Semester VI						
S.No	Course Code	Course Name	L	T	P	C
1	CE 301	Environmental studies	3	0	0	6
2	EE 314	Electronic Design Laboratory	3	0	0	6
3		Elective Courses				24
		Technical Writing				2
		Total Credits				38

1	**Title of the course (L-T-P-C)**	**Environmental studies (3-0-0-6)**
2	**Pre-requisite courses(s)**	Nil
3	**Course content**	**Module A:** Natural Resources, Ecosystems, Biodiversity and its conservation: Natural resources and ecosystems, Forest, grassland, desert and aquatic ecosystems, biodiversity at global, national and local levels, conservation of biodiversity **Module B:** Air Pollution Introduction to understanding air quality management, fundamental processes of meteorology, Air Pollutants – Gaseous and particulate, Criteria for pollutants, ambient and source standards, Aerosols: Characterisation of aerosols, size distributions, measurement methods; Transport behaviour: diffusion, sedimentation, inertia; Visibility; principles of particulate control systems. **Module C:** Water Treatment Discussion of water quality constituents and introduction to the design and operation of water and wastewater treatment processes. **Module D:** Solid Waste Management and Climate Change Different aspects of solid and hazardous waste management. Climate change and greenhouse gas emissions, technologies would reduce the greenhouse gas emissions. Climate change and its possible causes. **Module E:** Sociology/Environmentalism Description: Environmentalism in sociological tradition, Sustainability, North-South divide, Political economy approaches in environmental studies, Debates over environmental issues. **Module F:** Economics Energy economics and financial markets, Market dynamics, Energy derivatives, Energy Efficiency; Sustainable Development: Concept, Measurement & Strategies, Interaction between Economic Development, and the Environment **Module G:** Philosophy Environmental ethics, Deep ecology, Practical ecology, Religion and attitude towards environmental ethics, Ecofeminism, and its evolution. **Module H:** Field work and project: visit to a local area to document environmental assets, case studies of a simple ecosystem and group discussions on current environmental issues.
4	**Texts/References**	**1.** Cunningham W.P. and Cunningham M.A. (2002), Principles of Environmental Science, Tata McGraw-Hill Publishing Company, New Delhi. **2.** Dasgupta, P. and Maler, G. (eds.), (1997), The Environment and Emerging Development Issues, Vol. I, Oxford University Press, New Delhi.

		3. Jackson, A.R.W. and Jackson, J.M. (1996), Environmental Sciences: The Environment and Human Impact, Longman Publishers. **4.** Nathanson, J.A., (2002), Basic Environmental Technology, Prentice Hall of India, New Delhi. **5.** Redclift, M. and Woodgate, G. (eds.), (1997), International Handbook of Environmental Sociology. **6.** Srivastava, K.P. (2002), An Introduction to Environmental Study, Kalyani Publishers, Ludhiana. **7.** Review articles from literature.

1	**Title of the course (L-T-P-C)**	**Electronic Design Laboratory (1-0-4-6)**
2	**Pre-requisite courses(s)**	All the core courses of Electrical Engineering Department taught till 5th semester
3	**Course content**	This is project-based course in which students will do embedded systems project applying the concepts of core EE courses.
4	**Texts/References**	--

1	**Title of the course** (L-T-P-C)	**Technical Writing** **(1.5-0-0-3)**
2	**Pre-requisite courses(s)**	None
3	**Course content**	LaTeX and plotting tools (Microsoft tools, LaTeXDraw, R, etc.)Technical abstract & report writing Professional writing ethics: Plagiarism and citations Technical presentation making: short-duration vs long-duration presentationsTechnical elevator pitch and poster presentation
4	**Texts/References**	**1)** A Manual for Writers of Research Papers, Theses, and Dissertations, KateL Turabian, Ninth Edition, The University of Chicago Press. **2)** Communication Skills for Engineers and Scientists, Sangeeta Sharma andBinod Mishra, Second Edition, PHI Learning. **3)** The elements of style, William Strunk Jr and E White, Fourth Edition,Pearson Education. **4)** A New Approach to Research EthicsUsing Guided Dialogue to Strengthen Research Communities, Henriika Mustajoki and Arto Mustajoki, First Edition, Routledge Publications.