HSE PRACTICES FOR OFFSHORE AND PETROLEUM INDUSTRIES

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TYPE OF COURSE : Rerun | Core | UG/PG
COURSE DURATION : 12 weeks (29 Jul'19 - 18 Oct'19)
EXAM DATE : 16 Nov 2019

INTENDED AUDIENCE : B.E/B.Tech, M.E/M.Tech, M.S, B.Sc, M.Sc, PhD

INDUSTRIES APPLICABLE TO : Oil and Petroleum Companies, both in India and abroad, Consulting organizations, Safety Executive Teams.

COURSE OUTLINE :

The course will give an overview of the safety and environmental issues in the petroleum industry. It will provide detailed understanding of the methods and techniques to resolve these key issues for making petroleum production and processing, cleaner and safer. This course would educate the participants to identify and assess hazards in any stage of operation, to quantify and manage them as well. This course will also highlight lessons learnt from the past accidents.

ABOUT INSTRUCTOR :

Prof.Srinivasan Chandrasekaran is currently a Professor in the Dept. of Ocean Engineering, Indian Institute of Technology Madras, India. He has teaching, research and industrial experience of about 23 years during which he has supervised many sponsored research projects and offshore consultancy assignments both in India and abroad. His active areas of research include dynamic analysis and design of offshore platforms, Development of geometric forms of complaint offshore structures for ultra-deep water oil exploration and production, sub-sea engineering, Rehabilitation and retrofitting of offshore platforms, structural health monitoring of ocean structures, seismic analysis and design of structures and risk analyses and reliability studies of offshore and petroleum engineering plants.

COURSE PLAN :

Week 01 : Environmental impact and management, Impact of oil and gas industry in marine environment.
Week 02 : Oil hydrocarbons in marine environment, Chemical disposal of offshore industry and environmental management.
Week 03 : Dispersion models and atmospheric pollution, Dispersion models continued.
Week 04 : Hazard assessment, Introduction to HSE.
Week 05 : Safety assurance, Safety in design and operations.
Week 06 : Organizing for safety, Hazard classification and assessment.
Week 07 : Hazard evaluation and control, Hazop, FMEA.
Week 08 : Dose assessment, safety regulations, Toxic releases- models and methods.
Week 09 : Chemical risk analysis, Quantitative risk assessment.
Week 10 : Fire and explosion models, Flammability diagrams.
Week 11 : Fire and explosion: prevention methods, Event tree and fault tree analyses.
Week 12 : Process safety management, Software used in HSE.