OE6007:   PIPELINE & RISER ENGINEERING

Course content:

Introduction to subsea pipelines; Pipeline arrival and discharge conditions; Pipeline hydraulics; Pipeline sizing; Friction loss; Temperature profile; Slug formation and control. Installation of pipelines in shallow and deep water; S and J lay methods; Pipe lay barges and vessels; Pipeline initiation and termination. Pipeline design for stresses in service conditions; Static and dynamic stability; Pipeline flexibility and span analysis; Cathodic protection design. Rigid and flexible risers; Design and installation of risers; Intelligent pigging; Pipeline corrosion monitoring; Pipeline crossings; Bonded and unbonded flexibles

Text Books:

1. Subsea Pipelines and Risers (First Edition) by **Yong Bai and Qiang Bai**, Elsevier, 2005.
2. Offshore Pipelines by **Boyun Guo, Shanhong Song, Jacob Chacko and Ali Ghalambor**, Elsevier, 2005.

Reference Books:

1. Deepwater petroleum exploration and production : A non-technical guide **by William L. Leffler, Richard Pattarozzi, and Gordon Sterling, PennWell**, 2003.
2. Subsea Pipeline Engineering, (2nd Edition) by **Andrew C. Palmer and Roger A. King, PennWell**, 2008.
3. Fundamentals of Marine Riser Mechanics by **Charles P. Sparks, PennWell,** 2007.

Prerequisite:

Consent of teacher

SE-02

SE-03

COURSENO: OE6905

COURSENAME: M.Tech Ocean structures Project (Phase I)

CREDIT DISTRIBUTION: C: L: T: P: E: O: TH:

COURSE TYPE:

DESCRIPTION: Thesis project in the major stream

COURSE CONTENT: Thesis project in the major stream

Text Books:

Reference books:

Prereqisites: