. and RL Warms 2002. *Cultural Anthropology*. New York: Wadsworth Thomson Learning
- Scupin, R. 2004. *Cultural Anthropology: A Global Perspectives*. New Jersey: Prentice Hall
- Scupin, R. and C DeCorse 2005. *Anthropology: A Global Perspectives*. New Delhi: Prentice Hall

COURSE ANTH 414: PRACTICAL

Module-I: Biological Anthropology

Books:

- Bhasin MK and Chahal SMS 1996. *A Laboratory Manual for Human Blood Analysis*. Delhi: Kamla-Raj Enterprises.
- Cummins H and Midlo 1961. *Finger Prints, Palms and Soles*. New York: Dover Publications.
- Das BM and Deka R 1992. *Physical Anthropology Practicals*. Allahabad: Kitab Mahal.
- Ishihara Shinobu 1917. *The Series of Plates Designed as Test for Colour-Blindness*, 38 Plates edition.
- Nath S 2005. *Anthropometry: The Measurement of Body Size, Shape and Form*. New Delhi: Friends Publications.
- Sen Tulika 1994. *Guide to Anthropometry*. Kolkata: The World Press.
- Singh Indra P and Bhasin MK 1989. *Anthropometry*. Delhi: Kamla-Raj Enterprises.
- Singh Indra P and Bhasin MK 2004. *A Manual of Biological Anthropology*. Delhi: Kamla-Raj Enterprises.
- Weiner JS and Laurie JA 1969. *Practical Human Biology*. Oxford: Blackwell Scientific Publications.

Internet Resources:

- Visibone on Colour deficient vision: <http://www.visibone.com/colorblind/>
- Waggoner TL and Gulf Breeze OD. Colourblind: <http://colorvisiontesting.com/>

Module-II: Archaeological Anthropology

- British Museum 1956. *Flint Implements- An Account of Stone Age Techniques and Cultures*. London: The Trustees of the British Museum
- Andrefsky, William Jr. 2008. *Lithic Technology*. Cambridge: Cambridge University Press
- Bhattacharya, DK. 1977. *Old Stone Age Tools*

Module-III: Social -Cultural Anthropology

- Srinivas, MN. with AN Shah and EA Ramswamy 2008. *The Fieldworker and the Field*. New Delhi: Oxford Univ. Press
- Bisht, BS 2001. *Ethnography of a Tribe*. New Delhi: Rawat Publications
- Sarana, Gopala 2008. *Explorations in Method and Theory in Anthropology*. New Delhi: Rawat Publications
- Eriksen, TH 2008. *What is Anthropology?* New Delhi: Rawat Publications
- Scupin R. 1995. *Cultural Anthropology: A Global Perspective*. New Jersey: Prentice Hall
- Hammersley, M and P Atkinson 2008. *Ethnography: Principles in Practice*. New York: Routledge
- Srivastava, VK 2004. *Methodology and Fieldwork*. New Delhi: Oxford Univ. Press
- Bernard, HR 2008. *Research Methods in Anthropology*. New Delhi: Rawat Publications
- Kottak, CP 2002. *Cultural Anthropology*. New York: McGraw Hill.

EVALUATION/ QUESTION PATTERN

END SEMESTER EVALUATION (COURSE ANTH 411-414)

Theoretical Papers (for each module of 25 marks)

One Essay type question (from 2 options) of 12 marks (from 2 different units of the module)	= 12 marks
Two Short Answer Type Question (from 4 options) of 5 marks each (2 each from remaining two units of the module)	= 10 marks
Six Multiple Choice Question (no choice) of ½ marks each	= 3 marks

Practical Papers

Will be evaluated by External and Internal Examiners for each module

MID SEMESTER EVALUATION (COURSE ANTH 415)

Will be evaluated by Internal Examiners

Class Test: at least one class test of 25 marks for each theoretical module

Average marks (out of 25) will be added with end semester courses

Group Discussion: at least three GD of 25 marks for each theoretical course

Average marks (out of 25) will be added with end semester courses