COURSE TITLE: THIRD YEAR (HONORS) FINAL

Course	Course Title	Credit	Marks
Number			
301	Art and Architecture of Ancient South Asia	3	100
302	History of Bengal with emphasis on socio-economic and	3	100
	cultural aspect (1704 to 1947)		
303	Brahmanical, Jain and Buddhist Iconography	3	100
304	Protohistory of South Asia (excluding Eastern India)	3	100
305	Mediaeval World Civilization (excluding South Asia)	3	100
306	Numismatics of ancient South Asia with emphasis on Bengal	3	100
307	Research Methodology	3	100
308	Anthropological Concepts in Archaeology	3	100
309	Ancient Plants and People	2	50
310	Practical: Archaeobotany	2	50
311	Museum Studies: Theory and Practice	3	100
312	Practical: Field Work (Excavation)	4	100
313	Viva-voice	2	50
Total Marks		35	1150

and ten

Course Title : Art and Architecture of ancient South Asia

Course Code : ARCH 301

Class Hours : 4 [3 hours per week (course) + 1 hour (tutorial)]
Unit and Marks : Full Unit Course equivalent to 100 marks.

Marks Distribution: 100 [Attendance10 + Tutorials (3) 20 + Exam 70] **Assessment**: Attendance 10%, Tutorials 20%, Exam 70%

Objectives

It helps in understanding the changes happen in social, religious, political and cultural context.

- o To teach the students visual and contextual analysis of diverse South Asian art and architecture from the earliest evidences to 1300 CE.
- To teach them to analyze the similarities and differences of art and architecture of various schools of arts and dynastic periods (Comparative analysis).
- To learn the vocabulary for art and architecture of different regions and religions (Hindu, Buddhist and Jain).
- o students will learn to identify, to describe and to analyze the ancient art and architecture.

Learning Outcome

- 1. Students will understand meaning, the origin and development of art and architecture of South Asia.
- 2. They will learn the new terminology used for different architecture like stupa, chaityagriha, vihara and temple.
- 3. They will also learn the development of construction methods and the material used for the construction that varies over the time and space.
- 4. They will learn the impact of philosophical changes in religion on the art and architecture over the time.
- 5. They will learn the identification of sculptures, terra-cottas, paintings and even the architecture on the basis of stylistic changes found in every dynastic period and also regional variations.

Detailed Course and Lesson Plan

Required Topic in detail

Numbers of

Classes

Unit 1 Introduction

Classes 1-4

- Importance of the study, Meaning of art, Relation between myth, art and architecture; Relation between Indian mind and architecture, Aniconic and iconic forms of art;
- Development of art and architecture during Prehistoric,

Protohistoric (Harappan) and Early Historic (Vedic and Mahajanapad) periods, Foreign influence on art and architecture.

Unit 2 **Buddhist Architecture - Stupa**

Classes 7-8 Origin of Stupa architecture,

Architectural features of Buddhist Stupa

North India- Stupa architecture at Piprahwa (Pre Mauryan Stupa), Sanchi (Development from Maurya, Shunga, Kushan, Andhra-Satvahan and Gupta), Bharhut (Maurya and Shunga) and Takht-ibahi

Classes 8-10 South India - Amaravati, Ghantashala, Nagarjunakonda,

> East India Dhamek (Sarnatha), Lauriya Nandangarh, Kesariya and Bangladesh- Triratna Mura

Development of Stupa architecture from Pre Mauryan Period to 1200CE.

Unit 3 Buddhist and Jain Architecture - Chaityagriha

Classes 11 Define Chaityagriha, Rock cut and Structural Chaityagriha

Classes 12-14 Origin and development of structural Chaityagriha with examples from earliest Bairat (Rajasthan), Sirkap (Gandhar), Guntapalle Andhra Pradesh), Temple no. 40 at Sanchi (Madhya Pradesh), Ter (Maharashtra) and Chezerla (Andhra Pradesh)- (Buddhist religion). Origin and development of Rockcut caves with examples- Barabar and Nagarjuni hills (Jain religion)

> Architectural features of rock cut Buddhist Chaityagriha, Origin and development of rock cut Chaityagriha from 200 BCE -200CE (Hinayana Phase of Buddhism) - Bhaja, Kondane, Ajanta, Pitalkhora, Nasik, Bedsa, Karle, Junnar and Kanheri, Architectural features of rock cut Chaityagriha of Mahayana Phase

> of Buddhism- Ajanta cave 19 and 26, Ellora 10 (450-750 CE)

Unit 4 **Buddhist and Jain Architecture - Vihara**

Classes 15 -Architectural features of Vihara Architecture.

Origin and development of Jain Vihara (Rock cut architecture) 22 Khandagiri and Udaygiri hills in Orissa.

> Origin and development of Buddhist Vihara (Rock cut architecture) Hinayana phase- Ajanta, Kondane, Pitalkhora, Nasik and Bedsa. Mahayana Phase- Architectural features of rock cut Viharas of Ajanta (450-650 AD), Ellora (450-650AD) and Aurangabad.

Architectural features of Structural Vihara.

Structural Viharas - Rajgir, Takht-i-bahai, Nalanda, Vikramshila Structural Viharas of Bangladesh and its development

North Bangladesh- Sitakot vihara, Bhasu vihara, Bihar dhap,

Sompur Vihara, Halud vihara, Jagaddal Vihara

Southeast Bangladesh- Shalban vihara, Ananda Vihara, Bhoja vihara, Itakhola Mura, Rupban Mura, Latikot Mura, etc. and others in Dhaka (Savar) Harishchandra Rajar Bari and others

There feels

Unit 5 Temple Architecture (Nagar or Indo Aryan or North Indian Style of Temple Architecture)

Classes 23-30 Gupta Temple Architecture

Temple architecture and its Terminology

Temple architecture in Orissa Temple architecture in Khajuraho Temple architecture in Bengal

Origin and development of North Indian style of Temple architecture

Unit 6 Temple Architecture (Dravidian or South Indian Style of Temple Architecture

Classes 31-37 Chalukya Temple Architecture

Terminology of South Indian Temple Architecture

Origin and development of South Indian style of Temple architecture

Temple architecture of Pallavas (Structural and Rock cut),

Temple architecture of Cholas,

Rock cut Temple architecture at Ellora (Hindu and Jain)

Unit 7 Indian Art

Classes 38-50 Meaning of art

Paintings: Origin and development of paintings,

Pre and Protohistoric Indian subcontinent - Kashmir valley (North India), Vindhyan hills -Bhimbhetka, Mahadeohills, Adamgarh (Central India) and South India).

Historic Period - Ajanta, Ellora, Bagha, Badami, Bengal (Ancient and Early Medieval Historic Period)

Terracotta Art: Origin and development of terracotta (From earliest clay figurines, Harappa, Chalcolithic, Maurya, Sunga, Kushana, Gupta, Pala and Sena). Harappan Art

Folk Art: Identification, Style, Meaning and cult of Yaksha.

Sculptural Art of Maurya, Shunga, Kushan (Gandhar and Mathura School of Arts), Gupta (Mathura and Sarnath School of Arts)
Pala and Sena

Recommended Readings

Agrawal, V. S. 1965. *Indian Art* (A history of Indian art from the earliest times up to the third century A. D.). Prithvi Prakashan, Varanasi 5. India.

Brown, P. *Indian Architecture* (Buddhist and Hindu Period). D. B. Taraporevala sons and co. pvt. ltd. Bombay, India.

Coomarswamy, A. K. 1981. Figures of Speech or Figures of Thought (collected essays on the traditional or normal view of art). Munshiram Manoharlal Publishers Pvt.Ltd. New Delhi, India.

Dehejia, V. 1972. Early Buddhist Rock Temples. London.

Deva, K. 1969. Temples of North India. New Delhi.

Fergusson, J. 1910 *A History of Indian and Eastern Architecture*, revised by J and P. Spires, London

Hardy, A. 2007. Temple Architecture of India, published by Wiley.

Harle, J.C. 1986. *The Art and Architecture of the Indian Subcontinent*. Yale University Press. New Haven and London.

and gifter.

- Hoque S. and Hoque M.M. 2004. Understanding the Paharpur Temple Architecture in New Perspective in Proceedings of the International Seminar on Elaboration of an Archaeological Research Strategy for Paharpur World Heritage Site and Its Environment (Bangladesh)20-25 March 2004. Dhaka: Department of Archaeology, Ministry of Cultural Affairs Government of the people's Republic of Bangladesh and UNESCO Dhaka, pp.58-66.
- Hoque, S. and Hoque M.M. 2014. Rethinking of Buddhist Architecture of Bangladesh in Typological Perspective in *Pratnatattva*, Journal of the Department of Archaeology, Jahangirnagar University, Savar, Dhaka, Vol. 20, pp 9-35.
- Hoque, S. and Hoque, M.M. 2019. New Understanding of Buddhist Cruciform Temples in Early Medieval Bengal in *Pratnatattva*, Journal of the Department of Archaeology, Jahangirnagar University, Savar, Dhaka, Vol. 25, pp 95-104.
- Huntigton, S.L. 1985. *The Art of Ancient India*. Weatherhill, New York Tokyo.
- Kramrischi, S. 1933. *Indian Sculpture*, Calcutta, India.
- Kramrisch, S. 1946. The Hindu Temples, Calcutta, India.
- Mitra, Debala. 1971. *Buddhist Monuments*. Calcutta: Sahitya Samsad, 32A Acharya prafulla Chandra Road.
- Rao, S.K.R. 1993. Art and Architecture of Indian Temples. Kalpatharu Research Academy, Banglore, India.
- Rahman, M. 1998. Sculpture in the Varendra Research Museum A Descriptive Catalouge, Rajshahi.
- Rolland, B. 1955. The Art and Architecture. Penguin Books, London. Rowland, B. 1953. *The Art and Architecture of India:*
- Rowland, B. 1953. The Art and Architecture of India: Buddhist, Hindu, Jain (Pelican History of Art). Harmondsworth.
- Saraswati, S.K. 1976. Architecture of Bengal, G. Bhardwaj Publishers.
- Srinivasan, K. R. *Temples of South India*. National Book Trust, India Tomory, E. 1982. *A history of Fine Arts in India and the West*. Orient Longman Limited, Madras, India.
- Zimmer, H. 1990. *Myths and Symbols in Indian Art and Civilization*, edited by Joseph Campbell. Motilal Banarasidass Publishers Pvt. Ltd. Delhi, India.

Expected Outcome

- 6.Students will understand meaning, the origin and development of art and architecture of South Asia.
- 7. They will learn the new terminology used for different architecture like stupa, chaityagriha, vihara and temple.
- 8. They will also learn the development of construction methods and the material used for the construction that varies over the time and space.
- 9. They will learn the impact of philosophical changes in religion on the art and architecture over the time.
- 10. They will learn the identification of sculptures, terra-cottas, paintings and even the architecture on the basis of stylistic changes found in every dynastic period and also regional variations.

Course Title : History of Bengal with emphasis on socio-economic and

cultural aspect (1704 to 1947)

Course Code : ARCH 302

Class Hours : 4 [3 hours per week (course) + 1 hour (tutorial)]
Unit and Marks : Full Unit Course equivalent to 100 marks.

Marks Distribution: 100 [Attendance10 + Tutorials (3) 20 + Exam 70] **Assessment**: Attendance 10%, Tutorials 20%, Exam 70%

Objectives

 Defining Colonial Period of Bengal in relation to Indian sub-continent to understand the historical narrative in accordance cultural process and lifestyles.

- Understanding the 'making of Colonial Period' and its gradual political segments.
- Learn about the trans cultural shifts, aspects and issues in society, economics, culture and religion
 - Beginning from Nawabi Period following Company rule and Victorian era.
- Understanding Europeanization in urban development under Neo military and Christianity.
- o Understanding Colonial trade commerce and economic infrastructure.

Expected outcomes

After completion of the course the student should be able to:

- Basic knowledge to understand the historical narrative to its archaeological context.
- o Understanding of Colonial Period, its socio religious and economic aspects.
- Trade relations and its historical implications in Bengal during Colonial Period
- Cause and effects on historical segments and its archaeological and cultural translations.
- Knowledge how the present culture and custom developed and derived through the process.

Contents

Unit 1: Background

- i. Geo-political history of Subah Bengal and its socio-economic setting
- ii. Character of feudalism, nature of power relation, historical evolution and transformation of politics policies.
- iii. Decline of Mughal supremacy and ascendance of new political Settings under 'Nawab'
- iv. Development of *Nawabi*and its Chronological Aspects (Murshid Quli Khan to Siraj ud Daula)
- v. Dependent-Dominant relationship among Royal aristocrats-Foreign Agencies and Disintegration of different domains of *Nawabi*

Unit 2: Decline of 'Nawabi' and Emergence of Company Rule

- i. Battle of *Plassey*: Causes, Controversies and confrontations
- ii. Degeneration in Nawabi: Nawabs under the Company and their chronology

- iii. Mir Jafar Ali Khan, Mir Kashimand afterwards
- iv. Battle of *Buxar* and Mughul's Proclaim of 'Dewani' under East Indian Company
- v. Role of Dual Governance: Reza Khan and His efforts to reform political and commercial settings of Bengal
- vi. Demolishing Dual Governance: Cause and Effect
- vii. Introducing Europeanization in Company Administration
- viii. Chronological history of Company Administration
- ix. Permanent Settlement at work and introduction of new order in the changing composition of society, economy and culture: Company Policy of Administration and Revenue System

Unit 3: Impact of Colonialism and Challenges from Local Encounter

- i. Various Rebellion and Growth of Nationalism: Peasant and Ethnic uprising, Santhal Rebellion, Fakir- Sannyasi Movement, Indigo Movements, Islamic extremist movements,
- ii. Emergence of the *Bhadralok* society in Calcutta during second half of 19th century Bengali Hindus and Muslims--sense of identity and self-image perceptions, emotion and attitude
- iii. Muslim Upraising: Questions, Collaboration and Consequences
- iv. Partition of Bengal in 1905 : Formation of All India Muslim League
- v. Mutiny of 1857: Causes and Legacy, Decline of Company Authority
- vi. Foundation of Formal British Colonialism: A Queen's Empire
- vii. Final and formal Liberation Movement: Gradual development of Movements from "Self Autonomy towards full Fledged Independence", from
- "Rebellion Terrorism towards Systematic Progressive Movement"

Unit 4: Socio cultural and Economical Phenomena

- i. Various religious reformations in both Hindu and Muslim communities
- ii. Introductions of European Education: Changing Method, Norms and Values
- iii. Women upraising and Empowerment: Contribution to Society, Politics, Education
- iv. Economic Issues: Transformation through agrarian basis towards Industrial Development
- v. Art and Architecture

Recommended Readings

- Ahmed, R. (1981) *The Bengal Muslims, 1871-1906: A Quest for Identity*. Delhi: Oxford University Press.
- Ahmed, S. (2002) Social Ideas and Social Changes in Bengal. Calcutta: Papyrus.
- Amin, S. N. (1996) *The World of Muslim Women in Colonial Bengal, 1876-1939.* New York: E.J Brill.
- Banerjee, S. (1989) *The Parlour and the Streets: Elite and Popular Culture in Nineteenth Centruy Calcutta*. Calcutta: Seagull Books.
- Bhattacharya, A. K. (1994) *Calcutta Paintings*. Calcutta: Dept. of Information and Cultural Affairs, Govt. of West Bengal.
- Borthwick, M. (1984) *The Changing Role of Women in Bengal, 1849-1905*. Princeton: Princeton University Press.

and the

- Borthwick, M. & Sen, K. C. (1977) A Search for Cultural Synthesis. Calcutta: Minerva Associates.
- চক্রবতী, আর (২০০২) বাঙ্গালির ধর্ম সমাজ ও সংস্কৃতি সুবর্ণরেখা: কলকাতা
- Chatterjee, B. (1984) *Crime and Control in Early Colonial Bengal 17*60-1860. Calcutta: K.P. Bagchi.
- Chatterjee, P. (1996) *Texts of Power: Emerging Disciplines in Colonial Bengal*. Calcutta: Samya, (in conjunction with the Centre for Studies in Social Sciences)
- Chaudhuri, S. ed. (1990) *Calcutta: The Living City*.vols. I and II, Calcutta: Oxford University Press.
- Dasgupta, S. (1969) Obscure Religious Cults, Calcutta: Firma KLM.
- Engels, D. (1996) *Beyond Purdah: Women in Bengal, 1890-1939*. Delhi: Oxford University Press.
- Forbes, G. (1996) *The New Cambridge History of India: Women in Modern India*. Cambridge: Cambridge University Press.
- Islam, S. ed. (2007) *History of Bangladesh*, vol. 3. Dhaka: Bangladesh Asiatic Society.
- Kaviraj, N. (1982) Wahabi and Farazi Rebels of Bengal. New Delhi: PPH.
- Kaviraj, S. (1995) Unhappy Consciousness: BankimchandraChattopadhyay and the Formation of Nationalist Discourse in India. Delhi: OUP.
- Kopf, D. (1969) *British Orientalism and the Bengal Renaissance*, Berkeley: University of California Press.
- Thakurta, T. G. (1992) *The Making of a New 'Indian' Art: Artists, Aesthetics and Nationalism in Bengal, 1850-1920.* Cambridge: Cambridge University. Press.

Course Title : Buddhist, Brahmanical and Jain Iconography

Course Code : ARCH 303

Class Hours : 4 [3 hours per week (course) + 1 hour (tutorial)]
Unit and Marks : Full Unit Course equivalent to 100 marks.

Marks Distribution: 100 [Attendance10 + Tutorials (3) 20 + Exam 70] **Assessment**: Attendance 10%, Tutorials 20%, Exam 70%

Objectives

During excavations sculptures are generally discovered in early historic archaeological sites. These are made of stone/metal/wood. For an archaeologist it is a challenge to identify newly discovered images. But without having any knowledge on iconography it would be impossible to talk about an image. Archaeological sites of our country are very much related to religion. All early historic sites are religious sites. Therefore, it is a must know for a student of archaeology to have a clear concept on Brahmanical, Buddhist and Jain iconography as he/she can be able to identify an icon. Without knowing iconography, it would be difficult to explain the nature of a site. This module is intended to introduce the students with iconographic art. Practical have been designed in this module as the students can be familiar with images. The module will provide guidelines to the students to identify images of ancient and Early Medieval Periods and to edit sculptures in their professional life in museums and in the Department of Archaeology, GoB.

Expected outcomes

On successful completion of the module, students will be able to:

- o Understanding the basic iconographic terms.
- o Understand the iconic marks of images.
- o Identify a sculpture.
- o Edit an image.

Contents

Unit 1: Why Iconography?

- i. Concept of magic, animism, animatism.
- ii. Ideas on nature and ancestral worship, totemic religion.
- iii. Concept of mother goddess and fertility cult.

Unit 2: Iconographic Terminology

- i. Term and terminology of iconography
- ii. Mudras and asanas
- iii. Jain symbols and technical terms

Unit 3: Ideas on iconic worship in primitive society

Unit 4: Development of Image worship in Indian subcontinent

- i. Philosophy behind the development of image worship.
- ii. Philosophy on the development of Vedic deities and Pauranic deities
- iii. Development and concept of image in Buddhism,
- origin and development of Buddha image
- iv. Origin of Jain images

Unit 5: Sources for the study of Iconography

Archeological and literary sources: Puranas, Agamas, Shilpa shastra, Nispanyayogabali, Chandamaharoshanatantra, VajravarahiTantra, Kriyasamuchaya, YoginijalaTantra, Prajnaparamita,

Dharmakosa-Samgraha, Jaina-rupa-mandana.

Unit 6: Vedic Gods

Introduction to Vedic gods and goddesses

Unit 7: Puranic Gods

Vishnu, Shiva, Surya, Brahma, Ganesha, Karttikeya, Navagrahas, Dikpalas etc.

Unit 8: Puranic Goddesses

Lakshmi, Manasa, Mahishasuramardini, Matrikas, Gangā, Yamunā, Lalitā

Unit 9: Buddhist Gods

Transcendent Buddhas: Amitabha, Akshobhya, Vairocana, Amoghasiddhi, Ratnasambhava

Unit 10: The Bodhisattvas

Avalokiteshvara and his manifestations Manjushri and his manifestations Maitreya, Ratnapani, Vajrapani etc.

Unit 11: Miscellaneous Buddhist Gods

Vjarasatva, Padmapani Heruka, Hevajra Bhaishajyaguru etc.

Unit 12: BuddhistGoddesses

Emergence of goddesses as the female counterpart of the gods Origin of Tara, Manifestations of Tara Marici and her manifestations Bhrkuti, Prajnaparamita, Parnaaavari, Mahapratisara, Hariti, Cunda, Ushnishavijaya etc.

Unit 13: Jain Gods

Twenty-four Tirthankaras

Unit 14: Jain Goddesses

Jain goddesses

Unit 15: Introduction to Folk Deities

Recommended Readings

Banerjea, J. N. (1985) *Development of Hindu Iconography*. Delhi: Munshiram Manoharlal Publishers Pvt. Ltd.

Banerji, R.D. (1933) *Eastern Indian School of Mediaeval Sculpture*. Delhi: Archaeological Survey of India.

- Bhattasali, N. K. (2008) *Iconography of the Buddhist and Brahmanical Sculptures in the Dacca Museum*. Reprint (orig. publ. 1921). Dhaka: Bangladesh National Museum.
- Bhuiyan, M. H. (2015) *Studies in South Asian Heritage*. Dhaka: Bangla Academy GopinathaRao, T. A. (1985) *Elements of Hindu Iconography*. Delhi: MotilalBanarsidas Rahman, M. (1998) *Sculpture in the Varendra Research Museum*. Rajshahi: the Varendra Research Museum
- Bautze-Picron, C. (2005) *The Forgotten Place: Stone Images from Kurkihar, Bihar.* New Delhi: Archaeological Survey of India
- Bhattacharrya, B.C. (1974) *The Jain Iconography*. Delhi: Motilal Banarsidas Bhattacharya, B. (1968) *The Indian Buddhist Iconography*. Calcutta: Firma K L M Bhattacharyya, D. C. (1974) *Trantric Buddhist Iconographic* New Delhi: MonshiramManoharlal.
- Bhattasali, N. K. (2008) *Iconography of the Buddhist and Brahmanical Sculptures in the Dacca Museum*. Dhaka: Bangladesh National Museum.
- Ghosh, M. (1980) Development of Buddhist Iconography in Eastern India: A study of Tārā, Prajñās of five Tathāgatas and Bhṛkutī. New Delhi:

 MonshiramManoharlal.
- Gupte, R.S. (1972) *Iconography of the Hindus Buddhist and Jains*. Bombay: Taraporevala Sons and Co
- Pal, P. (1994) Jain Art from India. New York: Thames and Hudson

ভূঁইয়া, মো. মোকান্দেল হোসেন (২০০৩) প্রাচীনবাংলার পোড়ামাটিরশিল্প। ঢাকাঃ দিব্য প্রকাশ ভট্টাচার্য, হংসনারায়ণ (১৯৯২) হিন্দুদের দেব-দেবী (প্রথমপর্ব)। কলিকাতাঃ ফার্মা কে এলএমপ্রাইভেটলিমিটেড। ভট্টাচার্য,হংসনারায়ণ(১৯৯৫) হিন্দুদের দেব-দেবী (দ্বিতীয়পর্ব)। কলিকাতাঃ ফার্মা কে এলএমপ্রাইভেটলিমিটেড। ভট্টাচার্য,হংসনারায়ণ(১৯৯৭)হিন্দুদের দেব-দেবী (তৃতীয়পর্ব)। কলিকাতাঃ ফার্মা কে এলএমপ্রাইভেটলিমিটেড। ভিক্ষু,সুনীথানন্দ (১৯৯৯) বাংলাদেশের বৌদ্ধ ভাস্কর্য। ঢাকাঃ বাংলাদেশ এশিয়াটিক সোসাইটি। They feet

Course Title : Protohistory of South Asia (Excluding Eastern India)

Course Code : ARCH 304

Class Hours : 4 [3 hours per week (course) + 1 hour (tutorial)]
Unit and Marks : Full Unit Course equivalent to 100 marks.

Marks Distribution: 100 [Attendance10 + Tutorials (3) 20 + Exam 70] **Assessment**: Attendance 10%, Tutorials 20%, Exam 70%

Objectives

The objective of this course is to introduce students to the development of first Urban civilization in South Asia and to the factors and processes in the differential spatio-temporal developmental trajectories of various cultures during and after the Harappan Civilization. The objectives are:

- To teach the students the development of civilization as a culture process which is spatio-temporally varied.
- To teach the students about the variability of development of material culture and life ways in different area of South Asia
- o To make them aware about the recent developments and debates on Harappan Civilization and their relation to various chalcolithic and Iron Age cultures.
- o To make use of visual materials to teach the students in an interactive way.

Expected Outcomes

At the end of the course, students will be able to:

Students are expected to learn about the variegated development of material culture, lifeways and interaction in difference areas within South Asia and beyond. The connection among various settlements in different regions of South Asia is an important issue in the history of development of archaeology in the sub-continent. This course, thereby, aims to delve into the complexities of debates regarding the terminologies, issues and themes regarding the period of South Asian history which has attracted huge attention from the archaeologists over the world, and thus, generating, the most varied knowledge. The students will be taught to have visual connections with the sites and settlements of various regions in South Asia.

Contents

Unit 1: Introduction

- i. Protohistory: definition, scope, terminology.
- ii. Beginning of agriculture and domestication of animals and plants.

Unit 2: South Asian perspective

- i. Survey of Neolithic cultures with special reference to the early domestication of wheat-barley and rice cultivation.
- ii. Distribution, artefacts, technology, raw material, economy, question of microliths, pottery, etc. in association with animal domestication.
- iii. Regional distribution of sites: Baluchistan, Northern India, Central India, Eastern and north-eastern India, Peninsular India.

Unit 3: Chalcolithic Cultures

i. Diagnostic features, range and chronology

- ii. Chalcolithic cultures of Baluchistan and adjacent areas
- iii. Chalcolithic cultures of Rajasthan: Ahar, Gilund, Balathal, Ojiyana, Ganeshpur-Jodhpura sites.
- iv. Chalcolithic cultures of central India: Kayatha,

Navdatoli, Maheshwar, Eran.

- v. Chalcolithic sites of Ganga plain: Sohgaura, Narhan, Malhar, Lahuradewa, Vindhyian and Kaimur Chalcolithic
- vi. Neolithic-Chalcolithic cultures in Bihar and West Bengal. Major sites.

Chirand, Senuwar, Pandu Rajar Dhibi, Mangalkot, Golbai Sasan

vii. Chalcolithic cultures of Deccan: Jorwe, Prakash, Bahal, Nevasa, Daimabad, Chandoli, Sonegaon, Inamgaon, Kaote

viii. Neolithic-Chalcolithic cultures of South India: Piklihal, Brahmagiri,

Sanganakallu, Tekkalakota, Hallur, Maski, T.Narsipur

ix. Neolithic-Chalcolithic cultures of North-east and Odisha

Unit 4: Harappan Civilization: Early Harappan

- i. Terminology, history of Harappan studies in India , discovery and identification of the Harappan civilization
- ii. Emergence of the early Harappan Period Ravi, Hakra and Amri cultures /
- iii. Pre/Early Harappan Cultures: a. Development of Chalcolithic cultures at Mehrgarh and surrounding region. Early Harappan Cultures at Kulli, Nal, Amri, Kot Diji, Hakra, Ravi, Sothi, Padri, Pre-Prabhas, Anarta.
- iv. Early Harappan Period, concept and evolution of terminology, characteristic features, different cultural zones during early Harappan Period and distribution pattern
- v. Important sites: Amri, Kot Diji, Harappa, Nausharo, Kulli, Mehi, Nal-Nundara, Mundigak, Rahman Dheri, Sarai Khola, Kalibangan, Dholavira, Banawali, Rakhigarhi, Baror, Bhirrana

Unit 5: Mature Harappan

- i. Nature of transition from early Harappan to mature Harappan.
- ii. Mature Harappan Period, concept, distribution pattern and extent, characteristic features, standardisation
- iii. Town planning and settlement types, architecture
- iv. Society and social organisation
- v. Agriculture, floral remains
- vi. Faunal remains
- vi. Trade: Inland and Foreign, Mesopotamian contacts,

literary references, items traded

- vii. Writing and script, seals and sealing
- viii. Weights and linear measurements
- ix. Pottery
- x. Religion
- xi. Arts and Crafts (painting, terracotta figurines, glyptic art,

bronze, steatite, faience figurines, etc)

xii. Technology: stone (blade and bead industry), faience, shell, ivory, stone ware, terracotta, pottery, steatite, textile, bronze, copper, tin, silver, gold, survey of raw material sources of various items

xii. Funerary customs

xiii. Chronology

xiv. Decline: various theories, causes and consequences xv. A survey of excavated Harappan sites: Mohenjodaro, Harappa, Dholavira, Rakhigarhi, Banawali, Kalibangan, Lothal, Surkotada, Bagasra, Kuntasi, Nageshwar, Rangpur, Desalpur

Unit 6: Late / Post Harappan Period

i. Distribution, different cultural zones, chronology Jhukar-Jhangar, Cemetery H, Gandhara Grave Lustrous Red Ware Important sites: Jhukar, Harappa, Banawali, Dholavira, Rangpur, Hulas, Alamgirpur, Bhagwanpura, Mitathal

- ii. Decline and various theories
- iii. Legacy of Harappan civilization

Unit 7: Ochre Coloured Pottery and copper hoards

- i. Distribution: Bahadarabad, Bisauli, Saipai, Lalqila, Atranjikhera, Hastinapur, Jodhpura
- ii. Typology
- iii. Associated pottery and the cultural affiliation
- iv. Dating
- v. Malawa culture
- vi. Jorwe culture

Unit 8: Iron Age cultures (excluding eastern India)

- i. Antiquity of iron in India
- ii. Painted Grey Ware culture:
- iii. Distribution pattern, relation to late Harappan culture

Survey of PGW sites in Pakistan and India

- iv. Important sites: Ahichchhatra, Hastinapur, Bhagwanpura, Atranjikhera
- v. Northern Polished Black ware and
- cultural progress of Iron Age.
- vi. Iron Age and the Second Urbanization: Debates about transition, continuity and parameters

Unit 9: Megalithic cultures in India

- i. Distribution pattern, different types of megaliths, survey of various regional types of megaliths including rock-cut chambers
- ii. Habitation sites
- iii. Important sites: Burzahom, Naikund, Mahurjhari, Kunnatur,

Adichanallur, Kodumanal, Brahmagiri, Maski

Recommended Readings

- Agrawal, D.P. (1982) *Archaeology of India*. Copenhagen: Scandinavian Institute of Asian Studies.
- Agrawal, D.P. (2000) Ancient Metal Technology and Archaeology of South Asia (A PanAsian Perspective). New Delhi: Aryan Books International.
- Agrawal, D.P. and Chakrabarti, D.K. (eds.). (1979) *Essays in Indian Protohistory*. New Delhi: B.R. Publishing Corporation.
- Allchin, F.R. and Allchin, B. (1993) *The Birth of Civilization in India*. revised ed. New Delhi: Penguin Books.

- Allchin, B. and Allchin, R. (1982) *Rise of Civilization in India and Pakistan*. Cambridge: Cambridge University Press.
- Allchin, B.R.and Chakrabarti, D.K. (1979) *A Source Book on Indian Archaeology*. New Delhi: M.M Publishers Pvt. Limited.
- Banerjee, N. R.(1965) The Iron Age in India. New Delhi: Munshiram Manoharlal.
- Coningham, R. and Ruth Y. (2015) *The Archaeology of South Asia: From the Indus to Asoka c. 6500 BCE- 200CE*. Cambridge: Cambridge University Press.
- Datta, A. (1995) *The Black and Red Ware Culture in West Bengal*. Delhi: Agam Kala Prakashan.
- Deo, S.B. (1985) The Megaliths: Their culture, ecology, economy and technology, in S.B. Deo and K. Paddayya (eds.) *Recent Advances in Indian Archaeology*. Pune: Deccan College.
- Dhavalikar, M.K. (1990) First Farmers of the Deccan. Pune: Ravish Publishers.
- Dhavalikar, M.K. (1995) *Cultural Imperialism: Indus Civilization in Western India*. New Delhi: Books and Books.
- Elstov, P. A. (2008) From Harappa to Hastinapura: A Study of Earliest South Asian City and Civilization. Leiden: Brill Academic Pub.
- Fairservis, W.A. (1975) *The Roots of Ancient India*. Chicago: The University of Chicago press.
- Joshi, J.P. (1990) Excavation at Surkotada in 19721-72 and Exploration in Kutch. In: *Memoirs of the Archaeological Survey of India*, 87. New Delhi: Archaeological Survey of India.
- Kenoyer, J. M. (2006) The Origin, Context and Function of the Indus Script: Recent Insights from Harappa. *Harappa.com*. Available at: https://goo.gl/WsYY1K Accessed date: 23 March, 2018.
- Miller, H.M.L. (1997) Pottery firing Structures (Kilns) of the Indus Civilization during the third millennium BC. *The Prehistory and History of Ceramic Kilns*, 41-72.
- Misra, V.N. (ed.) (1992) *The Eastern Anthropologist*, vol. 45, Nos. 1-12 (Indus Civilization Special Number).
- Possehl, G.L. (ed). (1979) *Ancient Cities of the Indus*. New Delhi: Vikas Publishing House.
- Possehl, G.L. (1980) *Indus Civilization in Saurashtra*. Delhi: B.R. Publishing Corporation.
- Possehl, G.L. (1982) *Harappan Civilization*. New Delhi; Oxford and I.B.H Publishing Co.
- Possehl, G.L. (ed.) (1993) *Harappan Civilization A Recent Perspective*. New Delhi: Oxford and IBH Publishing Co.
- Possehl, G. (1999) The Indus Age. New Delhi: Oxford University Press.
- Possehl G.L. (2002) *Indus Civilization: a Contemporary Perspective*, New Delhi, Vistaar Publication.
- Rao, S.R. (1973) Lothal and Indus Civilization. Asia Publication House, Bombay.
- Rao, S.R. (1979) Lothal- A Harappan Port Town, 1955-62. In: *Memoir of the Archaeological Survey of India* 78(II).
- Ratnagar, S. (1982) Encounters: *The Westerly Trade of the Harappa Civilization*. New York: Oxford University Press.
- Ratnagar, S. (2003) *The End of the great Harappan Tradition*. New Delhi: Manohar Publishers and Distributors.
- Ratnagar, S. (2006) *Understanding Harappa*. New Delhi: Tulika.
- Ratnagar, S. (2016) *Harappan Archaeology; Early State Perspectives*. New Delhi: Primus Books.

- Roy, T.N. (1983) The Ganges Civilization: A Critical Study of the PGW and NBPW Periods of Ganga Plains of India. New Delhi: Ramanand Vidya Bhavan.
- Sankalia, H.D. (1974) *Prehistory and Protohistory of India and Pakistan*. Pune: Deccan College.
- Shaffer, J. G. (1978) *Prehistoric Baluchistan with Excavation Report on Said Qala Tepe.* Delhi: B. R. Publishing Corp.
- Shaffer, J. G. (1992) 'Indus Valley, Baluichistan, and the Helmand Drainage (Afghanistan),' in R.W. Ehrich (ed.) In: *Chronologies in Old World Archaeology*, vol. 2, pp. 425-46. Chicago: University Of Chicago Press.
- Shinde, . (1994) The Deccan Chalcolithic: A Recent Perspective, *Man and Environment*, XIX (1-2): 169-178.
- Shinde, V. (1998) Early Farming Community in the Central Tapi Basin (Study of Settlement and Subsistence Patterns), New Delhi: Munshiram Manoharlal Publishers.
- Subbarao, B.(1958) Personality of India. New Delhi: Baroda.
- Tripathi, V. (1976) *The Painted Grey Ware: An Iron Age Culture of Northern India*. Delhi: Concept.
- Tripathy, V. (2001) *Age of Iron in South Asia: Legacy and Tradition*. New Delhi: Aryan Books International.
- Wheeler, R.E.M. (1968) The Indus Civilization. London: London University Press.

Course Title : Medieval World Civilization (Excluding South Asia)

Course Code : ARCH 305

Class Hours : 4 [3 hours per week (course) + 1 hour (tutorial)]
Unit and Marks : Full Unit Course equivalent to 100 marks.

Marks Distribution : 100 [Attendance10 + Tutorials (3) 20 + Exam 70] **Assessment** : Attendance 10%, Tutorials 20%, Exam 70%

Objectives

In the way to the study of Archaeology, student must have to know world civilization. During their 1st year courses they have also learned ancient world civilization. Now it will be the continuity of their knowledge. After the fall of classical or the ancient urban civilization the trend of human development with the conception of urbanization stopped. This was the situation, then a new civilization was emerged mainly throughout the European countries. It was the medieval civilization. Basic structure of this civilization was feudal socio-cultural character. The people of the world observed so many important events during the time of medieval civilization, such as- spread of Christianity, papacy, monasticism, feudalism, crusades, rise of trade and towns, the development of medieval education and art etc.

Expected outcomes

After completion of the course the student should be able to:

- o Understanding the medieval world civilization.
- Understanding the deferent phases of the historical development and the diversity of cultural trait.
- o Know the educational and artistic features of the medieval world.
- o Create conception about socio-cultural and economic life of the medieval world.

Contents

Unit 1: Introductory notes on Medieval Civilization

- a. Definition and explanation of the Medieval Period.
- b. Brief introduction of the topics of present coerce.

Unit 2: Barbarian Invasion and Fall of Roman empire

- a. Background of the invasion
- b. Weakness of the Roman empire
- c. Final attack of the Barbarian tribes

Unit 3: Rise and spread of Christianity

- a. Rise of the Christianity and churches entered into a long period of missionary activity and expansion among the various tribes.
- b. Catholicism spread among the Germanic people and others.
- c. Since the 4th century Christianity has been an important part of the shaping of Western civilization.

Unit 4: Papacy

- a. Definition of the Papacy.
- b. Activities of the papacy.
- c. Drown-backs and limitations of the papacy.

Unit 5: Monasticism

- a. Definition of the Monasticism in Christianity.
- b. Conflict between the Papacy and Monasticism.

c. Role of the Monks like St. Basil and St. Benedict.

Unit 6: Byzantine civilization and Emperor Justinian

- a. Introductory notes on Byzantine or Eastern Roman Empire.
- b. Rise and development of Byzantine Empire.
- c. Contributions of Byzantine Empire to civilization.

Unit 7: Franks and Emperor Charlemagne

- a. Introductory note on Charlemagne or Charles the Great.
- b. Achievements of Charlemagne as an Emperor.
- c. Achievements of Charlemagne as a reformer.

Unit 8: Carolingian Renaissance

- a. Nature of the Carolingian Renaissance.
- b. Feature of the cultural rebirth in the reign of Charlemagne.
- c. Contributions the Carolingian Renaissance to civilization.

Unit 9: Political Situation after Charlemagne

- a. After Charlemagne new king was his surviving son, Louis the Pious. He failed to hold up his empire. His reign was mostly marked by constant civil war and rebellion, mostly done by members of his family.
- b. His sons often contested with him for control of Francia. Even though Louis in the end succeeded in subjugating his sons, his reign marked the fragmentation of the Frankish Empire.

Unit 10: Feudalism: Origin and Nature

- a. Definition of the European Feudalism.
- b. Nature of Feudalism, flourished between the 9th and 15th centuries.
- c. Explanation of feudalism describes a set of reciprocal legal and military obligations among the warrior nobility.

Unit 11: Socio-economic life under Feudalism

- a. The social structure of the Middle Ages was organized round the system of Feudalism.
- b. Feudalism in practice meant that the country was not governed by the king but by individual lords, or barons, who administered their own estates, dispensed their own justice, minted their own money, levied taxes and tolls, and demanded military service from vassals.
- c. Description of the Manorial system.

Unit 12: Reformation of Monastery

- a. Objectives of the reformations.
- b. Cluniac Reforms (also called the Benedictine Reform).
- c. The movement began within the Benedictine order at Cluny Abbey.
- d. Reformations spread throughout France, England and through much of Italy Spain.

Unit 13: Struggle for the Supremacy between the Church and State

- a. Nature of the straggle for the Supremacy between the Church and State.
- b. Straggle between the Holy Roman emperor and patriarch of Constantinople.
- **c.** A major struggle between Germany and Rome was started by the Lateran Council of 1059.

Unit 14: Crusades

a. Concept and the causes of the Crusades.

- b. Description of the Crusades
- c. The bloody, violent and often ruthless conflicts propelled the status of European Christians, making them major players in the fight for land in the Middle East.
- d. Results of the Crusades.

Unit 15: Development of Agriculture and Trade

- a. Development of the agriculture and trade in the 10th and 11th centuries.
- b. The old administrative centers of the Western Roman Empire continued to form the nucleus of urban existence; they mostly existed as small towns attached to cathedrals.
- c. As trade began to expand between the West and the Byzantium and the Islamic worlds and new wealth poured in, true cities began to arise.
- d. Attached to these cities were the *burghs* or commercial districts, whose class of people eventually was called *bourgeoisie*.
- e. Important trade cities included Venice, Genoa, Pisa, Milan, Florence, Flanders, and Ypres.
- f. Important goods included wool, salt, timber, beer and wine. At the same time, trade with the East was mostly in imports since these regions had their own native agricultural classes.
- g. Impact of the new trade routes was to increase trade across Europe.

Unit 16: Rise of Towns

- a. Causes of the rise of towns in Europe.
- b. Important towns of medieval Europe.
- c. Characteristics of the towns.

Unit 17: Education of medieval Europe

- a. Elementary education and educational centers created or enhanced by Charlemagne.
- b. Rise and spread of the universities.
- c. Curriculum and degrees.
- d. Development of Language and literature.
- e. Scholasticism of medieval Europe.

Unit 18: Development of Art and Architecture

- a. Architecture of medieval civilization.
- b. Sculptures and paintings of medieval civilization.

Recommended Readings

Adams, G. B. (1922) *Civilization, During the Middle Age.* New York: Charles Scribner's Sons.

Davis, R. H. C. (2006) *A History of Medieval Europe*. Harlow: Pearson Longman Hutton, W. (1947) *History of Civilization Ancient and Medieval*. Lexington:D.C heath and Company

Keen, M. (1969) The Pelican History of Medieval Europe. London: Penguin Books

Lopez, R. S. (1966) *The Birth of Europe*. New York: M. Evans and Company, Inc.

Wallbank, T. W. Taylor, M. A. (2000) *Civilization Past and Present*. vol. 1 (5th Edition). Harlow: Longman Publishing Group.

Watson, P. J., Leblank, S. A. and Redman, C. L. (1971) *Explanation in Archaeology: An Explicitly Scientific Approach*. New York: Columbia University Press.

Course Title : Numismatics of Ancient South Asia with emphasis on

Bengal

Course Code : ARCH 306

Class Hours : 4 [3 hours per week (course) + 1 hour (tutorial)]
Unit and Marks : Full Unit Course equivalent to 100 marks.

Marks Distribution: 100 [Attendance10 + Tutorials (3) 20 + Exam 70] **Assessment**: Attendance 10%, Tutorials 20%, Exam 70%

Objectives

This objective of the course is to impart an overview of the coins and currency system of ancient Bangladesh. The course intends to introduce the method of identification of coins, method of recording and documentation of coins, method of study coin hoards, study of manufacturing techniques and other metallurgical studies of coins and other related issues. Several practical classes have been designed in this module; therefore, the students will be familiar to handle coins in their profession life.

Expected outcomes

On successful completion of the module, students will be able to:

- o Understand of basic technical terms on numismatic.
- o Understand the manufacturing techniques of ancient coins.
- o Acquire knowledge to document of ancient Bengal coins.
- o Acquire knowledge on characteristic of ancient Bengal coins of various periods.
- o Acquire knowledge on currency system of ancient Bengal.

Contents

Unit 1: Introduction

i. Basic terms: Alloy, Alloying, Annealing, Banker's mark, Blank, Coin, Die, Find spot, Flan, Inscription, Legend, Mint, Mint Mark, Numismatics, Obverse, Official marks, Relief, Re-strike, Reverse, Stray find.

Unit 2: Origin and development of coins

- i. Origin and development of coins in Indian sub-continent
- ii Coins in ancient inscriptions and literature

Unit 3: Research on numismatics

- i. History of numismatic research in India and Bengal
- ii. Importance of numismatics study

Unit 4: Manufacturing of coins

- i. Source of raw material
- ii. Preparation of metal and coin-flan
- iii. Minting techniques of punch-marked,

cast copper, droplet, die-struck coins

iv) Fakes and forgeries

Unit 5: Methodological framework of documentation and analysis of ancient coins

i). Symbol/legend decipherment

These tell

- ii. Metrology
- iii. Typology analysis
- iv. Script and palaeography
- v. Die-analysis
- vi. Methods of documentation

Unit 6: Antiquity of ancient coinage in Bengal

- i. Punch-marked coins Janapada Series
- ii. Punch-marked coins Imperial Series
- iii. Cast copper coins
- iv. Kushana coins
- v. Puri-kushana coins
- vi) Gupta coins
- vii. Post-Gupta coins
- viii. Mainamati gold coins
- ix. Harikela coins
- x. Pala and Sena coins (?)

Unit 7: Scientific analysis of coins

- i. Scope of scientific analysis on coins
- ii. Destructive and non-destructive methods of modern analysis
- iii. Application of metal analysis in archaeology
- iv. Determination of raw material source and manufacturing techniques

Unit 8: Maintenance of coins

i. Maintenance of coins made of different metals

Recommended Readings

- Acharya, G.V. and Gyani R.G. (1938). A Resume of Numismatic Research in India. In: *Numismatic Supplement* XLVII: 7-22.
- Ahmed, B. and Rahman, S. M. (2015) 'Janapada Punch-marked Coins from Wari-Bateshwar, Narsingdi, Bangladesh'. In: *Cultural Contour of History and Archaeology*, vol. IV, pp. 1-9, Delhi: B. R. Publishing Corporation.
- Ahmed, B. and Manik, M. I. (2014) 'Punch-marked Coins Collection of Taka Museum: A Preliminary Study', in *KalerShakshi* (A souvenir published on the occasion of first anniversary of Taka Museum), pp. 34-58. Dhaka: Bangladesh Bank.
- Ahmed, B. and Hasan, M. A. A. (2014) Kushana Coins from Bangladesh: A Preliminary Study, *Journal of Bengal Art* (Journal of the International Centre for Study of Bengal Art) 19: 113-122.
- Ahmed, B. (2013) *Commemorative Coins and Notes of Bangladesh Bank*. Dhaka: Bangladesh Bank.
- Ahmed, B. and Tasmin, R. (2013) 'Some 'questioning' copper coins of Varendra Research Museum: a preliminary study', in Khondokar Sirajul Haque and Muhammad Lutful Haque edited *Akshay Kumar*

MaitraSardhashatoJanmobarshiki o

 $Varendra Gobeshana Jadughar Pratisthabar shiki Shmarak Grantho, {\tt pp.~59-72}.$

Rajshahi: Muhammad Lutful Haque.

SV / Street feet.

- Ahmed, B. and Shahanawaz, A. K. M. (2013) Bengal Coins (A Guide to the Coins of Bengal especially found in the Territory of Modern Bangladesh, Dhaka: Nymphiea.
- Ahmed, B. and Islam, M. N. (2011) Silver Punch-Marked Coins from Shahebganj, Gaibandha District, in *Nazimuddin Ahmed Commemoration Volume* (Syed MahmudulHasan ed.) pp. 423-425. Dhaka: Islamic Arts Organization Bangladesh.
- Ahmed, B. and Islam, M. N. (2011) *The Mahasthan Hoard II of Silver Punch-Marked Coins*, Dhaka: Asiatic Society of Bangladesh.
- Ahmed, B. (2011) 'Silver Punch-marked Coin from Shahebganj, Gaibandha District: Numismatic Studies', (jointly with Noorul Islam) in *Nazimuddin Ahmed Commemoration Volume* (Syed Mahmudul Hasan Ed.), pp. 413-425. Dhaka: Islamic Art Organization Bangladesh.
- Ahmed, B. (2010). Symbols on the Silver Punch-marked Coins Found in Bangladesh. *Journal of Bengal Art* (Journal of the International Centre for Study of Bengal Art) 15: 211-242.
- Allan, J. (1936) *Catalogue of the Coins of Ancient India*. Delhi: Oriental Books Reprint Corporation.
- Bhandarkar, D.R. (1921) *Lectures on Ancient Indian Numismatics*. Patna: Eastern Book House.
- Boussac, M. F. and Alam, S. (2001). Coins, in *France-Bangladesh Joint Venture Excavations at Mahasthangarh: First Interim Report 19993-1999* (S. Alam and J.-F. Salleseds.), pp. 219-264. Dhaka: Department of Archaeology.
- Boussac, M. F. and Alam, S. (2004) A Hoard of Silver Punchmarks from Baigachha, In: *Journal of the Varendra Research Museum* IX: 99-124.
- Chattopadhyay, P. K. (2003). Cast Copper Coins.In: *Banglapedia*, 2: 374-375. Dhaka: Asiatic Society of Bangladesh.
- Cunningham, A. (1891) Coins of Ancient India. New Delhi: Indological Book House.
- Guillaume, O. (1990). Analysis of Reasonings in Archaeology— The Case of Graeco-Bactrian and Indo-Greek Numismatics. Delhi: Oxford University Press.
- Gupta, P.L. (1969). Coins. New Delhi: National Book Trust.
- Gupta, P.L. and Hardaker, T.R. (1985). *Ancient Indian SilverPunch-marked Coins of the Magadha-MauryaKarshapana Series*. Nashik: Indian Institute of Research in Numismatic Studies.
- Hossain, M. (1996) The Un-inscribed Copper Cast Coins found at Mahasthagarh, In: *Journal of the Asiatic Society of Bangladesh* 41(1): 161-175.
- Islam, K. (1972). Coinage in Ancient Bengal. *Journal of the Varendra Research Museum* 1(1): 39-59.
- Karim, R. (1993) Some Silver Punch-marked Coins of Wari-Bator. In: *Proceedings of Fourth South Asian Archaeological Congress, Dhaka, Bangladesh 1991* (NazmulAhsanChowdhuryed.), pp. 52-56. Dhaka: Directorate of Archaeology, Government of Bangladesh.
- Kosambi, D.D. (1981). Indian Numismatics. Delhi: Orient Longman Ltd.
- Lahiri, A. N. (1990) What the Numismatist Expects from Archaeologists. In: Historical Archaeology of India: A Dialogue Between Archaeologists and Historians (Amita Ray and Samir Mukherjee eds.). pp. 209-215. New Delhi: Books and Books Publishers and Distributors.

- Lahiri, B. (1985) A Survey of the Pre-Muhammad Coins of Bengal. *Journal of the Varendra Research Museum* 7: 69-86.
- Mukherjee, B. N. (1991) Coins in Pre-Gupta Bengal.In *Studies in Archaeology, Papers Presented in the Memory of P.C. Dasgupta* (Ashok Datta ed.), pp. 281-308. Delhi: Books and Books.
- Mukherjee, B. N. (1992) *Coins and Currency Systems in Gupta Bengal (c. A.D. 320-550)*. New Delhi: Harman Publishing House.
- Mukherjee, B. N. (2000) *Coins and Currency Systems of Early Bengal (up to c. A.D. 300)*. Calcutta: Progressive Publishers.
- Mukherjee, B.N. and Lee P.K.D. (1988). *Technology of Indian Coinage*. Calcutta: Indian Museum.
- Rashid, M. H. (1975) The Mainamati Gold Coins, Bangladesh Lalit Kala 1: 41-58.
- Sharmadhikari, R.K. (1984) Some Observations on the Coins of Early Bengal. *Indian Museum Bulletin* XIX: 38-47.

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Course Title : Research Methodology

Course Code : ARCH 307

Class Hours : 4 [3 hours per week (course) + 1 hour (tutorial)]
Unit and Marks : Full Unit Course equivalent to 100 marks.

Marks Distribution: 100 [Attendance10 + Tutorials (3) 20 + Exam 70] **Assessment**: Attendance 10%, Tutorials 20%, Exam 70%

Aims of the Course

This course is a general introduction to social and archaeological research methods and will cover four broad topics: the foundations of social science, research design, data collection, and data analysis. In discussing each topic, it will also consider the ethical implications of social research. Social research is a craft, and like any other craft, it takes practice to do it well. Therefore, approach will be hands-on right from the start. Students will have opportunities to learn by doing in all aspects of the course—in the class, the computer lab, and out-of-class assignments.

Learning Outcomes

- On successful completion of this course, students will be able to
- Identify a research problem and related questions, engage in a literature review, and become familiar with both
- qualitative and quantitative methodologies.
- Develop a hypothesis, formulate appropriate research design and framing the problem with the correct research methodology.
- Collect data that accurately addresses the research problem
- analyze both qualitative and quantitative data using computer-based skills.
- write a good report on a given topic and/or of own research.
- evaluate own research and that of other's.

Contents

Unit 1: Basic Foundation of Research (14 hours)

Meaning of research, method and methodology, objectives and significance of Research.

Types of research; differences among various types of research

Scientific method :Meaning; Nature and Pattern, criteria, scope and limitations of scientific method, Scientific Method and Archaeology.

Ethics in social and archaeological research, Knowledge construction, Some misconception about knowledge.

Variables and Concept

Hypothesis: meaning; types; function; condition for valid hypothesis; validation and no validation of hypothesis, verification and proof of hypothesis, prediction; assumption; proposition.

Scientific reasoning: Deduction; Induction; Distinction between Deduction and Induction; Merits and Demerits of Deduction and Induction; Deductive-Inductive Method; Hypothetico-Deductive Method, generalization.

Theory: Meaning; understanding Theory; objectives; characteristics of theory; level of theory; theory& fact; relationship between theory and research; role of research in developing theory; theory construction in quantitative and qualitative research; relationship among hypothesis, theory ,law and fact.

Paradigms: Meaning; brief idea about three major Paradigms in social and archaeological research: positivist, interpretive and critical social science, culture History; processual and post processual Archaeology

Unit2: Research Process and Design (5 hours)

Selection of research problem, Literature review, Stages of research process, Research design. Formulation of a research design on a given topic, Archaeological Research: Archaeologist skills (theoretical, methodological, technical, administrative & managerial, writing & analytical skills); process of archaeological research (research design, formulation, data collection, data processing, analysis & interpretation, publication).

Formulate your own design on a given topic.

Unit 3: Sampling, Data Collection and Measurement (10 hours)

a) Sampling, Identification of Population and sample, Sampling procedure :Probability and Non Probability Sampling Techniques; Sample size; sampling error; Advantages and Limitations of sampling; Sampling in archaeology.

b)Methods of data collection: Experiment; Survey: Interviewing and Questionnaire;Observation; Ethnographic research; Focus group Discussion; Content Analysis; Case studies.

c)Quantification and Measurement: Definition; Level of measurement, how to quantify and measure data. what is measured, problem in measurement in research-validity and reliability, Application in Archaeology

Unit 4:Data Processing, Presentation and Analysis(10 hours)

Data Processing and Presentation : Coding, Editing, Classification, Tabulation, Graphical Representation.

Quantitative methods for Analysis: frequency distribution, Measures of Central Tendency, Standard Deviation Correlation, Regression, Chi- square tes, t-test.

Unit 5: Report Writing (3 hours)

Different steps in Report Writing; Layout of the research Report; Types of Report; Mechanics of Writing a research Report; Characteristics of a good report, instruction & precautions for writing research report, ethical issues: Plagiarism and self-plagiarism.

Referencing and Bibliography, Evaluate other's research report.

Recommended Readings

Babbie, Earl, (1979) The Practice of Social Research, Wadsworth Publishing Company Inc, California.

Bailey D. Kenneth, (1982) Methods of Social Research, The Free Press, NY.

David Hall and Irene Hall, (1996) Practical Social research: Project Work in the Community, Macmillan.

Ellen, R. F. (1984) Ethnographic Research: A Guide to General Conduct. Academic Press, New York.

Fagan, M. Brian, (2001) In The Beginning: An Introduction to Archaeology, Prentice Hall, New Jersey.

Ghosh,B.N,(1993)Scientific Method And Social Research, STERLING Publishers, New Delhi.

H. R. Bernard (1988) Research Methods in Cultural Anthropology.

Sarantakos, S, (1998) Social Research, Macmillan Press ltd, London.

Hodder, I. (1992) Theory and Practice in Archaeology. Routledge, London.

Kothari, C.R(2004)Research Methodology,New Age International (P) Limited,New Delhi.

Neuman W. Lawrence, (2003) Social Research Methods: Qualitative and Quantitative Approaches, Pearson Education, Inc, Yew York.

Jogelkar, P.P., (2004) Research Methodology for Archaeoloy Students, Gayatri Sahitya, Pune.

J. Creswell, (1994) Research Design: Qualitative and Quantitative Approaches,

Thousand Oaks, Sage.

Sayer, A. (1992) Method in Social Research: A Realist Approach. Routledge, 2nd Edition, London.

Shenan, S. (1988) Quantifying Archaeology. University Press, Edinburgh

and letter.

Course Title : Anthropological Concepts in Archaeology

Course Code : ARCH 308

Class Hours : 4 [3 hours per week (course) + 1 hour (tutorial)]
Unit and Marks : Full Unit Course equivalent to 100 marks.

Marks Distribution: 100 [Attendance10 + Tutorials (3) 20 + Exam 70] **Assessment**: Attendance 10%, Tutorials 20%, Exam 70%

Objectives

Anthropological concepts are fundamental and inseparable for the understanding of the past and present of human societies and cultures. Archaeology, as a discipline, is historically and conceptually connected to the concepts and theories, interpretive frameworks and field practices of anthropology. This course aims

- o To introduce the students to the concepts of anthropology those are essential for understanding archaeology and practice of archaeology.
- To make the students capable of understanding and practicing the archaeological practice and ethnographic practice which are inseparable from archaeological fieldwork and analyses.
- To develop capabilities of students to perform social research in other disciplines and professions.
- To augment the students' capacities to develop their carriers in various professions of social research in different non-government and government organizations.

Expected outcomes

Students are expected to learn basic ideas, concepts and practices of socio-cultural anthropology which are essentially linked with archaeology and its contemporary manifestations such as Public Archaeology, Critical Heritage Studies and various social researches which are important for devising heritage management programs. Archaeology is not a discipline which discusses about the past. Students would be trained in practical ethnographic and social researches which will allow them to involve in understanding the complexities of social researches. The most important thing in archaeology is to understand and interpret the relationship between the past and the present. Importantly, archaeology and anthropology have a common and shared genealogy. Many practices in both disciplines and research methodologies are common in both disciplines. Students are expected to learn the basic practices of 'field' and off-the field practices not only in archaeology, but also in other social researches that are considered to be important and essential in other disciplines like cultural studies, development studies and environmental management. The expected outcome of this course is a group of trained students who are critically informed about various researches in contemporary social sciences and social researches.

Contents

Unit 1: Anthropology as an object of anthropological inquiry and anthropology and archaeology within an interdisciplinary/trans-disciplinary framework

- i. Enlightenment, modernity and anthropology as a discipline ii 'Furone' and 'the non-European other'; colonialism and its
- ii. 'Europe' and 'the non-European other': colonialism and its forms of knowledge, ethnography and objects

- iii. Conditions and structures in which anthropology attained its dominant status as knowledge genre: Religious reformation, European Expansion, Birth of nation and nation-state, Capitalism and Imperialism
- iv. Ethnography as an objectifying practice.
- v. From the study of other to the study of European Hegemony Ethnographic triangle and reflexivity

Unit 2: Core ideas and methodologies

- i. The idea of interpretation: Culture/society, Essentialism vs. Anti-essentialism: apolitical opposition, Problematization, Historicization, Contextualisation, Eventalization, Simplification and others strategy and method of a critical anthropology in a post-colonial nation-state
- ii. Movie screening

Unit 3: Core concepts

- i. Socio-cultural Evolutionism: Biological Evolutionism and its problems, Neo-Evolutionism
- ii. Diffusionism
- iii. Functionalism, Structural functionalism
- iv. Movie/Documentaries/You Tube Video
- v. Structuralism and semiotics/semiology, linguistic and symbolic anthropology
- vi. Marxist Anthropology and Post-Marxist Thoughts
- vii. Cultural Relativism/Historical Particularism
- viii. Culture and Personality school
- ix. Colonialism, Post-colonialism, Decolonization, Orientalism
- x. Movies on colonial transformation in South Asia
- xi. Post-structuralist thoughts and epistemic shifts
- xii. Modermism and Post-modernism
- xiii. Feminism and subaltern studies

Unit 4: Case studies

- i. Archaeology, Anthropology and Social Research: Sociality of archaeology and archaeologists
- ii. Archaeological Field work and its entanglement with anthropological fieldwork
- iii. Review and understanding on the basis of selective texts (both fiction and non-fiction) and Movies

Recommended Readings

- Asad, T. (ed.) (1973) Anthropology and the Colonial Encounter. London: Ithaca Press.
- Ashcroft, B. Griffiths, G. and Tiffin H. (eds.) (1995) *The post-colonial studies reader*. Routledge, London.
- Barnard, A. (2000) *History and Theory in Anthropology*. Cambridge: Cambridge University Press.
- Barnard, A. and Spencer, J. (1998) *Encyclopedia of Social and Cultural Anthropology*. London: Routledge.
- Benedict, R. (1934) Patterns of Culture. New York: Houghton Miffin.

- Boas, F. (1948) Race, Language and Culture. New York: Macmillan.
- Chatterjee, P. (1974) Claims on the Past: The Genealogy of Modern Historiography in Bengal. *Subaltern Studies* VIII: 1-49
- Cohn, B. (1987) Anthropology and History in the 1980s: Towards a Rapprochement. In B. Cohn, *An Anthropologist Among the Historians and Other Essays*. Delhi: Oxford University Press.
- Douglas, M. (1966) Purity and Danger. California: Praeger.
- Engles, F. (1891) *The Origin of the Family, Private Property and the State*. New York: International Publishers.
- Foucault, M. (1977) Archaeology of Knowledge. London: Penguin.
- Foucault, M. (1979) *Discipline and Punish: The Birth of the Prison*. London: Penguin, Harmondsworth.
- Geertz, C. (1973) The Interpretation of Cultures. New York: Basic Books.
- Gluckman, M. (1968) *The Rise of Anthropological Theory*. New York: Harper and Row.
- Gramsci, A. (1971) *Selections from the Prison Notebooks*. New York: International Publishers.
- Guha, R. (1988) An Indian Historiography for India: A Nineteenth Century Agenda and its Implications. Calcutta: K. P. Bagchiand Co.
- Guha, R. (1994) On Some Aspects of the Historiography of Colonial India. In R. Guha (ed.) *Subaltern Studies* 1: 1-8
- Haris, M. (1968) The Rise of Anthropological Theory. New York: Harper and Row.
- Honiggmann, J. J. (1976) *The Development of Anthropological Ideas*. California: The Dorsey Press.
- Kucklick, H. (1993) *The Savage Within: The Social History of British Anthropology,* 1885-1945. Cambridge: Cambridge University Press.
- Kuper, A. (1973) *Anthropologists and Anthropology: The British Period 1992-1972*. New York: Pica Press.
- Layton, R. (1997) *An Introduction to Theory in Anthropology*. Cambridge: Cambridge University Press.
- Leaf, M. J. (1974) Frontiers of Anthropology. New York: D. Van Nostrand Company.
- Levi-Strauss, C. (1962) Structural Anthropology. New York: Basic Books.
- Malinowski, B. (1944) *A Scientific Theory of Culture*. University of North Carolina, Chapel Hill.
- Manners, R. A. and D. Kaplan (ed.) (1968) *Theory in Anthropology: A Source Book*. London: Aldine Publishing House.
- Murphy, R. F. (ed.) (1966) Selected Papers from the American Anthropologist: 1946-1970. Washington: American Anthropological Association.
- Nash, J. (1979) We Eat the Mines and the Mines Eat Us. Dependency and Exploitation in Bolivian Tin Mines. New York: Columbia University Press.

- Penniman, T. K. (1974) *A Hundred Years of Anthropology*. New York: William Morrow and Company, Inc.
- Radcliffe-Brown, A. R. (1952) *Structure and Function in Primitive Society*. London: Oxford University Press.
- Rappaport, R. (1984) Pigs for the Ancestors. London: Yale University Press.
- Sarkar, S. (1991) Writing Social History. Delhi: Oxford University press.
- Sahlins, M. (1978) Culture and Practical reason. Chicago: Chicago University Press.
- Steward, J. (1955) *Theory of Culture Change*. Champaign: Illinois University Press.
- Steward, J. (1977) Evolution and Ecology. Champaign: Illinois University Press.
- Turner, V. (1967) *The Forest of Symbols: Aspects of Ndembu Rituals*. Ithaca: Cornell University Press.
- Waugh, P. (ed.) (1992) Postmodernism: A Reader. London: Edward Arnold.
- White, L. (1959) The Evolution of Cultures. New York: McGraw Hill.
- Wolf, E. (1982) *Europe and the People without History*. Berkley: University of California Press.
- Stanford Encyclopedia of Philosophy https://plato.stanford.edu/

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Course Title : Ancient Plants and People

Course Code : ARCH 309

Class Hours : 3 [2 hours per week (course) + 1 hour (tutorial)]
Unit and Marks : Half Unit Course equivalent to 100 marks.

Marks Distribution: 50 [Attendance 05 + Tutorials (3) 10 + Exam 70] **Assessment**: Attendance 10%, Tutorials 20%, Exam 70%

Objectives

This course is designed to provide the theoretical grounding for practical projectson past subsistence systems, subsistence changes and related human modifications of environments. The module is expected to facilitate an improved understanding of the many degrees and forms of human-environment interactions, specifically human interactions with and influences on other organisms within their environments.

Learning Outcome

On successful completion of this course, a student should:

- Understand current debates about hunter-gatherer subsistence, agricultural origins, intensification, and social and cultural aspects of food procurement and production systems, as well as issues in the humandietary selection, food preparation and consumption; and,
- Be familiar with a wide range of case studies and data sets, their problems and possible interpretations.
- Be able to contribute constructively to knowledge-based debates on a range of current issues in past human resource use and major transitions in subsistence mode; and able to
- recognise and situate archaeological plant assemblages within the the spectrum of the human subsistence system.

Unit 1 The Evolution of The Human Diet

- i. What features of the human diet can be traced to our hominoid ancestors?
- ii. What features of our diet do we share with the great apes? What features of the diet are unique to Homo?
- iii. What features of the diet are unique to Homo sapiens? What is the role of culture, particularly tools but also ecological knowledge and its dissemination across and between generations, in the evolution of the human diet?

2. Hunter-Gatherer-Fishers: Foragers or Collectors?

- i. How does mobility influence site location and settlement patterns?
- ii. How does seasonality of resources influence site location (e.g., "

Degree of specialisation in resources

- iii. Degree of specialisation of types of sites
- iv. Degrees of interaction/interdependence between communities
- v. On Gender and hunter-gatherer subsistence practices

3. Hunting Strategies, Broad Spectrum Adaptations

- i. Variation in hunting strategies
- ii. Distinctions between big game and more minor, harder to catch small game.
- iii. Faunal evidence relating to seasonality, the use of dental microwear, and isotopes.
- iv. Hunting and "broad spectrum" in the tropics.

4. Plant Domestication, Agricultural Origins, And Intermediate Economies with A Focus on Grain Domestication in The Near East, South Asia, And Southeast Asia.

- i. Principles involved in the study of agricultural origins.
- ii. "Plant Management", "Cultivation", "Domestication", and "Agriculture"
- iii. Plant Domestication in South Asia and China.

5. Bangladesh, A New Centre of The Origin of Agriculture and Plant Domestication.

- i. Cereals, pulses, and fruits were domesticated in early Bangladesh.
- ii. Possible Neolithic subsistence strategy in the Lower Ganges-Brahmaputra-Meghna (GBM) delta. iet and subsistence of early Bangladesh; archaeological andhistorical evidence

6. Alternative pathways to agriculture: vegeculture, arboriculture, lowland, and highland tropics

- i. Beyond the "standard" model of cereal domestication and agricultural origins derived from the Near East.
- ii. Tuber and tree domestication, such as in the highlands of New Guinea and the Neotropical lowland forest regions.
- iii. Role and longevity of intermediate economies.

7. Secondary subsistence product

- i. Secondary exploitation of animals in the Old World.
- ii. Milk and dairy
- iii. Residues in pottery
- iv. Role of cattle, sheep and goats' domestication.

8. Genetics, ancient DNA, and its contribution to studying, domestication, agricultural transformations, and migrations.

- i. 'Paradox' of Rice domestication; Rice origins: single origin or more? What is the genetic picture? What about maternal versus nuclear markers, whole chromosomes versus whole genomes? What is the role of hybridisation?
- ii. Functional genetics indicating a sequence of genetic changes with domestication: compare rice and maize.
- iii. Genetics and archaeobotany for early human migration in South Asia, particularly in early Bangladesh.

9. Agricultural Intensification and Land Use

Current archaeological debates on agricultural strategies, intensification, and links to landscape modification highlight environmental archaeology's contributions to reconstructing past landuse.

10. omplex societies: Producers, Consumers, The Scale of Surplus and social dimensions of food and agriculture.

- i. New directions on food and food production by hierarchical and complex societies.
- ii. Examining the role of food processing, storage, and conspicuous consumption.
- iii. Meaning of 'Culturally mediated food procurement, production, and consumption'.
- iv. The archaeological record of the significance of social dimensionsof subsistence and consumption.
- v. The division of labour and differential access to resources, be it by gender, age, or social status/rank, that have shaped human societies in the past will likewise have shaped the form and content of archaeological sites and the distribution of sites over the landscape.

Recommended Readings

Allaby, Robin G., Chris J. Sevens, Logan Kistler and Dorian Q Fuller (2022)The emerging evidence for plant domestication as a landscape level process. Trends in Evolution and Ecology 37(3): 268-279 ttps://doi.org/10.1016/j.tree.2021.11.002and an alternative to optimal foraging explanations. Journal of Anthropological Archaeology, 31(3), pp.241- 264.and Archaeobotany, 28(3), 263-282.and Ethnoarchaeological Perspectives. Left Coast Press, Walnut Creek Denham, T. and White, P. (Eds.) 2007 The Emergence of Agriculture. A GlobalView.

and unstable adaptations. Philosophical Transactions of the Royal Society B366, 849-862.

Archaeological Archaeology and Anthropology of Hunter-Gatherers. Oxford University Press.Denham, T., Iriarte, J. & Vrydaghs, L. (Eds.) 2008. Rethinking Agriculture.

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Barton, H. and Denham, T., 2018. Vegecultures and the social—biological transformations of plants and people. Quaternary International, 489, pp.17-25. Fuller, Dorian Q and Tim Denham (2022) Coevolution in the arable battlefield:pathways to crop domestication, cultural practices and parasitic domesticoids. In: T. Schulz, Peter N. Denham, T. and Donohue, M., 2022. Mapping the middle ground between foragers and farmers. Journal of Anthropological Archaeology, 65, p.101390.

Bogaard A et al. 2013 Crop manuring and intensive land management by Europe's first farmers. PNAS 110, 12589–12594. (doi:10.1073/pnas.1305918110)

Bogaard, A., Fochesato, M. and Bowles, S., 2019. The farming-inequality nexus: new insights from ancient Western Eurasia. Antiquity, 93(371), pp.1129-1143.

Bogaard, A., Fochesato, M., & Bowles, S. (2019). The farming-inequality nexus: new insights from ancient Western Eurasia. Antiquity, 93(371), 1129-1143.

Brookfield, H.C. 2001. Intensification and alternative approaches to agricultural change. Asia Pacific Viewpoint 42 (Special Issue), 181–192.

Clement et al. 2021. Disentangling domestication from food production systems in the Neotropics. Quaternary, 4(1), p.4.

Cummings, Vicki, Peter Jordan, and Marek Zvelebil (eds.) 2014 The Oxford Handbook of the

Diet. Oxford University Press

Erickson CL. (2006) Intensification, Political Economy, and the Farming Community: in defence of a bottom-up perspective of the past. In AgriculturalStrategies (eds J Marcus, C Stanish), pp. 334–363. Cotsen Institute of Archaeology Press at UCLA. (doi:10.2307/j.ctvdjrr1w.18)

Fuller, D. Q., & Stevens, C. J. (2019). Between Domestication and civilization: The Role of agriculture and arboriculture in the emergence of the first urban societies. Vegetation History

Fuller, D. Q., Denham, T., Kistler, L., Stevens, C., Larson, G., Bogaard, A., &Allaby, R. (2022). Progress in domestication research: Explaining expanded empirical observations. Quaternary Science Reviews, 296, 107737.

Fuller, D.Q & Qin, L. 2009. Water management and labour in the origins and dispersal of Asian rice. World Archaeology 4, 88-111.

Gerbault, P., Allaby, R. G., Boivin, N., Rudzinski, A., Grimaldi, I. M., Pires, J.C., ... & Arroyo-Kalin, M. (2014). Storytelling and story testing in domestication. Proceedings of the National Academy of Sciences, 201400425.Brunson, K. and Reich, D., 2019. The promise of paleogenomics beyond our own species. Trends in Genetics, 35(5), pp.319-329.

Hastorf, C.A., 2016. The social archaeology of food: Thinking about eatingfrom Prehistory to the

Jones, Martin 2007. Feast. Why Humans Share Food. Oxford University Press.Lee-Thorpe, Julie and M. Anne Katzenberg (eds.) 2016 The Oxford Handbookof the Archaeology of

Kristiansen, K., Allentoft, M. E., Frei, K. M., Iversen, R., Johannsen, N. N., Kroonen, G., ... &

Larson, G., & Fuller, D. Q. (2014). The evolution of animal domestication. Annual Review of Ecology, Evolution, and Systematics, 45, 115-136.

MacHugh, D.E., Larson, G. and Orlando, L., 2017. Taming the past: ancientDNA and the study of animal domestication. Annual Review of Animal Biosciences, 5, pp.329-351.

Marciniak, A., 2011. The secondary products revolution: Empirical evidence and its current zooarchaeological critique. *Journal of World Prehistory*, 24(2),pp.117-130.

O'Brien., M.J. & Bentley, R.A. 2015. The role of food storage in human niche construction: An example from Neolithic Europe. Environmental Archaeology 20, 364-378.

present. Cambridge University Press.

Routledge

Rowley-Conway, P. and Layton, R. 2011. Foraging and farming as niche construction: stable

Rowley-Conwy, P. and Piper, S., 2016. Hunter-Gatherer Variability. Arctic, 69,pp.1-14.

Sherratt, A. 1981. Plough and pastoralism: aspects of the secondary products revolution, in Hodder, Isaac, G. and Hammond, N. (Eds.), Pattern of the Past: Studies in Honour of David Clarke, 261-305. Cambridge University Press, Cambridge.

Sherratt, A. 1999. Cash crops before cash: organic consumables and trade. In Gosden, C. and Hather, J. (Eds.), The Prehistory of Food. Appetites for Change, 13-34.: Routledge, London.

Sherratt, A., 1983. The secondary exploitation of animals in the Old World.

Sikora, M. (2017). Re-theorising mobility and the formation of culture and language among the Corded Ware Culture in Europe. Antiquity, 91(356), 334-347

Twiss, Katheryn C. 2019. The Archaeology of Food. Cambridge UniversityPress.

World archaeology, 15(1), pp.90-104.

Zeder, M.A., 2012. The broad spectrum revolution at 40: resource diversity, intensification,

Course Title : Practical: Archaeobotany

Course Code : ARCH 310

Class Hours : 2 [1.5 hours per week (course) + 0.5 hour (tutorial)]

Unit and Marks: Half Unit Course equivalent to 50 marks.

Marks Distribution: 50 [Attendance 05 + Tutorials (3) 10 + Exam 35] **Assessment**: Attendance 10%, Tutorials 20%, Exam 70%

Objectives

This course aims to prepare students on the practical hands-on aspects of sorting, especially the identification of archaeobotanical macro-remains. Quantification and reporting will be discussed to some extent, but this course focuses on the botanical "nuts and bolts" of archaeobotanical seed research. Practical demonstration sessions are concentrated in most detail on significant Bangladeshi and South Asian archaeobotanical remains along with Old World seed crops (including Near Eastern/European as well as South/East Asian and African taxa) and systematic groupings (key families and orders, such as those that recur as arable weeds in the Old World).

Learning Outcome

- On successful completion of this course, a student should:
- Comprehension of technical jargon relevant to carpology, the study of seed and fruit anatomy or morphology.
- Understanding of identification criteria used to separate rice, wheat and barley species, oats and rye, Old World millets, Old World pulses, common oilseed, and fibre crops
- Knowledge of how charred archaeobotanical material differs from modern reference material
- Working knowledge of the range of potential edible fruit and nut taxa that might be recovered archaeologically.
- Understanding how seed form and internal anatomy can aid taxonomic assignment, and an appreciation of how the study of reference material from related taxa can provide a firm basis for archaeobotanical identification. An appreciation of how crop processing may structure archaeobotanical Assemblages

Contents

- Fundamental of practical archaeobotany, basic sample preparation procedures, microscoping and recording.
- Fruits, Seeds and Seed-alikes: defining basic categories.
- Turning flowers into fruits: Examples of the Solanaceae, Rosaceae
- A brief introduction to taxonomic nomenclature
- Phylogenetic systems and the evolution of seeds.
- Cereal Identification Part 1: grasses & cereals

- (Poaceae), an overview- barley, wheat, rice, a few millets
- Cereal Identification Part 2: wheat, rye, oats and related grasses
- Pulses and an introduction to legume seeds
- A first look at weed seeds: comparing Cyperaceae and Polygonaceae Nutlets. A first
- consideration of pseudo-cereals.
- An introduction to sorting samples. 11.Practical sorting: cereals, chaff, and weeds 12.Crop processing; A brief discussion
- Cereal identification Part 3. Wheat glume bases and rachis segments, observing cereal chaff, measuring cereal grains.
- An overview of nuts, and selected fruits. 15.Cucurbits
- Oilseeds
- Fibre crops- esp. Asteraceae, Brassicaceae, Malvaceae, Lamiaceae, Linaceae,
- Pedaliaceae.
- Cereal identification Part 4. Millets, and overview of wild grasses. 19.Gymnosperms and Basal Angiosperms
- An introduction to monocots
- Higher Eudicot trends: towards curled embryos and trigonous seeds- Solanaceae vs. Caryophyllales

Assessment Process

PRACTICAL EXAM (40%)

Students are directed to identify (to Family/genus and/or species) botanical specimens and are required to give the type of plant fruit (e.g., achene, nut, caryopsis, drupe). In some cases, additional information such as region of domestication, ecological zone in which they originated, or time and specific site they have found will be asked. The exam should be divided into two parts: for Part 1, students will be allowed to use their lab notebooks and handouts with their identifications. For Part 2, students will not be permitted to use hand-outs or notebooks.

All items will be worth 2 or 3 points of each. Partial credit will be awarded for incomplete identification (e.g., for higher taxonomic level identification and plant part identification). Practice quizzes during the course are of similar format and will provide for practice. Study specimens will be available for study in the student's own time, up to the day before the exam. A study of the list of taxa that might be on the exam will be provided by the course teacher. Specimens for the exam may be archaeological, modern, or modern charred.

WRITTEN ASSIGNMENT: 2,500 WORDS PLUS ILLUSTRATIONS (30%)

The assignment requires both laboratory and literature research. Students are presumed to

deal with a small comparative study of plants in each taxonomic order of seeds, or groups of domesticates, and to prepare illustrations, measurements, and descriptions. Prospective topics and taxa categories are provided by the course teacher; it is assumed that students in a particular academic session will do different topics from each other.

The focus of the assignment is to produce guidelines for the identification of specimens found in archaeological contexts and to observe how species' morphological features relate to evolutionary relationships such as phylogeny or domestications.

The more detailed direction to prepare the assignment will be provided by the course teacher at the beginning of the year/class, preferably in the first class of the year.

Laboratory Notebook (20%)

Students will prepare a laboratory notebook during the practical course illustrating seeds and plant parts with proper identification marks. It would be worthwhile to mention, archaeological insights as a note on each specific taxa or plant part will be drawn.

Reference Reading

10.1093/acrefore/9780190277734.013.204

Cappers, Rene and Reinder Neef. 2012. Handbook of Plant Palaeoecology. Groningen,

Champion, L. and Fuller, D. Q. (2019) Archaeobotany: Methods and Themes. In Mitchell,

From Concepts of the Past to Practical Strategies: The Teaching of Archaeological Field

Fuller, D. Q. and Leilani Lucas (2014) Archaeobotany. In Encyclopedia of Global Archaeology (Claire Smith, Ed.). Springer, New York. pp 305-310

Fuller, D.Q. 2008. Archaeological Science in Field Training. in Ucko, P., Qin ,L., Hubert,J. (ed.)

Fuller, Dorian Q, Chris Stevens and Meriel McClatchie (2014). Routine activities, tertiary

Netherlands: Barkhuis, University of Groningen Library. Note: the second edition of Cappers and Neef (2021) is expanded and improved, but is not available online.

Peter (ed.) The Oxford Encyclopedia of African Histories: Methods, Sources, and Historiographies. Oxford: Oxford University Press. Online publication 30 Dec 2018: DOI:

refuse, and Labor organization. Social inferences from everyday archaeobotany. In Ancient

sampling.

Techniques. London: Saffron Press, 183-205 Provides a short history of archaeobotany and

Course Title : Museum Studies: Theory and Practice

Course Code : ARCH 311

Class Hours : 4 [3 hours per week (course) + 1 hour (tutorial)]
Unit and Marks : Full Unit Course equivalent to 100 marks.

Marks Distribution: 100 [Attendance10 + Tutorials (3) 20 + Exam 70] **Assessment**: Attendance 10%, Tutorials 20%, Exam 70%

Objectives

The Objectives of this course is to introduce the students with museum as an Institution. The course will focus on the historical development of museums in the world context as well as in the Indian subcontinent and Bangladesh. It will also demonstrate to the students to identify the students the challenges and opportunity of the museum as a cultural and educational institute the serve the public as a future leader of Museum. Beside the theoretical learning student will be trained to evaluate museum activities through visiting some selected museum, understand the types, functions and challenges of museums.

Learning outcomes

On successful completion of the module, students will be able to:

- Define museum and have the better understanding of the ICOM code of ethics for museums.
- Understand the history of museum development and evaluate the museum they are familiar with.
- o Understand of basic technical terms, definitions, Types and functions of museums.
- o Understand the basic management structure of the museum.
- Understand the collection management and care of museum objects, basic conservation and curatorial work at Museum
- o Acquire knowledge to develop museum exhibition and display also designing museum architecture, security and disaster Preparedness plan.
- o Understand how to asses and develop museum education program for visitors.

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Contents

Unit 1: Introduction to the Museum Studies

- a. Definition of Museum
- b. ICOM code of ethics for Museums
- c. Aim and objectives
- d. Functions of Museum and Types of Museum

Unit 2: History of museums

- a. History of museum development in the world
- b. History of Museum development in the Indian Sub-continent.
- c. History of Museum development in Bangladesh

Unit 3: Management Structure of Museums

- - a. Board of Trustees / Governing Body
 - b. Personnel administration
 - c. Financial administration.
 - d. Staff Structure / Duties / Responsibilities.
 - e. Curatorial responsibilities in Museum

Unit 4 : Collection of Museum Objects

- a. Modes of Acquisition/ Collection
- b. Collection management policy
- c. Ethics of Collections
- d. Documentation / Registration.
- e. Computerization and accessibility

Unit 5 : Display and Exhibition of Museums

- a. Planning an exhibition
- b. Exhibition Show cases and Layout.
- c. Developing text, blurb and Label
- d. Lighting
- e. Audio / Video assistance.
- f. Guide Book, Hand on Project

Unit 6: Museum Architecture and Planning

- a. Objective / Type of Museum
- b. Natural and artificial lighting.
- c. Ventilation / Air-conditioning
- d. Circulation of visitors.
- e. Permanent and temporary display.
- f. Storage.
- g. Scope for future expansion.

Unit 7: Museum Educational Programmes and Research

- a. Guides for visitors.
- b. Special guides for children and other target group
- c. Films / Video.
- d. Brochure / Pamphlets.
- e. Outreach-Reach out program: Travelling Exhibition Bus, School Bus
- f. Facilities for Scholars use of library and reserve collection
- g. Publication of Bulletin, Annual Report and Monographs.
- h. Public Lecture Series.
- i. Use of Auditoriums.

Unit 8: Curatorial and Conservators Responsibilities in Museum

- a. Basic Conservation for Museum
- b. Archaeological Objects, Textile
- c. Manuscript, Paintings, Photographs
- d. Ethnographical Materials
- e. Ivory and Bone Objects
- f. Leather Materials
- g. Glass and Siliceous Materials
- h. Zoological objects,
- i. Botanical objects etc.

Unit 9: Museum Security

- a. Security of Museum Properties.
- b. Security during public hours.
- c. Preventive measures for; theft, fire, earthquake, natural calamities, accidents etc.
- d. Disaster Preparedness for Museum

Unit 10: Visitor facilities of Museums

- a. Café, Museum shop, clock room, Toilet
- b. Facilities for handicapped people
- c. Access to information
- d. Museum Marketing
- e. Docent and Volunteer service

Recommended readings

- Alexander, E. P. (1979) Museums in Motion-An introduction to the History and Functions of Museum. *American Association for State and Local History:* 6.
- Agrawal, O. P. (1993) *Preservation of Art Objects and Library Materials*. New Delhi: National Book Trust.
- Annis, S. (1986) The Museum as a staging ground for symbolic action. *Museum* 38, 3: 168-171. Available at: http://www.mcdonald.cam.ac.uk/iarc/research/publications.htm
- Barringer, T. (1998) The South Kensington Museum and the Colonial project. In: *Colonialism and the Object: Empire, Material Culture and the Museum.* Routledge: London.
- Brodie, Neil; Doole, Jenny och Watson, Peter, (2000) *Stealing History: The Illicit trade in Cultural Material*. Cambridge: McDonald Institute for Archaeological Research.

- Clifford, J. (1988) The Predicament of Culture Twentieth Century Ethnography, Literature, and Art. Cambridge: Harvard University Press.
- Corsane, Gerard (ed.) (2005) *Heritage, Museums and Galleries. an Introductory Reader*. London: Psychology Press.
- Cronyn, J. M. (1999) *The Elements of Archaeological Conservation*. London: Routledge.
- Dwivedi, V. P. and Pant, G. N. (1980) Museums and Museology New Horizons: Essays in Honour of Dr. Grace Morley. Delhi: Agam Kala Prakashan.
- Dani, Ahmed Hasan. "Baldha Museum, Dacca." *Musuem Journal of Pakistan* (Organ of the Museum Association of Pakistan) Vol. IV, no. 1 April (1952), Karachi
- Edward P. Alexander and Mary Alexander (2008) *Museums in Motion: An Introduction to the History and Functions of Museums*. Lanham: AltaMira Press, pp 1-19.
- Edson, G. and Dean, D. (1994) The Handbook for Museums. London: Routledge.
- Eilean, H. G. (1999) The Educational Role of the Museums. London: Routledge.
- Firoz, M. and Rahman, H. (1987) Museums in Bangladesh. Dhaka: Bangla Academy.
- Firoz, M. and Rahman, H. (1993) *Prospects of Material Folk Culture Studies and Folk Life Museums in Bangladesh.* Dhaka: Bangla Academy.
- Gaynor, K. (1994) Museum provision and Professionalism. London: Routledge.
- George E. H. (1998) Learning in the Museums (Museum meanings). London: Routledge.
- Guha- Thakurta, T. (2004) Monuments, Objects, *Histories: Institutions of Art in Colonial and Post-Colonial India.* USA: Columbia University Press.
- Haque, Enamul, (1970). Survey of Museums and Archaeological Education and Training in East Pakistan. Dhaka: Dacca Museum, Dhaka
- Haque, Enamul. (1963) *Treasures in the Dacca Museum, Part 1*. Dhaka: Dacca Museum, Dhaka.
- Hooper-Greenhill, E. (2000) Museums *and the Interpretation of Visual Culture*. London: Routledge.
- Hudson, K. (1987) Museums of Influence. Cambridge: Cambridge University Press
- Hunter, M. (1985) The Cabinet Institutionalized: the Royal Society's "Repository" and its background. In: *The Origins of Museums*. Oxford: Clarendon Press.
- Thompson, M. A. (1992) *Manual of Curatorship- a Guide to Museum Practice*. Oxford: Butterworth Heinemann.

- Kavanagh, G. (1994) Looking for ourselves. Inside and outside museums. In: *Gender and History*, 6(3): 370-375.
- Walsh, K. (1992) *Representation of the Past: Museum and Heritage in the Post-Modern.* London: Routledge.
- Kotler, W. I. and Kotler, N. G. (1998) *Museum Strategy and Marketing*. California: Jossey Bass.
- Light, R. B. et.al. (1986) Museum Documentation Systems: Developments and Applications. London: British Library
- Lord, B. and Gail, D. L. (2001) *The Manual of Museum Exhibitions*. USA: Altamira Press.
- Macmillan, M. (1977) Pathology of Building Materials. Rome: ICCROM.
- Mahmud, F. and Rahman, H. (1987) Museums of Bangladesh. Dhaka: Bangla Academy
- Fopp, M. A. (1997) Managing Museum and Galleries. London: Routledge.
- Parkes, P. A. (1986) Current Scientific Techniques in Archaeology. London: Croom Helm.
- Pearce, S. M. (1989) *Museum Studies in Material Culture*. London: Leicester University Press.
- Pollard, A. M. and Heron, C. (1996). *Archaeological Chemistry*, Cambridge: The Royal Society of Chemistry.
- Patrick J. Boylan eds (2004) Running a Museum: A Practical Handbook, ICOM-International Council of Museums, Paris, France
- Timothy Ambrose and Crispin Paine (2012). *Museum Basics*. London: Routledge, 12-21.
- Vergo, Peter (1989) The Reticent Object, in: The New Museology. pp: 41-59.
- Walsh, K. (1992) *The Representation of the Past Museums and Heritage in the Post Modern World.* London and New York:

Course Title: Practical: Field Work (Excavation)

Course Code : ARCH 312

Class Hours : Credit 4, Duration: 21 Days

Unit and Marks : Full Unit Course equivalent to 100 marks.

Marks Distribution : Pre-Fieldwork :15 Field Performance: 15 Report: 70