NOTIFICATION

No. 75/2013 Date : 12/06/2023

Subject: Implementation of the new syllabus of the subject Environmental Impact: Risk Assessment & Management and the Chances to be given for the Old Course failure students of Semester V of B.Tech. (Chem. Tech.) (C.G.S.) in the Faculty of Science &Technology from the session 2022-2023 and Onwards.

It is notified for general information of all concerned that the authorities of the University have accepted as under:

(I) Implementation of new syllabus of the Open Elective Subject **Environmental Impact: Risk Assessment & Management** of Semester V of B.Tech. (Chem.Tech.) as per Choice Based Credit System in the Faculty of Science &Technology (Group Engineering &Technology) to be implemented from the session 2022-2023 and Onwards as under:

SYLLABUS OF SEMESTER V OF B.TECH. (CHEM.TECH.) C.B.C.S.

ENVIRONMENTAL IMPACT RISK ASSESSMENT AND MANAGEMENT

OBJECTIVES:

- To recognizes the growing need of industry to anticipate and incorporate environmental concerns and risks while developing large scale projects.
- It is emphasizes on the contemporary tools and techniques of assess various environmental impacts and outlines various management options needed to mitigate these risks.
- To expose the students to the need, methodology, documentation and usefulness of environmental impact assessment and to develop the skill to prepare environmental management plan.
- To provide knowledge related to the broad field of environmental risk assessment, important processes that control contaminant transport and tools that can be used in predicting and managing human health risks.

SECTION A

UNIT I: Environmental impact Assessment (EIA): Definition, introduction, concepts and historical development; rationale and historical development of EIA; scope and methodologies of EIA, Environmental impact statement (EIS) and Environmental Management plane (EMP), Types and limitations of EIA.

UNIT II : EIA regulations in India; status of EIA in India; current issues in EIA; legal and Regulatory aspects in India; Case study of Chemical industry projects.

UNIT III : Strategic environmental assessment; social impact assessment, cost benefit analysis, environmental appraisal; environmental management-principles, problems and strategies, environmental planning, environmental audit, introduction to ISO and ISO 14000, sustainable development.

SECTION B

UNIT IV: Social impact assessment - Relationship between social impacts and change in community and institutional arrangements. Individual and family level impacts. Communities in transition Documentation of EIA findings – planning – organization of information and visual display materials – Report preparation.

UNIT V: Environmental Management Plan - preparation, implementation and review – Mitigation and Rehabilitation Plans – Policy and guidelines for planning and monitoring programmes – Post project audit – Ethical and Quality aspects of Environmental Impact Assessment- Case Studies.

UNIT VI: Risk assessment: Introduction and scope, project planning; Tools for Environmental Risk Assessment; HAZOP and FEMA methods; exposure assessment; toxicity assessment; hazard identification and assessment; risk characterization, risk communication; environmental monitoring, community involvement; legal and regulatory framework; human and ecological risk assessment.

OUTCOMES:

Students will be able to understand the necessity to study the impacts and risks that will be caused by projects or industries and the methods to overcome these impacts.

The student will also know about the legal requirements of Environmental and Risk Assessment for projects.

References:

1. Canter, L.W., Environmental Impact Assessment, McGraw Hill, New York. 1996.
2. Lawrence, D.P., Environmental Impact Assessment-Practical solutions to recurrent problems, Wiley-Interscience, New Jersey. 2003.
3. World Bank-Source book on EIA
4. Cutter, S.L., Environmental Risk and Hazards, Prentice-Hall of India Pvt. Ltd., New Delhi, 1999.
5. Kolluru Rao, Bartell Steven, Pitblado R and Stricoff., Risk Assessment and Management Handbook", McGraw Hill Inc., New York, 1996.
6. Raghavan, K. V. and Khan, A. A., Methodologies in Hazard Identification and Risk Assessment, Manual by CLRI, 1990.
7. Sam Mannan, Lees, Loss Prevention in the Process Industries, Hazard Identification, Assessment and Control, 4th Edition, Butterworth Heineman, 2012.
8. Barrow, C.J., Social Impact Assessment: An introduction, Oxford University Press, 2000.
9. Glasson, J., Therivel, R., Chadwick, A., Introduction to Environmental Impact assessment London, Research Press, UK, 1994.
10. Judith, P., Handbook of Environment impact assessment, Blackwell Science, 1999.
11. Marriott, B., Environmental impact assessment : A practical Guide, McGraw Hill New York, 1997.

(II) It is also notified for general information of all concerned that the authorities of the University have accepted to provide three (3) Chances i.e. Summer-2023, Winter-2023 & Summer-2024 to the Old Course failure students of the subject Environmental Impact Risk Assessment And Management of Semester V of B.Tech. (Chem.Tech.) to be implemented from Summer-2023 examination onwards.

Sd/-
Registrar
Sant Gadge Baba Amravati University