CEDX 46	ENVIRONMENTAL IMPACT	L	T	P	C
SDG: 3,6, 15	ASSESSMENT	3	0	0	3

COURSE OBJECTIVES:

COB1: To impart knowledge on the importance and stages of Environmental Impact Assessment.

COB2: To give exposure to the methodologies of EIA.

COB3: To impart an understanding of the public participation, resettlement and rehabilitation processes in EIA.

COB4: To familiarize the students with the documentation of EIA and environmental management plan.

COB5: To enhance knowledge on the exposure related to the environmental audit and life cycle assessment

MODULE I BASIC CONCEPTS 9

Evolution of EIA (Environmental Impact Assessment) - Concepts - Stages of EIA -Screening - Scoping – Mitigation- Need for EIA – Environmental Impact Statement (EIS) - EIA capability and limitations-, Types of EIA - Rapid and Comprehensive EIA - Legislative and Environmental Clearance procedure in India

MODULE II EIA METHODOLOGIES 9

Methods of EIA –Check lists – Matrices – Networks – Cost-benefit analysis –Analysis of alternatives- Impact of development projects – Sustainable development-Assessment of Impact - Air - Water - Soil – Noise and Biological environment.

MODULE III PUBLIC PARTICIPATION 9

Socio-cultural impact assessment - Public participation – Addressing the issues related to the Project - Resettlement and rehabilitation– Policy, Regulation frame work and its amendment- Environmental and Social Management Frame work (ESMF).

MODULE IV MONITORING 9

Documentation of EIA - Environmental management plan– ISO 14000 - Plan for mitigation of adverse impact on environment -options for mitigation of impact on water, air and land, flora and fauna; Post project monitoring.

MODULE V ENVIRONMENTAL AUDIT & CASE STUDIES 9

Environmental Audit- Life cycle assessment case studies – Environmental Management System - Industrial ecology – carbon trading- EIA for infrastructure projects – Bridges – Highways – Dams.

L – 45; TOTAL HOURS – 45

TEXT BOOKS:

1. Canter, R. L., "Environmental Impact Assessment", McGraw Hill, New Delhi, 2006.
2. David P.Lawrence, "Environmental Impact Assessment: Practical Solutions to Recurrent Problems", John Wiley & Sons, Inc.,2003.
3. Hundloe, Tor., " Environmental Impact Assessment: Incorporating Sustainability Principles", Springer International Publishing, 2022.
4. Kevin Hanna, "Routledge Handbook of Environmental Impact Assessment", Taylor & Francis, 2022.

REFERENCES:

1. Environmental Assessment Source book", Vol. I, II & III. The World Bank, Washington, D.C., 2001.
2. Judith Petts, "Handbook of Environmental Impact Assessment Vol. I & II", Blackwell Science, 2006.
3. John G. Rau and David C Hooten(Ed)., "Environmental Impact AnalysisHandbook", McGraw-Hill Book Company, 2000.
4. "Ministry of Environmental, Forest and Climate Change, "EIA Manual", Impact Division, Government of India, 2001. http://www.moef.nic.in/division/eia-manual.
5. Raman, N. S.., Gajbhiye, A. R.., Khandeshwar, S. R.. Environmental Impact Assessment. India: I.K. International Publishing House Pvt. Limited, 2014.
6. Shukla, S. K., and Srivastava.P.R. "Concept in Environmental Impact Analysis", Common wealth publishers, New Delhi, 2002.

COURSE OUTCOMES:

At the end of the course the student will be able to

CO1: Describe the concepts of Environmental impact assessment.

CO2: Explain the methodologies of EIA and apply the prediction tools to assess the impact

CO3: Describe the process of public participation, settlement & rehabilitation in EIA

CO4: Prepare documentation of EIA and develop environmental management plan

CO5: Conduct environmental audit and life cycle assessment.

Board of Studies (BoS) :
18th BoS of CE held on 05.04.2023

Academic Council:
20th Academic council held on 13.4.2023

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO11	PO 12	PSO1	PSO2	PSO3
CO1	-	-	L	-	-	M	H	M	-	-	-	-	L	-	M
CO2	-	-	L	-	-	M	H	M	-	-	-	-	L	-	M
CO3	-	-	L	-	-	M	H	M	-	-	-	-	L	-	M
CO4	-	-	L	-	-	M	H	M	-	-	-	-	L	-	M
CO5	-	-	L	-	-	M	H	M	-	-	-	-	L	-	M

Note: L- Low Correlation M - Medium Correlation H -High Correlation

SDG 3: Ensure healthy lives and promote well-being for all at all ages
SDG.6: Ensure availability and sustainable management of water and sanitation for all
SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Statement : The knowledge about the process of EIA leads to reduction of impact on environment due to any infrastructure project