

U.G. 1st Semester

Paper: EWS101A (AECC) Environmental Studies

Credits: 2 = 2+0+0 (32 Lectures)

Unit 1: Basics of Environmental Science (8 lectures)

Definition and scope of environmental science; segments of the environment – atmosphere, hydrosphere, lithosphere, biosphere; natural resources; environmental impact assessment; energy and the environment; concept of sustainable development; GPS, GIS and Remote Sensing

Unit 2: Natural History and Ecology (8 lectures)

Why, how and what of natural history? concept of biodiversity, its value and measurement; biodiversity from genes to ecosystem; levels of ecological organisation; concept of population, community and ecosystem; biogeography of plants and animals; plant-animal interactions

Unit 3: Conservation Biology and Wildlife Sciences (8 lectures)

Introduction to ornithology, mammalogy, herpetology and vegetation science; an overview of different wildlife habitats; concept of flagship, keystone and umbrella species; wildlife laws; human dimension of biodiversity conservation; citizen science initiatives such as eBird, Assam Biodiversity Portal and SeasonWatch; habitat loss and fragmentation; poaching and hunting; Invasive Alien Species; extinction; urban biodiversity; concept of biodiversity hotspot and Protected Areas; concept of Threatened species.

Unit 4: Environmental Issues and Management (8 lectures)

Population growth; global warming and climate change; environmental pollution and management; hazards and disaster management; public health; solid waste management; resettlement and rehabilitation issues; sustainable agriculture and food security-biotechnological approach; environmental organizations; environmental laws and policies.

Field-work (one of the following)

1. Visit to a local polluted site
2. Study of common plants, insects, birds within the cotton campus
3. Study of an ecosystem

Suggested Readings

1. Sawyer CN, McCarty PL, Parkin GF (2003). *Chemistry for Environmental Science and Engineering*, Tata-McGraw-Hill Edition
2. De AK (2000). *Environmental Chemistry (4th Edition)*. New Age International (P) Ltd., New Delhi, India

3. Molles Jr MC (2016). *Ecology: Concepts and Applications (7th Edition)*. McGraw Hill Higher Education
4. Sodhi NS and PR Ehrlich (2010). *Conservation Biology for All*. Oxford University Press
5. Fleischner TL (2005). Natural history and the deep roots of natural resource management. *Natural Resources Journal* 45: 1-13
6. Fleischner TL (2011). Why natural history matters. *Journal of Natural History Education and Experience* 5: 21-24
7. Feldhamer GA, Drickamer LC, Vessey SH and Merritt JF (2003). *Mammalogy: Adaptation, Diversity and Ecology (2nd Edition)*. McGraw Hill, New York.
8. Lovette IJ and Fitzpatrick JW (eds) (2016). *Handbook of Bird Biology (3rd Edition)*. Cornell University
9. Vitt, LJ and Janalee P Caldwell (2013). *Herpetology: An Introductory Biology of Amphibians and Reptiles*. Academic Press.
10. Duellman WE and T Linda (1986). *Biology of Amphibians*. JHU Press
11. Seigo C (1999). *Environmental Science*. McGraw Hill
12. Miller GT (2000). *Living in the Environment*. Brooks/Cole
13. Canter LW (1996). *Environmental Impact Assessment (2nd Edition)*. McGraw-Hill, New York
14. Soubbotina TP (2004). *Beyond Economic Growth: An Introduction to Sustainable Development (2nd edition)*. The World Bank, Washington, DC
15. Eggleton, T (2013). *A Short Introduction to Climate Change*. Cambridge University Press, New York
16. Lillesand T, Kiefer RW and J Chipman (2015). *Remote Sensing and Image Interpretation (7th Edition)*. Wiley

U.G. 2nd Semester

**Paper: ASM203A (AECC)
Essay and Drama**

Credits: 2 = 2+0+0 (32 Lectures)

[This paper aims to introduce the various essays, belles letter and travelogue from different periods of Assamese literature for understanding the different prose compositions.]

Unit I - Essays

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| 1. Science Literature : Baijnanik Manasikata | Dinesh Chanrda Goswami |
| 2. Travelogue: <i>Mekong Noi Dekhilo</i> , First Chapter | Hem Baruah |
| 3. Belles Letter: Mahanagar Guwahati, 2008 | Bhadra Bora |

Unit II-Drama

Ejak Jonakir Jilmil –Bhabendranath Saikia

Textbooks:

<i>Baijnanik Mon, Baijnanik Cinta</i>	Dinesh Chandra Goswami
<i>Bhadra Bora Nirbacita Rochana: Pratham Khanda:Mukali Duchinta</i>	Asom Bani
<i>Ejak Jonakir Jilmil</i>	Bhabendranath Saikia
<i>Mekong Noi Dekhilu</i>	Hem Barua

Reference Books:

<i>Asamia Sahityar Samikshatmak Itibritta</i>	:Satyendranath Sarma
<i>Asamia Sahityar Ruprekha</i>	:Maheswar Neog

U.G. 2nd Semester

Paper: ENG203A (AECC)

Functional English

Credits: 2 = 2+0+0 (32 Lectures)

UNIT I: GRAMMAR (30m) (12 lectures)

- Appropriate prepositions
- Use of tense
- Correction of errors in sentences
- Transformation of sentences (simple/complex/compound/assertive/negative)
- Voice change
- Phrases and idioms

UNIT II: LETTER WRITING (10m) (8 lectures)

- Letter to the editor
- Business letter
- Application

UNIT III: REPORT WRITING (10m) (6 lectures)

- on a given topic with a given outline

UNIT IV: PRECIS WRITING (10m) (6 lectures)

- of a given prose passage

Recommended Reading:

Wren & Martin: *English Grammar & Composition*. Published by S. Chand

Collins Cobuild Grammar, Harper & Collins

Adrian Duff. *English Language in Use*

M McCartley & Odowell. *English Vocabulary in Use*

Mark Hancock. *English Pronunciation in Use*