

**INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI**  
**PROFORMA FOR NEW COURSE**

1.	Title of the Course	Environmental Risk Assessment
2.	Course Number	CE5031
3.	Status of the Course	Elective
4.	Structure of Credits	3-0-0-3
5.	Offered To	PG
6.	New Course/Modification to	New
7.	To be Offered by	Department of Civil & Environmental Engineering
8.	To take effect from	July 2019
9.	Prerequisite	Nil
10.	Whether approved by the Department	Yes
11.	<b>Course Objective:</b> The objectives of the course are: To learn about environmental health and risk assessment and its role within the risk management process. To assess the impacts of environmental pollution such as air pollution, water pollution, soil contamination on environment and human health. To learn epidemiological data, case study analysis to understand various methods of risk assessment.	
12.	<b>Course Content:</b> Introduction to environmental health and risk assessment (EHRA), principles and processes of EHRA, exposure assessment, hazard identification, dose-response evaluation, risk characterization, and risk management; Environmental health risk evaluation and management; Application of a risk assessment framework to characterise environmental health risks, inform risk management and risk communication; Environmental epidemiology, epidemiological criteria, descriptive epidemiology, analytical epidemiology, study design and common methods in environmental epidemiology like experimental and observational. Regulatory issues in risk assessment; Scientific basis for policy decisions; and emerging global environmental health problems. Industrial occupational health and safety management; Case studies.	
13.	Text book(s): 1. Theodore L and Dupont R R, <i>Environmental Health and Hazard Risk Assessment</i> , CRC Press (2012). 2. Woodward W, <i>Epidemiology: Study Design and Data Analysis</i> , Chapman and Hall/CRC (2013).	
14.	Reference(s): 1. Gilbert M M and Wendell E, <i>Introduction to Environmental Engineering and Science</i> , Prentice Hall (2008). 2. Baker D, Kjellstrom T, Calderon R and Pastides H, <i>Environmental Epidemiology: A Textbook on Study Methods and Public Health Applications</i> , World Health Organization (1999).	