

Murshidabad Adarsha Mahavidyalaya

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www.murshidabadadarshamahavidyalaya.in



Islampur

Murshidabad

Pin- 742304 (W.B.)

Memo No: MAM / /

Date: ___/___/___

Syllabus

for

Under Graduate Compulsory Course

in

ENVIRONMENTAL STUDIES

(Ability Enhancement Compulsory Course)

(AECC)

2018-2019

Under

Choice Based Credit System (CBCS)



UNIVERSITY OF KALYANI

WEST BENGAL

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Indra Kumar Mistry

Principal
Murshidabad Adarsha Mahavidyalaya
P.O.-Islampur, Dist.-Murshidabad
West Bengal

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COURSE STRUCTURE UNDER CHOICE BASED CREDIT SYSTEM FOR B.A./B.Sc. HONOURS COURSE IN GEOGRAPHY

Semester-wise course structure

(6 Credit: 75 Marks)

SEMESTER-I				
Course Code	Course Nature	Course Title	Course wise Class (L+T+P)	Credit
GEO/H/CC/T/01	Core	GEOTECTONICS AND GEOMORPHOLOGY	75L+15T	6
GEO/H/CC/T/02	Core	CARTOGRAPHIC TECHNIQUES AND GEOLOGICAL MAP STUDY	60T	4
GEO/H/CC/P/02		DISASTER MANAGEMENT OR GEOGRAPHY OF TOURISM	60P	2
GEO/H/GE/T/01/A or GEO/H/GE/T/01/B	GE	Environmental studies	75L+15T	6
-	AECC	4 courses	-	20
Total				
SEMESTER-II				
Course Code	Course Nature	Course Title	Course wise Class (L+T+P)	Credit
GEO/H/CC/T/03	Core	HUMAN GEOGRAPHY	75L+15T	6
GEO/H/CC/T/04	Core	CARTOGRAMS, SURVEY AND THEMATIC MAPPING	60T	4
GEO/H/CC/P/04		GEOSPATIAL TECHNOLOGY OR REGIONAL DEVELOPMENT	60P	2
GEO/H/GE/T/02/A or GEO/H/GE/T/02/B	GE	Communicative English/ MIL	75L+15T	6
-	AECC	4 courses	-	20
Total				
SEMESTER-III				
Course Code	Course Nature	Course Title	Course wise Class (L+T+P)	Credit
GEO/H/CC/T/05	Core	CLIMATOLOGY	75L+15T	6
GEO/H/CC/T/06	Core	STATISTICAL METHODS IN GEOGRAPHY	60T	4
GEO/H/CC/P/06		GEOGRAPHY OF INDIA	60P	2
GEO/H/CC/T/07	Core	CLIMATE CHANGE: VULNERABILITY AND ADAPTATION OR RURAL DEVELOPMENT	75L+15T	6
GEO/H/GE/T/03/A or GEO/H/GE/T/03/B	GE	COMPUTER BASIC AND COMPUTER APPLICATIONS OR REMOTE SENSING	75L+15T	6
GEO/H/SEC/P/01/A or GEO/H/SEC/P/01/B	SEC	5 courses	60P	2
Total				26

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COURSE STRUCTURE UNDER CHOICE BASED CREDIT SYSTEM FOR B.A. GENERAL/ PROGRAM COURSE IN GEOGRAPHY

Semester-wise course structure

(6 Credit: 75 Marks)

SEMESTER-I				
Course Code	Course Nature	Course Title	Course wise Class (L+T+P)	Credit
GEO/G/CC/T/01	Core	GEOTECTONICS AND GEOMORPHOLOGY AND SCALE AND CARTOGRAPHY	60L	4
GEO/G/CC/P/01			60P	2
-	Core	As to be offered by other departments	-	6
-	Language Core	Lang 1-I	-	6
-	AECC	Environmental studies	-	2
Total		4 courses		20
SEMESTER-II				
Course Code	Course Nature	Course Title	Course wise Class (L+T+P)	Credit
GEO/G/CC/T/02	Core	CLIMATOLOGY, SOIL AND BIOGEOGRAPHY AND SURVEYING AND LEVELLING	60L	4
GEO/G/CC/P/02			60P	2
-	Core	As to be offered by other departments	-	6
-	Language Core	Lang 2-I	-	6
-	AECC	Communicative English/ MIL	-	2
Total		4 courses		20
SEMESTER-III				
Course Code	Course Nature	Course Title	Course wise Class (L+T+P)	Credit
GEO/G/CC/T/03	Core	HUMAN GEOGRAPHY AND MAP PROJECTION AND MAP INTERPRETATION	60L	4
GEO/G/CC/P/03			60P	2
-	Core	As to be offered by other departments	-	6
-	Core	Core Lang 1-2	-	6
(GEO/G/SEC/P/01/A or GEO/G/SEC/P/01/B)	SEC	COMPUTER BASICS AND COMPUTER APPLICATIONS OR REMOTE SENSING	60P	2
Total		4 courses		20

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ABILITY ENHANCEMENT COMPULSORY COURSE (AECC 2) ENVIRONMENTAL STUDIES

Unit 1: Introduction to Environmental studies

Multidisciplinary nature of environmental studies; Scope and importance; Concept of sustainability and sustainable development.

Unit 2: Ecosystems

What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems:

- Forest ecosystem.
- Grassland ecosystem.
- Desert ecosystem.
- Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit 3: Natural Resources : Renewable and Non-renewable Resources

- Land resources and land use change; Land degradation, soil erosion and desertification.
- Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations.
- Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state).
- Energy resources: Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

Unit 4: Biodiversity and Conservation

- Levels of biological diversity: genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots.
- India as a mega-biodiversity nation; Endangered and endemic species of India.
- Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.
- Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.

Unit 5: Environmental Pollution

- Environmental pollution: types, causes, effects and controls; Air, water, soil and noise pollution.
- Nuclear hazards and human health risks.
- Solid waste management: Control measures of urban and industrial waste.
- Pollution case studies.

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Unit 6: Environmental Policies & Practices

- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture.
- Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).
- Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.

Unit 7: Human Communities and the Environment

- Human population growth: Impacts on environment, human health and welfare.
- Resettlement and rehabilitation of project affected persons; case studies.
- Disaster management: floods, earthquake, cyclones and landslides.
- Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan.
- Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.
- Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi).

Unit 8: Field work

- Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc.
- Visit to a local polluted site- Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds and basic principles of identification.
- Study of simple ecosystems-pond, river, Delhi Ridge, etc.

Suggested Readings:

1. Carson, R. 2002. Silent Spring. Houghton Mifflin Harcourt.
2. Gadgil, M., & Guha, R. 1993. This Fissured Lands: An Ecological History of India. Univ. of California Press.
3. Gleeson, B. and Low, N. (eds.) 1999. Global Ethics and Environment, London, Routledge.
4. Gleick, P. H. 1993. Water in Crisis. Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute, Oxford Univ. Press.
5. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll. Principles of Conservation Biology. Sunderland: Sinauer Associates, 2006.
6. Grumbine, R. Edward, and Pandit, M. K. 2013. Threats from India's Himalaya dams, Science, 339: 36-37.
7. McCully, P. 1996. Rivers no more: the environmental effects of dams (pp. 29-64). Zed Books.
8. McNeill, John R. 2000. Something New Under the Sun: An Environmental History of the Twentieth Century.
9. Odum, E. P., Odum, H. T. & Andrews, J. 1971, Fundamentals of Ecology. Philadelphia: Saunders.
10. Pepper, I. L., Gerba, C. P. & Brusseau, M. L. 2011. Environmental and Pollution Science. Academic Press.

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