

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Elements of Ocean Engineering

Subject Co-ordinator - Dr. Ashoke Bhar

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction
Lecture 2 - Physical Oceanography - I
Lecture 3 - Physical Oceanography - II
Lecture 4 - Physical Oceanography - III
Lecture 5 - Physical Oceanography - IV
Lecture 6 - Sediments & Open Ocean
Lecture 7 - Open Ocean - I
Lecture 8 - Open Ocean - II
Lecture 9 - Physical Properties of Water
Lecture 10 - Water and Waves
Lecture 11 - Waves - I
Lecture 12 - Waves - II
Lecture 13 - Waves - III
Lecture 14 - Introduction to Offshore Structures - I
Lecture 15 - Introduction to Offshore Structures - II
Lecture 16 - Waves - IV
Lecture 17 - The Wave Spectra
Lecture 18 - The Wave Spectra (Continued...1)
Lecture 19 - The Wave Spectra (Continued...2)
Lecture 20 - Offshore Structures - I
Lecture 21 - Offshore Structures - II
Lecture 22 - Offshore Structures - III
Lecture 23 - Floating Offshore Structures
Lecture 24 - Drilling from Platforms
Lecture 25 - Drilling and Topsides
Lecture 26 - Topsides
Lecture 27 - Mooring Systems
Lecture 28 - Mooring Systems (Continued...1)
Lecture 29 - Static Analysis of Mooring Cable

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- Lecture 30 - Static Analysis of Mooring Cable (Continued...)
- Lecture 31 - Mooring Systems (Continued...2)
- Lecture 32 - Mooring Systems (Continued...3)
- Lecture 33 - Mooring Systems (Continued...4)
- Lecture 34 - Mooring Systems (Continued...5)
- Lecture 35 - Mooring Systems (Continued...6)
- Lecture 36 - Fixed Offshore Structures
- Lecture 37 - Fixed Offshore Structures (Continued...)
- Lecture 38 - Structural Analysis of Jacket Platforms
- Lecture 39 - Structural Analysis of Jacket Platforms (Continued...1)
- Lecture 40 - Structural Analysis of Jacket Platforms (Continued...2)
- Lecture 41 - Jacket Pile Selection
- Lecture 42 - Jacket Pile Selection (Continued...1)
- Lecture 43 - Jacket Pile Selection (Continued...2)
- Lecture 44 - Floating Platform Design
- Lecture 45 - Semi-Submersibles
- Lecture 46 - Semi-Submersibles & TLPs
- Lecture 47 - Tension Leg Platform
- Lecture 48 - Tension Leg Platform (Continued...)
- Lecture 49 - SPAR Platform

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Hydrostatics and Stability

Subject Co-ordinator - Dr. Hari V. Warrior

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction
Lecture 2 - Archimedes Principle
Lecture 3 - Archimedes Principle (Continued...)
Lecture 4 - Numerical Integration
Lecture 5 - Problems in Stability - I
Lecture 6 - Problems in Stability - II
Lecture 7 - Problems in Stability - III
Lecture 8 - Problems in Integration
Lecture 9 - Free Surface Effect
Lecture 10 - Inclining Experiment
Lecture 11 - Hydrostatic Curves - I
Lecture 12 - Hydrostatic Curves - II
Lecture 13 - Stability Curve
Lecture 14 - Dynamical Stability - I
Lecture 15 - Dynamical Stability - II
Lecture 16 - Heeling Moment - I
Lecture 17 - Heeling Moment - II
Lecture 18 - Heeling Moment - III
Lecture 19 - Dynamical Stability - III
Lecture 20 - Discussion
Lecture 21 - Righting Stability - I
Lecture 22 - Righting Stability - II
Lecture 23 - Trim Calculations - I
Lecture 24 - Trim Calculations - II
Lecture 25 - Trim Stability - I
Lecture 26 - Trim Stability - II
Lecture 27 - Dry Docking - I
Lecture 28 - Dry Docking - II
Lecture 29 - Bilging - I

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- Lecture 30 - Bilging - II
- Lecture 31 - Bilging - III
- Lecture 32 - Bilging - IV
- Lecture 33 - Safety Regulations
- Lecture 34 - Safety Regulations (Continued...)
- Lecture 35 - Safety Regulations (Continued...)
- Lecture 36 - Ship Stability on Waves
- Lecture 37 - Ship Stability on Waves (Continued...)
- Lecture 38 - Ship Stability on Waves (Continued...)
- Lecture 39 - Wave Theory
- Lecture 40 - Conclusion

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Marine Construction and Welding

Subject Co-ordinator - Prof. N.R. Mandal

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction to ships & offshore structures
- Lecture 2 - Characteristics of shipbuilding industry
- Lecture 3 - Structural Requirement
- Lecture 4 - Basic Structural Components
- Lecture 5 - Structural Subassemblies
- Lecture 6 - Bulkheads
- Lecture 7 - Decks & Shells
- Lecture 8 - Structural Assemblies Double Bottom Construction
- Lecture 9 - Wing Tanks & Duct Keels
- Lecture 10 - Fore & Aftend Construction
- Lecture 11 - General Cargo Carrier
- Lecture 12 - Bulk Carrier
- Lecture 13 - Structural Details
- Lecture 14 - Container Ship
- Lecture 15 - RO-RO Ship
- Lecture 16 - Oil Tanker
- Lecture 17 - Structural Alignment & Continuity
- Lecture 18 - Steel Material Preparation
- Lecture 19 - Shot Blasting
- Lecture 20 - Acid Pickling
- Lecture 21 - Plate Cutting
- Lecture 22 - Plate & Section Forming - I
- Lecture 23 - Plate & Section Forming - II
- Lecture 24 - Line Heating
- Lecture 25 - Fusion Welding & Power Source
- Lecture 26 - Welding Parameters & their Effects
- Lecture 27 - Welding Methods
- Lecture 28 - Shielded Metal Arc Welding
- Lecture 29 - Gas Metal Arc Welding - I

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- Lecture 30 - Gas Metal Arc Welding - II
- Lecture 31 - Gas Tungsten Arc Welding
- Lecture 32 - Submerged Arc Welding
- Lecture 33 - Electroslag Welding
- Lecture 34 - Electrogas Welding
- Lecture 35 - Friction Stir Welding
- Lecture 36 - FSW Metallurgy
- Lecture 37 - Welding Defects & NDT
- Lecture 38 - Welding Distortions
- Lecture 39 - Distortion Mechanism & Types of Distortion
- Lecture 40 - Distortion Control & Mitigation
- Lecture 41 - Welding Sequence

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Marine Hydrodynamics

Subject Co-ordinator - Dr. T. Sahoo

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction to Marine Hydrodynamics
- Lecture 2 - Law of Conservation of Mass - Continuity of Equation
- Lecture 3 - Streamlines and Flow Direction
- Lecture 4 - Worked Examples on Various Types of Flow
- Lecture 5 - Equation of Motion (Law of Conservation of Momentum)
- Lecture 6 - Applications of Equations of Motion
- Lecture 7 - Applications of Equations of Motion (Continued...)
- Lecture 8 - Two Dimensional Flows
- Lecture 9 - Two Dimensional Flows (Continued...)
- Lecture 10 - Source, Sink and Doublet
- Lecture 11 - Worked Examples on Two Dimensional Flows
- Lecture 12 - Conformal Mapping and Joukowski Transformation
- Lecture 13 - Uniform Flow Past an Elliptic Cylinder
- Lecture 14 - Aerofoil theory
- Lecture 15 - Aerofoil theory (Continued...)
- Lecture 16 - Aerofoil theory (Continued...)
- Lecture 17 - Schwarz - Christoffel Transformation
- Lecture 18 - Motion of a cylinder
- Lecture 19 - Vertex Motion
- Lecture 20 - Irrotational Flow - A Bird's eyeview
- Lecture 21 - Introduction to Water Waves
- Lecture 22 - Basic Equation and Conditions of Water Waves
- Lecture 23 - Water particle kinematics in wave motion
- Lecture 24 - Capillary Gravity Waves
- Lecture 25 - Linearised Long Wave Equation
- Lecture 26 - Linearised Long Wave Equation (Continued...)
- Lecture 27 - Wave motion in two layer fluids
- Lecture 28 - Worked Examples on Wave Motion
- Lecture 29 - Worked Examples on Wave Motion (Continued...)

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- Lecture 30 - Gravity wave transformation and energy rotation
- Lecture 31 - Gravity wave transformation and energy rotation (Continued...)
- Lecture 32 - Gravity wave transformation and energy rotation (Continued...)
- Lecture 33 - Navier - Stokes equation of motion
- Lecture 34 - Analysis of Basic Flow Problems
- Lecture 35 - Analysis of Basic Flow Problems (Continued...)
- Lecture 36 - Unsteady unidirectional flows
- Lecture 37 - Unsteady unidirectional flows (Continued...)
- Lecture 38 - An introduction to Boundary Layer Theory
- Lecture 39 - Solution methods for Boundary Layer Equations
- Lecture 40 - Solutions Methods for Boundary Layer Equations (Continued...)

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Seakeeping and Manoeuvring

Subject Co-ordinator - Prof. Debabrata Sen

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Regular Water Waves - I
- Lecture 2 - Regular Water Waves - II
- Lecture 3 - Definition of Ship Motions & Encounter Frequency
- Lecture 4 - Single Degree of Freedom Motions in Regular Waves
- Lecture 5 - Uncoupled Heave, Pitch and Roll - I
- Lecture 6 - Uncoupled Heave, Pitch and Roll - II
- Lecture 7 - Uncoupled Heave, Pitch and Roll - III
- Lecture 8 - Uncoupled Heave, Pitch and Roll - IV
- Lecture 9 - Uncoupled Heave, Pitch and Roll - V
- Lecture 10 - Coupled Motions
- Lecture 11 - Irregular Waves
- Lecture 12 - Description of Irregular Waves by Spectrum
- Lecture 13 - Theoretical Wave Spectrum
- Lecture 14 - Ship Motion in Irregular Waves - I
- Lecture 15 - Ship Motion in Irregular Waves - II
- Lecture 16 - Ship Motion in Irregular Waves - III
- Lecture 17 - Description of Short-Crested Sea
- Lecture 18 - Motions in Short-Crested Sea
- Lecture 19 - Derived Responses & Dynamic Effects - I
- Lecture 20 - Derived Responses & Dynamic Effects - II
- Lecture 21 - Derived Responses & Dynamic Effects - III
- Lecture 22 - Seakeeping Considerations in Design
- Lecture 23 - Manoeuvring
- Lecture 24 - Dynamic Equations of Motion - I
- Lecture 25 - Dynamic Equations of Motion - II
- Lecture 26 - Hydrodynamic Derivatives
- Lecture 27 - Controls-Fixed Stability
- Lecture 28 - Stability & Cotrollability
- Lecture 29 - Definitive Manoeuvres - I

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- Lecture 30 - Definitive Manoeuvres - II
- Lecture 31 - Definitive Manoeuvres - III
- Lecture 32 - Non-linear Equations of Motion
- Lecture 33 - Non-linear Equations & Model Tests
- Lecture 34 - Captive Model Tests and Experimental Determination of Hydrodynamic Derivatives
- Lecture 35 - PMM Tests - I
- Lecture 36 - PMM Tests - II
- Lecture 37 - Rudder & Control Surfaces - I
- Lecture 38 - Rudder & Control Surfaces - II
- Lecture 39 - Theoretical Determination of Hydrodynamic Derivatives - I
- Lecture 40 - Theoretical Determination of Hydrodynamic Derivatives - II

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Applied Thermodynamics for Marine Systems

Subject Co-ordinator - Prof. P.K. Das

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction & Some Definitions
- Lecture 2 - First Law of Thermodynamics (Closed System)
- Lecture 3 - First Law of Thermodynamics (Open System)
- Lecture 4 - Second Law of Thermodynamics
- Lecture 5 - Second Law and Carnot Principle
- Lecture 6 - Property of Pure Substance, Steam Table
- Lecture 7 - Ideal Gas Laws, Different Processes
- Lecture 8 - Introduction to Vapour Power Cycle
- Lecture 9 - Vapour Power Cycle
- Lecture 10 - Steam Power Cycle, Steam Nozzle
- Lecture 11 - Basic Concept of Turbine, Velocity Diagram
- Lecture 12 - Steam Turbine-Impulse
- Lecture 13 - Reaction Turbine Compounding
- Lecture 14 - Comparison of Different Staging Arrangement
- Lecture 15 - Basics Laws of Fluid Mechanics
- Lecture 16 - Pipe Friction, Major Loss, Minor Loss
- Lecture 17 - Pipeline & Pipe Network
- Lecture 18 - Refrigeration Vapour Compression Cycle
- Lecture 19 - Psychometrics
- Lecture 20 - Psychometrics (Continued...)
- Lecture 21 - Psychometric Processes
- Lecture 22 - Psychometric Processes (Continued...), Air Conditioning
- Lecture 23 - Summer & Winter Air Conditioning
- Lecture 24 - Gas Power Cycles, Cycles for IC Engines
- Lecture 25 - Gas Turbine Cycles
- Lecture 26 - Modification of Brayton Cycle
- Lecture 27 - Introduction to Convective Heat Transfer Forced & Free Convection

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Performance of Marine Vehicles at Sea

Subject Co-ordinator - Prof. Debabrata Sen, Prof. S.C. Misra

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Components of Resistance - I
- Lecture 2 - Components of Resistance - II
- Lecture 3 - Dimensional Analysis
- Lecture 4 - Frictional Resistance
- Lecture 5 - Wave Making Resistance
- Lecture 6 - Other Components of Resistance
- Lecture 7 - Model Experiments
- Lecture 8 - Shallow Water Effects
- Lecture 9 - Ship hull form and Resistance
- Lecture 10 - Propeller Geometry - Part I
- Lecture 11 - Propeller Geometry - Part II
- Lecture 12 - Introduction to High Speed Crafts - Part I
- Lecture 13 - Introduction to High Speed Crafts - Part II
- Lecture 14 - Propeller in Open Water - Part I
- Lecture 15 - Propeller in Open Water - Part II
- Lecture 16 - Propeller 'behind' a ship
- Lecture 17 - Propeller experiments
- Lecture 18 - Propeller theories - Part I
- Lecture 19 - Propeller Theories
- Lecture 20 - Cavitation
- Lecture 21 - Regular Sea Waves - I
- Lecture 22 - Regular Sea Waves - II
- Lecture 23 - Irregular sea Waves - I
- Lecture 24 - Irregular Sea Waves - II
- Lecture 25 - Ship Motion in Regular Waves - I
- Lecture 26 - Ship Motion in Regular Waves - II
- Lecture 27 - Ship Motion in Regular Waves - III
- Lecture 28 - Ship Motion in irregular Waves - I
- Lecture 29 - Ship Motion in irregular Waves - II

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- Lecture 30 - Ship Motion in irregular Waves - III
- Lecture 31 - Motion in Short Crested Sea, Coupled Motions
- Lecture 32 - Derived Responses
- Lecture 33 - Ship Controllability
- Lecture 34 - Equation of Motion in Horizontal Plane
- Lecture 35 - Hydrodynamic Derivatives and Stability
- Lecture 36 - Hydrodynamic Derivatives and Stability
- Lecture 37 - Ship Trials and Maneuvers - I
- Lecture 38 - Ship Trials and Maneuvers - II
- Lecture 39 - Heel During Turn, IMO Requirements
- Lecture 40 - Rudder Hydrodynamics

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Strength and Vibration of Marine Structures

Subject Co-ordinator - Prof. S.K. Satsangi, Prof. A.H. Sheikh

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction to Ship Structures - I
- Lecture 2 - Introduction to Ship Structures - II
- Lecture 3 - Deflection of Structure Beam - I
- Lecture 4 - Deflection of Structure Beam - II
- Lecture 5 - Deflection of Structure Beam - III
- Lecture 6 - Deflection of Structure Beam - IV
- Lecture 7 - Statically Indeterminate Structures - I
- Lecture 8 - Statically Indeterminate Structures - II
- Lecture 9 - Statically Indeterminate Structures - III
- Lecture 10 - Statically Indeterminate Structures - IV
- Lecture 11 - Statically Indeterminate Structures - V
- Lecture 12 - Statically Indeterminate Structures - VI
- Lecture 13 - Longitudinal Bending of Hull Girder - I
- Lecture 14 - Longitudinal Bending of Hull Girder - II
- Lecture 15 - Longitudinal Bending of Hull Grider - III
- Lecture 16 - Theory of Column - I
- Lecture 17 - Theory of Column - II
- Lecture 18 - Theory of Column - III
- Lecture 19 - Theory of Column - IV
- Lecture 20 - Calculation of Momentum of Inertia of Main Section
- Lecture 21 - Bending in Inclined Condition
- Lecture 22 - Calculation of Deflection/Shear Stress
- Lecture 23 - Ship Vibration - I
- Lecture 24 - Ship Vibration - II
- Lecture 25 - Ship Vibration - III
- Lecture 26 - Ship Vibration - IV
- Lecture 27 - Ship Vibration - V
- Lecture 28 - Propeller Induced Vibration & Hull Frequency Estimation
- Lecture 29 - Hull Frequency Estimation from Basic Group (Continued...)

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- Lecture 30 - Analysis of Bulkhead - I
- Lecture 31 - Analysis of Bulkhead - II
- Lecture 32 - Stress Concentration/Structural Discontinuities
- Lecture 33 - Composite Construction
- Lecture 34 - Method of Plastic Analysis
- Lecture 35 - Calculation of Natural Frequency of Hull Girder
- Lecture 36 - Hull Resonance Diagram

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Water Economics and Governance

Subject Co-ordinator - Prof. Manoj Kumar Tiwari

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction

Lecture 2 - Global Water Availability and Uses

Lecture 3 - Water Availability and Uses in India

Lecture 4 - Surface Water and Ground Water Resources

Lecture 5 - Water Use Practices and Major Challenges

Lecture 6 - Background to Water Rights

Lecture 7 - Water Rights

Lecture 8 - Right to Sanitation

Lecture 9 - Rights to Water and Sanitation - Underline Principals and Implementation

Lecture 10 - Water Rights

Lecture 11 - Water Sustainability

Lecture 12 - The Dublin Statement on Water Sustainability

Lecture 13 - Action Agenda in the Dublin Statement on Water Sustainability

Lecture 14 - Water Sustainability

Lecture 15 - Water Sustainability

Lecture 16 - Valuing Water

Lecture 17 - Valuing Water

Lecture 18 - Valuing Water

Lecture 19 - Valuing Water

Lecture 20 - Valuing Water

Lecture 21 - Pricing Water

Lecture 22 - Pricing Water

Lecture 23 - Pricing Water

Lecture 24 - Pricing Water

Lecture 25 - Pricing Water

Lecture 26 - Water Pricing

Lecture 27 - Conflicts in Water Pricing

Lecture 28 - Conflicts in Water Pricing

Lecture 29 - Conflicts in Water Pricing

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- Lecture 30 - Water Pricing Case Studies
- Lecture 31 - Economics of Water Projects
- Lecture 32 - Economics of Water Projects
- Lecture 33 - Economics of Water Projects
- Lecture 34 - Economics of Water Projects
- Lecture 35 - Economics of Demand and Sectoral Allocation
- Lecture 36 - Economics Evaluation of Water Projects
- Lecture 37 - Evaluation of Water Projects
- Lecture 38 - Evaluation of Water Projects
- Lecture 39 - Evaluation of Water Projects
- Lecture 40 - Evaluation of Water Projects
- Lecture 41 - Evaluation of Water Projects
- Lecture 42 - Evaluation of Water Projects
- Lecture 43 - Water Governance
- Lecture 44 - Elements, Dimensions and Principles of Water Governance
- Lecture 45 - Principles of Water Governance
- Lecture 46 - Principles of Water Governance and Effective Water Governance Schemes
- Lecture 47 - Effective Water Governance Schemes and its Benchmarking
- Lecture 48 - Decision Making and Implementation in Water Governance and its Benchmarking
- Lecture 49 - Water Governance in India
- Lecture 50 - Water Governance in India
- Lecture 51 - Water Governance in India
- Lecture 52 - Water Governance in India
- Lecture 53 - Water Governance in India
- Lecture 54 - Water Dispute Management
- Lecture 55 - Water Dispute Management
- Lecture 56 - Water Dispute Management
- Lecture 57 - Water Dispute Management
- Lecture 58 - Global Water Diplomacy
- Lecture 59 - Global Water Diplomacy
- Lecture 60 - Global Water Diplomacy
- Lecture 61 - Course Summary
- Lecture 62 - Course Summary (Continued...)
- Lecture 63 - Live Session-1
- Lecture 64 - Live Session-2
- Lecture 65 - Live Session-2 (April 20, 2018)

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Marine Propulsion

Subject Co-ordinator - Prof. Anirban Bhattacharyya

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction
Lecture 2 - Propeller Geometry
Lecture 3 - Propeller Geometry (Continued...)
Lecture 4 - Propeller Theory - I
Lecture 5 - Propeller Theory - II
Lecture 6 - Propeller Theory - III
Lecture 7 - Propeller Theory - IV
Lecture 8 - Propeller Theory - V
Lecture 9 - Propeller Theory - VI
Lecture 10 - Propeller Theory - VII
Lecture 11 - Propeller in Open Water
Lecture 12 - Dimensional Analysis and Similarity
Lecture 13 - Propeller Open Water Characteristics
Lecture 14 - Propeller Open Water Characteristics (Continued...)
Lecture 15 - Methodical Propeller Series
Lecture 16 - Hull-Propeller Interaction
Lecture 17 - Hull-Propeller Interaction (Continued...)
Lecture 18 - Ship Powering and Efficiency Components
Lecture 19 - Engine-Propeller Matching - Part I
Lecture 20 - Engine-Propeller Matching - Part II
Lecture 21 - Propeller Model Tests - Part I
Lecture 22 - Propeller Model Tests - Part II
Lecture 23 - Propeller Model Tests - Part III
Lecture 24 - Propeller Cavitation - Part I
Lecture 25 - Propeller Cavitation - Part II
Lecture 26 - Propeller Strength - Part I
Lecture 27 - Propeller Strength - Part II
Lecture 28 - Propeller Design - Part I
Lecture 29 - Propeller Design - Part II

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- Lecture 30 - Propeller Design - Part III
- Lecture 31 - Controllable Pitch Propeller
- Lecture 32 - Ducted Propeller
- Lecture 33 - Ducted Propeller (Continued...)
- Lecture 34 - Problems on Propeller Performance
- Lecture 35 - Surface Piercing Propeller, Podded Propeller, Thruster
- Lecture 36 - Waterjet Propulsion
- Lecture 37 - Unconventional Propulsors
- Lecture 38 - Unconventional Propulsors (Continued...)
- Lecture 39 - Miscellaneous Topics
- Lecture 40 - Energy Saving Devices

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Numerical Ship and Offshore Hydrodynamics

Subject Co-ordinator - Prof. Ranadev Datta

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction
Lecture 2 - Introduction to Seakeeping - 1
Lecture 3 - Introduction to Seakeeping - 2
Lecture 4 - Seakeeping - 3
Lecture 5 - Seakeeping - 4
Lecture 6 - Seakeeping - 5
Lecture 7 - Seakeeping - 6
Lecture 8 - Seakeeping - 7
Lecture 9 - Hydrodynamics - 1
Lecture 10 - Hydrodynamics - 2
Lecture 11 - Wave and Wave Effect
Lecture 12 - Waves - 2
Lecture 13 - Waves - 3
Lecture 14 - Introduction to BEM
Lecture 15 - Introduction to BEM (Continued...)
Lecture 16 - Lower Order Panel Method
Lecture 17 - Lower Order Panel Method (Continued...)
Lecture 18 - Case Study - Part 1
Lecture 19 - Case Study - Part 2
Lecture 20 - Demonstration of Panel Method Code
Lecture 21 - Frequency Domain Panel Method
Lecture 22 - Frequency Domain Panel Method (Continued...)
Lecture 23 - Frequency Domain Panel Method (Continued...)
Lecture 24 - Frequency Domain Panel Method (Continued...)
Lecture 25 - Frequency Domain Panel Method (Continued...)
Lecture 26 - Frequency Domain Panel Method (Continued...)
Lecture 27 - Frequency Domain Panel Method (Continued...)
Lecture 28 - Frequency Domain Panel Method (Continued...)
Lecture 29 - Cummins Equation

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- Lecture 30 - IRF Based Solution - Part 1
- Lecture 31 - IRF Based Solution - Part 2
- Lecture 32 - Time Domain Solution Using IRF
- Lecture 33 - Time Domain Solution Using IRF (Continued...)
- Lecture 34 - Numerical Computation of IRF Based Method
- Lecture 35 - Numerical Computation of IRF Based Method (Continued...)
- Lecture 36 - Forward Speed Effects
- Lecture 37 - Strip Theory - Part 1
- Lecture 38 - Strip Theory - Part 2
- Lecture 39 - Strip Theory - Part 3
- Lecture 40 - Strip Theory - Part 4
- Lecture 41 - Strip Theory - Part 5
- Lecture 42 - Strip Theory - Part 6
- Lecture 43 - Strip Theory - Part 7
- Lecture 44 - Time Domain Panel Method
- Lecture 45 - Time Domain Panel Method (Continued...)
- Lecture 46 - Time Domain Panel Method (Continued...)
- Lecture 47 - Time Domain Panel Method (Continued...)
- Lecture 48 - Time Domain Panel Method (Continued...)
- Lecture 49 - Non Linear Time Domain Panel Method
- Lecture 50 - Non Linear Time Domain Panel Method (Continued...)
- Lecture 51 - Time Domain Panel Method - Code Development
- Lecture 52 - Ship Hydroelasticity
- Lecture 53 - Hydroelasticity
- Lecture 54 - Hydroelasticity (Continued...)
- Lecture 55 - Hydroelasticity (Continued...)
- Lecture 56 - Semi Analytic Method
- Lecture 57 - Semi Analytic Method (Continued...)
- Lecture 58 - Including Non linear Forces in BEM Code
- Lecture 59 - Including Non linear Forces in BEM Code (Continued...)
- Lecture 60 - Closer

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Seakeeping of Ships and Offshore Structures

Subject Co-ordinator - Prof. Ranadev Datta

Co-ordinating Institute - IIT - Kharagpur

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction
- Lecture 2 - Basic Hydrodynamics - Part 1
- Lecture 3 - Basic Hydrodynamics - Part 2
- Lecture 4 - Basic Water Wave Theory
- Lecture 5 - Water Wave - Part II
- Lecture 6 - Non-linear Wave
- Lecture 7 - Ir-regular Waves
- Lecture 8 - Sea Spectrum
- Lecture 9 - Encounter Frequency
- Lecture 10 - Problem Solving
- Lecture 11 - Coupled and Uncoupled Motion
- Lecture 12 - Uncoupled Heave Motion - Part I
- Lecture 13 - Uncoupled Heave Motion - Part II
- Lecture 14 - Uncoupled Heave Motion - Part III
- Lecture 15 - Uncoupled Heave Motion - Part IV
- Lecture 16 - Uncoupled Heave Motion - Part V
- Lecture 17 - Uncoupled Heave Motion - Part VI
- Lecture 18 - Basic Strip Theory Code
- Lecture 19 - Problem Discussion on Uncoupled Heave Motion
- Lecture 20 - Uncoupled Pitch Motion
- Lecture 21 - Uncoupled Pitch and Roll Motion
- Lecture 22 - Discussion Uncoupled Roll Motion
- Lecture 23 - Problem Solving
- Lecture 24 - Coupled Equation of Motion
- Lecture 25 - Brief Discussion on Industry Standards Commercial Software for Seakeeping
- Lecture 26 - Loads Under Extreme Waves - Part 1
- Lecture 27 - Loads Under Extreme Waves - Part 2
- Lecture 28 - Motion Stabilizer
- Lecture 29 - General Discussion on Various Offshore Structures

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Morison's Equation - Part I
- Lecture 31 - Morison's Equation - Part II
- Lecture 32 - Mooring Analysis - Part I
- Lecture 33 - Mooring Analysis - Part II
- Lecture 34 - Mooring Analysis - Part III
- Lecture 35 - Discussion on Orcaflex Software
- Lecture 36 - Revision Ir-regular Waves
- Lecture 37 - Problem Solving
- Lecture 38 - Short Crested Wave
- Lecture 39 - Encounter Wave Spectrum
- Lecture 40 - Encounter Wave Spectrum (Continued...)
- Lecture 41 - Response Spectrum - Part I
- Lecture 42 - Response Spectrum - Part II
- Lecture 43 - Problem Solving
- Lecture 44 - Derived Motion - Part II
- Lecture 45 - Vertical Bow Motion - Part II
- Lecture 46 - Relative Bow Motion and Deck Wetness
- Lecture 47 - Deck Wetness
- Lecture 48 - Derived Responses : Slamming
- Lecture 49 - Problem Solving
- Lecture 50 - Sea Sickness and Others
- Lecture 51 - 2nd Order Forces - Part I
- Lecture 52 - 2nd Order Forces - Part II
- Lecture 53 - Added Resistance and Sloshing
- Lecture 54 - Dynamic Positioning - Part I
- Lecture 55 - Dynamic Positioning - Part II
- Lecture 56 - Seakeeping Design Consideration - Part I
- Lecture 57 - Seakeeping Design Consideration - Part II
- Lecture 58 - Discussion on Gate Paper
- Lecture 59 - Problems Solving
- Lecture 60 - Problem and Closer

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Design of Offshore Structures

Subject Co-ordinator - Dr. S. Nallayarasu

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Loads On Offshore Structures - 1
Lecture 2 - Loads On Offshore Structures - 2
Lecture 3 - Loads On Offshore Structures - 3
Lecture 4 - Loads On Offshore Structures - 4
Lecture 5 - Loads On Offshore Structures - 5
Lecture 6 - Loads On Offshore Structures - 6
Lecture 7 - Loads On Offshore Structures - 7
Lecture 8 - Concepts of Fixed Offshore Platform Deck and Jacket - 1
Lecture 9 - Concepts of Fixed Offshore Platform Deck and Jacket - 2
Lecture 10 - Concepts of Fixed Offshore Platform Deck and Jacket - 3
Lecture 11 - Concepts of Fixed Offshore Platform Deck and Jacket - 4
Lecture 12 - Concepts of Fixed Offshore Platform Deck and Jacket - 5
Lecture 13 - Steel Tubular Member Design - 1
Lecture 14 - Steel Tubular Member Design - 2
Lecture 15 - Steel Tubular Member Design - 3
Lecture 16 - Steel Tubular Member Design - 4
Lecture 17 - Steel Tubular Member Design - 5
Lecture 18 - Tubular Joint Design for Static and Cyclic Loads - 1
Lecture 19 - Tubular Joint Design for Static and Cyclic Loads - 2
Lecture 20 - Tubular Joint Design for Static and Cyclic Loads - 3
Lecture 21 - Tubular Joint Design for Static and Cyclic Loads - 4
Lecture 22 - Tubular Joint Design for Static and Cyclic Loads - 5
Lecture 23 - Tubular Joint Design for Static and Cyclic Loads - 6
Lecture 24 - Tubular Joint Design for Static and Cyclic Loads - 7
Lecture 25 - Tubular Joint Design for Static and Cyclic Loads - 8
Lecture 26 - Tubular Joint Design for Static and Cyclic Loads - 9
Lecture 27 - Tubular Joint Design for Static and Cyclic Loads - 10
Lecture 28 - Tubular Joint Design for Static and Cyclic Loads - 11
Lecture 29 - Tubular Joint Design for Static and Cyclic Loads - 12

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

Lecture 30	- Jackup RIGS-Analysis and Design	- 1
Lecture 31	- Jackup RIGS-Analysis and Design	- 2
Lecture 32	- Jackup RIGS-Analysis and Design	- 3
Lecture 33	- Jackup RIGS-Analysis and Design	- 4
Lecture 34	- Jackup RIGS-Analysis and Design	- 5
Lecture 35	- Design Against Accidental Loads	- 1
Lecture 36	- Design Against Accidental Loads	- 2
Lecture 37	- Design Against Accidental Loads	- 3
Lecture 38	- Design Against Accidental Loads	- 4
Lecture 39	- Design Against Accidental Loads	- 5
Lecture 40	- Design Against Accidental Loads	- 6
Lecture 41	- Design Against Accidental Loads	- 7
Lecture 42	- Design Against Accidental Loads	- 8

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Foundation for Offshore Structures

Subject Co-ordinator - Dr. S. Nallayarasu

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Basics of Soil Mechanics - I
Lecture 2 - Basics of Soil Mechanics - II
Lecture 3 - Basics of Soil Mechanics - III
Lecture 4 - Basics of Soil Mechanics - IV
Lecture 5 - Basics of Soil Mechanics - V
Lecture 6 - Basics of Soil Mechanics - VI
Lecture 7 - Basics of Soil Mechanics - VII
Lecture 8 - Bearing Capacity of Foundations - I
Lecture 9 - Bearing Capacity of Foundations - II
Lecture 10 - Pile Foundation - I
Lecture 11 - Pile Foundation - II
Lecture 12 - Pile Foundation - III
Lecture 13 - Pile Foundation - IV
Lecture 14 - Pile Foundation - V
Lecture 15 - Pile Foundation - VI
Lecture 16 - Pile Installation - I
Lecture 17 - Pile Installation - II
Lecture 18 - Pile Driveability Analysis - I
Lecture 19 - Pile Driveability Analysis - II
Lecture 20 - Pile Driveability Analysis - III
Lecture 21 - Pile Driveability Analysis - IV
Lecture 22 - Pile Driveability Analysis - V
Lecture 23 - Onbottom Stability of Jackets - I
Lecture 24 - Onbottom Stability of Jackets - II
Lecture 25 - Pile Load Test - I
Lecture 26 - Pile Load Test - II
Lecture 27 - Pile Load Test - III
Lecture 28 - Special Topics
Lecture 29 - Special Foundations - I

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Special Foundations - II
- Lecture 31 - Special Foundations - III
- Lecture 32 - Pile Group Effects
- Lecture 33 - Two Pile Group Effect For Axial Load

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Health, Safety and Environmental Management in
Petroleum and Offshore Engineering

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction and Terminologies
- Lecture 2 - Introduction to HSE
- Lecture 3 - Safety assurance and assessment
- Lecture 4 - Safety assurance and assessment (Continued...)
- Lecture 5 - Safety in design and operations
- Lecture 6 - Organizing for safety
- Lecture 7 - Hazard classification and assessment, Hazard evaluation and hazard control
- Lecture 8 - HaZOP
- Lecture 9 - HaZOP (Continued...)
- Lecture 10 - Hazard evaluation and hazard control
- Lecture 11 - Hazard Identification and Management in Oil & Gas Industry using HAZOP
- Lecture 12 - FMEA
- Lecture 13 - FMEA (Continued...)
- Lecture 14 - Environmental Issues and Management
- Lecture 15 - Impact of Oil and Gas Industry on Marine Environment
- Lecture 16 - Oil Hydrocarbon in Marine Environment
- Lecture 17 - Chemicals and Wastes from Offshore and Oil Industry
- Lecture 18 - Dispersion Models & Atmospheric Pollution
- Lecture 19 - Atmospheric Pollution (Continued...)
- Lecture 20 - Hazard Assessment and Accident Scenario
- Lecture 21 - Dose Assessment, Safety Regulation
- Lecture 22 - Toxic Release and Dispersion Modeling
- Lecture 23 - Chemical Exposure Index (CEI)
- Lecture 24 - Chemical Exposure Index (Continued.)
- Lecture 25 - Quantitative Risk Assessment
- Lecture 26 - Quantitative Risk Assessment (Liquid Release Models Case Study - Continued...)
- Lecture 27 - Fire and Explosion Modeling
- Lecture 28 - Fire and Explosion Modeling Flammability Diagrams

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 29 - Explosion Modeling
- Lecture 30 - Fire and Explosion Preventive Measures
- Lecture 31 - Probabilistic Risk Analysis
- Lecture 32 - Safety Measures in Design and Process Operations
- Lecture 33 - Case Studies
- Lecture 34 - Case Studies (Continued...)
- Lecture 35 - Software Used in HSE an Over View

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Port and Harbour Structures

Subject Co-ordinator - Prof. R. Sundaravadivelu

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Layout of ports
- Lecture 2 - Continuation of layout of ports
- Lecture 3 - Visakhapatnam port
- Lecture 4 - Ships and size of ships
- Lecture 5 - Port planning
- Lecture 6 - Harbour layout
- Lecture 7 - Site characteristics & navigation channel
- Lecture 8 - Bathymetric survey
- Lecture 9 - Tide, surge, tsunami and wave
- Lecture 10 - Wave rose diagram
- Lecture 11 - Breakwater
- Lecture 12 - Design of breakwater - Part-1
- Lecture 13 - Design of breakwater - Part-2
- Lecture 14 - Berm breakwater
- Lecture 15 - Dredging & methods of disposal
- Lecture 16 - Berthing structures modelling
- Lecture 17 - Berthing structures - analyses
- Lecture 18 - Loads
- Lecture 19 - Types of berthing structures
- Lecture 20 - Design of berthing, structures-1
- Lecture 21 - Design of offshore berthing, structures-1
- Lecture 22 - Estimation of mooring, berthing and seismic forces
- Lecture 23 - Estimation seismic forces
- Lecture 24 - Active and passive earth pressure and differential water pressure
- Lecture 25 - Load combinations and design
- Lecture 26 - Fenders
- Lecture 27 - Mechanical handling system
- Lecture 28 - Single buoy mooring and open sea jetty - Part 1
- Lecture 29 - Single buoy mooring and open sea jetty - Part 2

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Slipway, drydock, floating dock, shiplift
- Lecture 31 - Soil structure interaction
- Lecture 32 - Calculation of fixity depth
- Lecture 33 - Pile load test
- Lecture 34 - Ground improvement techniques
- Lecture 35 - Analysis of pile with spring support
- Lecture 36 - UPV, Half cell potential, Low high Integrity Test
- Lecture 37 - Mooring Dolphin at KPT
- Lecture 38 - Coastal structures and environmental management
- Lecture 39 - BOQ and Cost Estimate
- Lecture 40 - Proposed Mega Terminal Chennai
- Lecture 41 - Preliminary Project Report on Shipyard
- Lecture 42 - Procedures & clearances before implementation of a project
- Lecture 43 - Detailed project report
- Lecture 44 - Environmental studies of a project
- Lecture 45 - Design of pile
- Lecture 46 - Design and construction of diaphragm wall
- Lecture 47 - Empirical relationship between spt and several soil properties
- Lecture 48 - Model studies for a deep water port_case study

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Ship Resistance and Propulsion

Subject Co-ordinator - Dr. P. Krishnankutty, Prof. V. Anantha Subramanian

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Syllabus and Introduction

Lecture 2 - Seaway Effects on Resistance

Lecture 3 - Ship Types and Powering Aspects

Lecture 4 - Frictional Resistance and Turbulence Stimulation

Lecture 5 - Wave Making Resistance

Lecture 6 - Bulbous Bow on Ship Resistance

Lecture 7 - Air and Wind Resistance Dimensional Analysis - I

Lecture 8 - Dimensional Analysis - II, Model Tests and Ship Resistance Prediction Methods - I

Lecture 9 - Model Tests and Ship Resistance Prediction Methods - II

Lecture 10 - Model Tests and Ship Resistance Prediction Methods - III

Lecture 11 - Resistance in Shallow Water

Lecture 12 - Canal Effects on Resistance Holtrap-Mennen Method for Ship Resistance Prediction

Lecture 13 - Ship Resistance Prediction Methods - I

Lecture 14 - Ship Resistance Prediction Methods - II

Lecture 15 - Resistance of Advanced Marine Vehicles - I

Lecture 16 - Resistance of Advanced Marine Vehicles - II

Lecture 17 - Resistance of Advanced Marine Vehicles - III

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Coastal Engineering

Subject Co-ordinator - Prof. V. Sundar

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Wave deformation - I
- Lecture 2 - Wave deformation - II
- Lecture 3 - wave deformation (problems - I)
- Lecture 4 - wave deformation (problems - II)
- Lecture 5 - wave deformation (problems - III)
- Lecture 6 - Sediment charecteristics - I
- Lecture 7 - Sediment charecteristics - II
- Lecture 8 - Radiation stresses - I
- Lecture 9 - Radiation stresses - II
- Lecture 10 - Longshore sediment transport - I
- Lecture 11 - Longshore sediment transport - II
- Lecture 12 - Longshore sediment transport (problems - I)
- Lecture 13 - Longshore sediment transport (problems - II)
- Lecture 14 - Coastal erosion protection measures - I
- Lecture 15 - Coastal erosion protection measures - II
- Lecture 16 - Coastal erosion protection measures - III
- Lecture 17 - Coastal erosion protection measures - IV
- Lecture 18 - Coastal erosion protection measures - V
- Lecture 19 - Coastal erosion protection measures - VI
- Lecture 20 - Coastal erosion protection measures - VII
- Lecture 21 - Coastal erosion protection measures - VIII
- Lecture 22 - Coastal erosion protection measures - IX
- Lecture 23 - Coastal erosion protection measures - X
- Lecture 24 - Cheaper CEP methods - XI
- Lecture 25 - Geosynthetics - I
- Lecture 26 - Geosynthetics - II
- Lecture 27 - Breakwaters - I
- Lecture 28 - Breakwaters - II
- Lecture 29 - Breakwaters - III

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Breakwaters - IV
- Lecture 31 - Forces on coastal structures - I
- Lecture 32 - Forces on coastal structures - II
- Lecture 33 - Scour under marine structures
- Lecture 34 - Physical modelling of coastal structures - I
- Lecture 35 - Physical modelling of coastal structures - II
- Lecture 36 - Tsunami - I
- Lecture 37 - Tsunami - II

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Wave Hydrodynamics

Subject Co-ordinator - Prof. V. Sundar

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Basic Fluid Dynamics - I
Lecture 2 - Basic Fluid Dynamics - II
Lecture 3 - Introduction
Lecture 4 - Wave Motion - I
Lecture 5 - Wave Motion - II
Lecture 6 - Wave Motion - III
Lecture 7 - Wave Motion Problems
Lecture 8 - Standing Wave Theory
Lecture 9 - Wave Deformation - I
Lecture 10 - Wave Deformation - II
Lecture 11 - Wave Deformation and Problems
Lecture 12 - Random Waves
Lecture 13 - Random Waves and Problems - I
Lecture 14 - Random Waves and Problems - II
Lecture 15 - Random Waves and Problems - III
Lecture 16 - Simulation of Random Waves
Lecture 17 - Directional waves
Lecture 18 - Wave Loads on Structures - I
Lecture 19 - Wave Loads on Structures - II
Lecture 20 - Wave Loads on Structures and Problems - I
Lecture 21 - Wave Loads on Structures and Problems - II
Lecture 22 - Wave loads on Large Boides
Lecture 23 - Finite Amplitude Wave Theories
Lecture 24 - Hydrodynamic Testing Facility
Lecture 25 - Hydrodynamic Testing Facility at IITM

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Ocean Structures and Materials

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction and objectives
Lecture 2 - Fixed type offshore structures
Lecture 3 - Compliant type offshore structures - I
Lecture 4 - Compliant type offshore structures - II
Lecture 5 - Drill ships and basics of drilling
Lecture 6 - Subsea production systems
Lecture 7 - Environmental loads - I
Lecture 8 - Environmental loads - II
Lecture 9 - Types of coastal structures - I
Lecture 10 - Types of coastal structures - II
Lecture 11 - Summary of coastal structures
Lecture 12 - Tutorials on Module - I
Lecture 13 - Outline of planning of ocean structures
Lecture 14 - Introduction to design
Lecture 15 - Construction techniques
Lecture 16 - Dredging - I
Lecture 17 - Dredging - II
Lecture 18 - Uncertainties in analysis and design
Lecture 19 - Design adequacy - Example I
Lecture 20 - Design adequacy - Example II
Lecture 21 - Dredging equipments' specifications
Lecture 22 - Ocean Pollution
Lecture 23 - Foundation and sea bed anchors
Lecture 24 - Introduction to materials - I
Lecture 25 - Introduction to materials - II
Lecture 26 - Concrete in marine environment
Lecture 27 - Concrete
Lecture 28 - Repair materials for marine structures
Lecture 29 - Corrosion in concrete - I

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Corrosion in concrete - II
- Lecture 31 - Material sin repair and rehabilitation
- Lecture 32 - Materials for special repair
- Lecture 33 - New materials for coastal embankments - I
- Lecture 34 - New materials for coastal embankments - II
- Lecture 35 - Non-destructive testing
- Lecture 36 - Structural health monitoring
- Lecture 37 - Wireless sensor networking
- Lecture 38 - Repair and rehabilitation-Fenders

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Dynamics of Ocean Structures

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction to different types of ocean structures - I
- Lecture 2 - Introduction to different types of ocean structures - II
- Lecture 3 - Introduction to different types of ocean structures - III
- Lecture 4 - Types of Compliant towers
- Lecture 5 - New Generation offshore and Coastal structures
- Lecture 6 - Environmental forces
- Lecture 7 - Wave forces, Current
- Lecture 8 - Introduction to Structural dynamics
- Lecture 9 - Characteristics of single degree - of - freedom model
- Lecture 10 - Methods of writing equation of motion
- Lecture 11 - Free and forced vibration of single degree - of - freedom systems
- Lecture 12 - Undamped and damped systems - I
- Lecture 13 - Undamped and damped systems - II
- Lecture 14 - Undamped and damped systems - III
- Lecture 15 - Comparison of methods
- Lecture 16 - Examples
- Lecture 17 - Numerical problems in single degree - of - freedom systems
- Lecture 18 - Two degrees - of - freedom systems
- Lecture 19 - Eigenvalues and Eigenvectors
- Lecture 20 - Orthogonality of modes
- Lecture 21 - Study of Multi degrees - of - freedom systems
- Lecture 22 - Equations of motion
- Lecture 23 - Natural frequencies and mode shapes
- Lecture 24 - Stodla, Rayleigh - Ritz and influence coefficient methods, Dunkerley
- Lecture 25 - Continuous system
- Lecture 26 - Structural action of offshore structures
- Lecture 27 - Fluid - Structure interaction - I
- Lecture 28 - Fluid - Structure interaction - II Dynamic analysis of offshore jacket platforms
- Lecture 29 - Steps of analysis using software

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Steps of analysis using software (Continued...)
- Lecture 31 - Dynamic analysis of articulated towers
- Lecture 32 - Iterative frequency domain - I
- Lecture 33 - Iterative frequency domain - II
- Lecture 34 - Multi - legged articulated towers
- Lecture 35 - Response control of multi-legged articulated towers using tuned mass dampers Experimental and an
- Lecture 36 - Development of Tension Leg Platforms and geometric optimization
- Lecture 37 - Dynamic analyses of TLPs
- Lecture 38 - Development of Mass, stiffness and damping matrices of TLP from first principles
- Lecture 39 - Estimate of classical damping
- Lecture 40 - TLPs under seismic excitation
- Lecture 41 - Direct Integration method
- Lecture 42 - Development of new generation offshore structures
- Lecture 43 - Introduction to stochastic dynamics of ocean structures
- Lecture 44 - Response spectrum
- Lecture 45 - Narrow band process
- Lecture 46 - Return period, Fatigue prediction
- Lecture 47 - Modal response method, Modal mass contribution
- Lecture 48 - Missing mass correction, Example problems
- Lecture 49 - Duhamel's integral

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Advanced Marine Structures

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction and Scope
- Lecture 2 - Fixed type structures
- Lecture 3 - Compliant type structures
- Lecture 4 - New generation marine structures
- Lecture 5 - Environmental loads - I
- Lecture 6 - Environmental loads - II
- Lecture 7 - Environmental loads - III
- Lecture 8 - Environmental loads - IV
- Lecture 9 - Other loads - I
- Lecture 10 - Other loads - II
- Lecture 11 - Ultimate load design principles - I
- Lecture 12 - Ultimate Limit State - I
- Lecture 13 - Ultimate Limit State - II
- Lecture 14 - Ultimate Limit State - III
- Lecture 15 - Partial safety factor
- Lecture 16 - Plastic design - I
- Lecture 17 - Plastic design - II
- Lecture 18 - Plastic design - III
- Lecture 19 - Plastic design - IV - Example problems - I
- Lecture 20 - Plastic analysis - Example problems - II
- Lecture 21 - Plastic analysis - Example problems - III
- Lecture 22 - Theories of failure - I
- Lecture 23 - Theories of failure - II
- Lecture 24 - Theories of failure - III
- Lecture 25 - Theories of failure - IV
- Lecture 26 - Shear centre - I
- Lecture 27 - Shear centre - II - Examples
- Lecture 28 - Plastic capacity of sections under combined loads - I
- Lecture 29 - Plastic capacity of sections under combined loads - II

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- Lecture 30 - Impact analysis- fundamentals - I
- Lecture 31 - Impact analysis- fundamentals - II
- Lecture 32 - Ultimate capacity of tubular joints
- Lecture 33 - Fluid structure interaction - I
- Lecture 34 - Fluid structure interaction - II
- Lecture 35 - Fluid induced vibration - I
- Lecture 36 - Fluid induced vibration - II
- Lecture 37 - Flow through perforated members - I
- Lecture 38 - Flow through perforated members - numerical studies - II
- Lecture 39 - Flow through perforated members - III - Analytical studies
- Lecture 40 - Introduction to Reliability - I
- Lecture 41 - Introduction to Reliability - II
- Lecture 42 - Introduction to Reliability - III
- Lecture 43 - Reliability framework in Marine structures
- Lecture 44 - Ultimate Limit state and Reliability approach - I
- Lecture 45 - Ultimate limit state and Reliability approach - II
- Lecture 46 - Levels of Reliability
- Lecture 47 - FOSM and AFOSM methods of Reliability
- Lecture 48 - Fracture and Fatigue
- Lecture 49 - Fatigue failure
- Lecture 50 - Fatigue loading and fatigue analysis
- Lecture 51 - Deterministic fatigue analysis
- Lecture 52 - Spectral fatigue analysis
- Lecture 53 - Stress concentration and fatigue analysis

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Dynamics of Ocean Structures

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction to Offshore structures
- Lecture 2 - Introduction to Offshore structures (Continued...)
- Lecture 3 - Environmental Loads
- Lecture 4 - Structural action of Ocean structures
- Lecture 5 - Single Degree of Freedom
- Lecture 6 - Equations of Motion
- Lecture 7 - Free Vibration of SDOF systems
- Lecture 8 - Damped and Undamped Forced Vibration
- Lecture 9 - Damped Forced Vibration
- Lecture 10 - Response building
- Lecture 11 - Numerical Example (SDOF)
- Lecture 12 - Numerical Example II
- Lecture 13 - Numerical Example
- Lecture 14 - Numerical Example - MDOF
- Lecture 15 - Numerical Example - Eigen value problems
- Lecture 16 - Orthogonality of modes - MDOF system models
- Lecture 17 - Numerical Methods for MDOF systems
- Lecture 18 - Influence Coefficient Method - MDOF
- Lecture 19 - STODLA Method - MDOF
- Lecture 20 - Stodla Method - Examples
- Lecture 21 - Rayleighs Method
- Lecture 22 - Modal Response Analysis for MDOF
- Lecture 23 - Rayleigh Damping
- Lecture 24 - Caughey Damping
- Lecture 25 - Damping Matrix by Super Positioning Method
- Lecture 26 - Duhamels Integral
- Lecture 27 - Modal superposition and truncation
- Lecture 28 - Modal participation and missing mass corrections
- Lecture 29 - Fluid Structure Interaction

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Fluid Structure Interaction - II
- Lecture 31 - Retrofitting and Rehabilitation - Application through Dynamics
- Lecture 32 - Drag and Earthquake Forces
- Lecture 33 - Articulated Towers
- Lecture 34 - Fluid Structure Interaction Application in Ocean Structure
- Lecture 35 - Response Control of Compliant Structures (MLAT)
- Lecture 36 - MLATs with Passive Dampers
- Lecture 37 - Tension Leg Platforms
- Lecture 38 - Tension Leg Platforms - II
- Lecture 39 - Fluid Structure Interaction.
- Lecture 40 - Dynamic Analysis of TLPs under Springing and Ringing Waves
- Lecture 41 - Numerical Integration
- Lecture 42 - Dynamic Analysis of Offshore Triceratops
- Lecture 43 - Stochastic Process
- Lecture 44 - Stochastic Process (Continued...)
- Lecture 45 - Response Spectrum - I
- Lecture 46 - Response Spectrum - II
- Lecture 47 - Return Period and Fatigue Damage

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Health, Safety and Environmental Management in Offshore and Petro

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1
Lecture 2
Lecture 3
Lecture 4
Lecture 5
Lecture 6
Lecture 7
Lecture 8
Lecture 9
Lecture 10
Lecture 11
Lecture 12
Lecture 13
Lecture 14
Lecture 15
Lecture 16
Lecture 17
Lecture 18
Lecture 19
Lecture 20
Lecture 21
Lecture 22
Lecture 23
Lecture 24
Lecture 25
Lecture 26
Lecture 27
Lecture 28
Lecture 29

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Lecture 30
Lecture 31
Lecture 32
Lecture 33
Lecture 34
Lecture 35
Lecture 36
Lecture 37

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NPTEL Video Course - Ocean Engineering - NOC:Risk and Reliability of offshore structures

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction
Lecture 2 - Uncertainties
Lecture 3 - Uncertainties - II
Lecture 4 - Probability and Plausibility
Lecture 5 - Rules of Probability
Lecture 6 - Plausible Reasoning - I
Lecture 7 - Plausible Reasoning - Quantitative rules
Lecture 8 - Quantitative Rules
Lecture 9 - Probability Distribution
Lecture 10 - Random Variables
Lecture 11 - Random Variables - II
Lecture 12 - Sampling Estimates
Lecture 13 - Modelling of Environmental Loads
Lecture 14 - Exercises - I
Lecture 15 - Introduction
Lecture 16 - Components of Reliability analysis
Lecture 17 - Levels of Reliability
Lecture 18 - Error Estimation
Lecture 19 - Reliability methods - I
Lecture 20 - Reliability methods - II
Lecture 21 - Reliability methods - III
Lecture 22 - Reliability methods - IV
Lecture 23 - System Reliability - I
Lecture 24 - System Reliability - II
Lecture 25 - System Reliability - III
Lecture 26 - Failure domains
Lecture 27 - Failure domains II
Lecture 28 - Application Problem - I
Lecture 29 - Application Problem - I (Continued...)

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Application Problem II
- Lecture 31 - Application Problem II (Continued...)
- Lecture 32 - Application Problem II (Continued...)
- Lecture 33 - Risk and Reliability
- Lecture 34 - Reliability analysis of structural systems
- Lecture 35 - Codes on structural reliability
- Lecture 36 - Variables in Reliability analysis
- Lecture 37 - Mechanical models in Reliability analysis
- Lecture 38 - Mechanical modes in Reliability analysis - II
- Lecture 39 - Stochastic Process - I
- Lecture 40 - Stochastic Process - II
- Lecture 41 - Fatigue Reliability
- Lecture 42 - Design SN curve
- Lecture 43 - Simplified Fatigue Assessment
- Lecture 44 - Short term fatigue damage
- Lecture 45 - Behaviour of tubular joints
- Lecture 46 - Tubular Joints - Experimental studies on T-Joints
- Lecture 47 - Risk Assessment
- Lecture 48 - Logical Risk analysis
- Lecture 49 - Risk analysis of Mechanical Systems
- Lecture 50 - FMEA II
- Lecture 51 - Design FMEA for Offshore Triceratops
- Lecture 52 - Fault Tree Analysis
- Lecture 53 - Event Tree Analysis
- Lecture 54 - Consequence Analysis
- Lecture 55 - Risk Acceptability
- Lecture 56 - Risk and Hazard assessment
- Lecture 57 - Risk Picture
- Lecture 58 - Risk Management

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:HSE for offshore and petroleum engineers-Practices

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction
Lecture 2 - Drilling Operation and Consequences
Lecture 3 - Drilling Accidents
Lecture 4 - Oil Spills
Lecture 5 - Ecological Monitoring
Lecture 6 - Pollution Modeling - I
Lecture 7 - Pollution Modeling - II
Lecture 8 - Pollution Modeling - III
Lecture 9 - Hazard Management
Lecture 10 - Introduction
Lecture 11 - HSE Practices
Lecture 12 - Lessons learnt from accidents
Lecture 13 - HSE guidelines
Lecture 14 - HSE lessons
Lecture 15 - Risk Assessment - I
Lecture 16 - Financing Risk
Lecture 17 - Financing Risk Example Problem
Lecture 18 - Risk Assessment and Accident Analysis
Lecture 19 - Accident analysis
Lecture 20 - Hazard assessment - I
Lecture 21 - Hazard Analysis - I
Lecture 22 - Hazop - I
Lecture 23 - Hazop - II
Lecture 24 - Hazop - III
Lecture 25 - Hazop - IV
Lecture 26 - Hazop - V
Lecture 27 - Hazop (Case study)
Lecture 28 - Accidents in offshore platforms
Lecture 29 - Hazard Control

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - FMEA
- Lecture 31 - FMEA Example
- Lecture 32 - FMEA Example - II
- Lecture 33 - Excercises
- Lecture 34 - Dose Response Assessment
- Lecture 35 - Flammability characteristics
- Lecture 36 - Flammability diagram
- Lecture 37 - Explosions
- Lecture 38 - Chemical Explosions
- Lecture 39 - Fire and Explosion Prevention - I
- Lecture 40 - Explosion and Prevention
- Lecture 41 - Fire Prevention Practices
- Lecture 42 - Industrial Hygiene control
- Lecture 43 - Chemical Risk Analysis
- Lecture 44 - Chemical Risk Analysis - II
- Lecture 45 - CEI - Examples
- Lecture 46 - QRA Application
- Lecture 47 - Hazard Identification Practices
- Lecture 48 - Risk in Marine Systems - I
- Lecture 49 - Risk in Marine Systems - II
- Lecture 50 - Safety measures in design and operation
- Lecture 51 - Safety measures in design and operation - II
- Lecture 52 - Safety factors for confined spaces - I
- Lecture 53 - Safety practices for confined spaces - II
- Lecture 54 - Safety practices for Fire protection
- Lecture 55 - Process safety management

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Offshore Structures Under Special Loads Including Fire Resistance

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction
- Lecture 2 - Novelty of fixed platforms
- Lecture 3 - Novelty of compliant platforms
- Lecture 4 - Novelty of floating platforms
- Lecture 5 - New generation offshore platforms - I
- Lecture 6 - New generation offshore platforms - II
- Lecture 7 - Offshore Triceratops
- Lecture 8 - Offshore Regasification platforms
- Lecture 9 - Environmental loads - I
- Lecture 10 - Environmental loads - II
- Lecture 11 - Wind loads
- Lecture 12 - Ice loads - I
- Lecture 13 - Ice loads - II
- Lecture 14 - Response spectrum - I
- Lecture 15 - Response spectrum - II
- Lecture 16 - Uncertainties
- Lecture 17 - Earthquake loads - I
- Lecture 18 - Earthquake loads - II
- Lecture 19 - Earthquake loads - III
- Lecture 20 - General design requirements
- Lecture 21 - Impact and Non-impact wave loads - I
- Lecture 22 - Impact and Non-impact wave loads - II
- Lecture 23 - Unsymmetrical bending - I
- Lecture 24 - Unsymmetrical bending - II
- Lecture 25 - Unsymmetrical bending - III
- Lecture 26 - Shear centre - I
- Lecture 27 - Shear centre - II
- Lecture 28 - Shear centre - III
- Lecture 29 - Shear centre - IV

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Curved beams - I
- Lecture 31 - Curved beams - II
- Lecture 32 - Curved beams - III
- Lecture 33 - Curved beams - IV
- Lecture 34 - Curved beams - V
- Lecture 35 - Rings and chain links - I
- Lecture 36 - Rings and chain links - II
- Lecture 37 - Marine risers
- Lecture 38 - Marine risers under VIM
- Lecture 39 - Fire safety overview
- Lecture 40 - Explosion - I
- Lecture 41 - Explosion and fire protection - I
- Lecture 42 - Explosion and fire protection - II
- Lecture 43 - Blast Resistance - I
- Lecture 44 - Blast Resistance - II
- Lecture 45 - Blast Resistance - III
- Lecture 46 - Blast Resistance - IV
- Lecture 47 - Material Strength - I
- Lecture 48 - Material Strength - II
- Lecture 49 - Material Strength - III
- Lecture 50 - Fire resistant design overview
- Lecture 51 - Types of fire
- Lecture 52 - Design Approach - I
- Lecture 53 - Design Approach - II

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Computer Methods Of Structural Analysis of Offshore Structures

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction to structural analysis - Part 1
Lecture 2 - Introduction to structural analysis - Part 2
Lecture 3 - System of linear equations - Part 1
Lecture 4 - System of linear equations - Part 2
Lecture 5 - Matrices - Part 1
Lecture 6 - Matrices - Part 2
Lecture 7 - Beam Element 1 - Part 1
Lecture 8 - Beam Element 1 - Part 2
Lecture 9 - Beam Element 2 - Part 1
Lecture 10 - Beam Element 2 - Part 2
Lecture 11 - Stiffness matrix of beam element - Part 1
Lecture 12 - Stiffness matrix of beam element - Part 2
Lecture 13 - Stiffness method of analysis of planar orthogonal structures - Part 1
Lecture 14 - Stiffness method of analysis of planar orthogonal structures - Part 2
Lecture 15 - Example on continuous beam - Part 1
Lecture 16 - Example on continuous beam - Part 2
Lecture 17 - Example - II - Part 1
Lecture 18 - Example - II - Part 2
Lecture 19 - Example - II (Continued...)
Lecture 20 - Example - III - Part 1
Lecture 21 - Example - III - Part 2
Lecture 22 - Planar non-orthogonal frame - Part 1
Lecture 23 - Planar non-orthogonal frame - Part 2
Lecture 24 - Non-orthogonal structures - II
Lecture 25 - Planar non-orthogonal frame
Lecture 26 - Non-orthogonal structures - III - Part 1
Lecture 27 - Non-orthogonal structures - III - Part 2
Lecture 28 - Example problem
Lecture 29 - Example problem

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NPTTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Planar non-orthogonal frame using computer code - Part 1
- Lecture 31 - Planar non-orthogonal frame using computer code - Part 2
- Lecture 32 - Planar non-orthogonal frame - Example 3 - Part 1
- Lecture 33 - Planar non-orthogonal frame - Example 3 - Part 2
- Lecture 34 - Planar truss system
- Lecture 35 - Planar truss system examples - Part 1
- Lecture 36 - Planar truss system examples - Part 2
- Lecture 37 - 3D structures - analysis by stiffness method - Part 1
- Lecture 38 - 3D structures - analysis by stiffness method - Part 2
- Lecture 39 - 3D structures - transformation matrix - Part 1
- Lecture 40 - 3D structures - transformation matrix - Part 2
- Lecture 41 - Y-Z-X transformation for 3d analysis
- Lecture 42 - Z-Y-X transformation for 3d analysis - Part 1
- Lecture 43 - Z-Y-X transformation for 3d analysis - Part 2
- Lecture 44 - Analysis of space frames - Example 1 - Part 1
- Lecture 45 - Analysis of space frames - Example 1 - Part 2
- Lecture 46 - Analysis of space frames - Example 1 - Part 3
- Lecture 47 - Analysis of space frame structures
- Lecture 48 - 3d analysis of space frames - Example 1 - Part 1
- Lecture 49 - 3d analysis of space frames - Example 1 - Part 2
- Lecture 50 - 3d analysis - Example 2 - Part 1
- Lecture 51 - 3d analysis - Example 2 - Part 2
- Lecture 52 - 3d truss analysis
- Lecture 53 - Special elements
- Lecture 54 - Non-prismatic members - Part 1
- Lecture 55 - Non-prismatic members - Part 2
- Lecture 56 - Offshore structures - 1 - Part 1
- Lecture 57 - Offshore structures - 1 - Part 2
- Lecture 58 - Offshore structures - 2 - Part 1
- Lecture 59 - Offshore structures - 2 - Part 2
- Lecture 60 - Offshore structures - 3 - Part 1
- Lecture 61 - Offshore structures - 3 - Part 2
- Lecture 62 - Offshore compliant structures - 1 - Part 1
- Lecture 63 - Offshore compliant structures - 1 - Part 2
- Lecture 64 - Offshore compliant structures - 2 - Part 1
- Lecture 65 - Offshore compliant structures - 2 - Part 2
- Lecture 66 - New generation platforms - Part 1
- Lecture 67 - New generation platforms - Part 2
- Lecture 68 - Environmental loads - 1 - Part 1

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- Lecture 69 - Environmental loads - 1 - Part 2
- Lecture 70 - Wave spectra - Part 1
- Lecture 71 - Wave spectra - Part 2
- Lecture 72 - Wind loads - Part 1
- Lecture 73 - Wind loads - Part 2
- Lecture 74 - Wind loads - 2 - Part 1
- Lecture 75 - Wind loads - 2 - Part 2
- Lecture 76 - Ice load and Earthquake load - Part 1
- Lecture 77 - Ice load and Earthquake load - Part 2
- Lecture 78 - Dynamic analysis - 1 - Part 1
- Lecture 79 - Dynamic analysis - 1 - Part 2
- Lecture 80 - Dynamic analysis - 2 - Part 1
- Lecture 81 - Dynamic analysis - 2 - Part 2
- Lecture 82 - Dynamic analysis - 3 - Part 1
- Lecture 83 - Dynamic analysis - 3 - Part 2
- Lecture 84 - Computer methods of dynamic analysis - Part 1
- Lecture 85 - Computer methods of dynamic analysis - Part 2
- Lecture 86 - Damping estimate - Part 1
- Lecture 87 - Damping estimate - Part 2
- Lecture 88 - Damping estimate - 2 - Part 1
- Lecture 89 - Damping estimate - 2 - Part 2
- Lecture 90 - Newmark's method - Part 1
- Lecture 91 - Newmark's method - Part 2
- Lecture 92 - Articulated towers - Part 1
- Lecture 93 - Articulated towers - Part 2
- Lecture 94 - Tension leg platforms - Part 1
- Lecture 95 - Tension leg platforms - Part 2
- Lecture 96 - Tension leg platforms - 2 - Part 1
- Lecture 97 - Tension leg platforms - 2 - Part 2
- Lecture 98 - New generation offshore structures - Part 1
- Lecture 99 - New generation offshore structures - Part 2
- Lecture 100 - Triceratops-2 - Part 1
- Lecture 101 - Triceratops-2 - Part 2
- Lecture 102 - Random process - 1 - Part 1
- Lecture 103 - Random process - 1 - Part 2
- Lecture 104 - Random process - 2 - Part 1
- Lecture 105 - Random process - 2 - Part 2
- Lecture 106 - Response spectrum - Part 1
- Lecture 107 - Response spectrum - Part 2

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- Lecture 108 - Return period and Stochastic process - Part 1
- Lecture 109 - Return period and Stochastic process - Part 2
- Lecture 110 - Stochastic modelling - Part 1
- Lecture 111 - Stochastic modelling - Part 2
- Lecture 112 - Fatigue damage - 1 - Part 1
- Lecture 113 - Fatigue damage - 1 - Part 2
- Lecture 114 - Fatigue damage - 2 - Part 1
- Lecture 115 - Fatigue damage - 2 - Part 2
- Lecture 116 - Fatigue estimate of offshore platform - Part 1
- Lecture 117 - Fatigue estimate of offshore platform - Part 2
- Lecture 118 - Live Session

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Structural Health Monitoring

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Introduction to SHM - Part 1
- Lecture 2 - Introduction to SHM - Part 2
- Lecture 3 - Necessity of SHM - Part 1
- Lecture 4 - Necessity of SHM - Part 2
- Lecture 5 - Components of SHM - Part 1
- Lecture 6 - Components of SHM - Part 2
- Lecture 7 - Challenges in SHM - Part 1
- Lecture 8 - Challenges in SHM - Part 2
- Lecture 9 - Advantages of SHM - Part 1
- Lecture 10 - Advantages of SHM - Part 2
- Lecture 11 - Components of SHM process - Part 1
- Lecture 12 - Components of SHM process - Part 2
- Lecture 13 - SHM issues applied to concrete structures - Part 1
- Lecture 14 - SHM issues applied to concrete structures - Part 2
- Lecture 15 - Level of uncertainties in SHM process - Part 1
- Lecture 16 - Level of uncertainties in SHM process - Part 2
- Lecture 17 - Short term and long term Structural Health Monitoring (SHM) - Part 1
- Lecture 18 - Short term and long term Structural Health Monitoring (SHM) - Part 2
- Lecture 19 - Local and Global Health Monitoring
- Lecture 20 - Data Evaluation and Assessment
- Lecture 21 - Estimation of Structural Health i.e. Structural Health Monitoring (SHM)
- Lecture 22 - Estimation of Structural Health using Static SHM
- Lecture 23 - Structural Health Monitoring (SHM) Planning and Management - Part 1
- Lecture 24 - Structural Health Monitoring (SHM) Planning and Management - Part 2
- Lecture 25 - Vibration based health monitoring scheme - Part 1
- Lecture 26 - Vibration based health monitoring scheme - Part 2
- Lecture 27 - Structural Health monitoring methods
- Lecture 28 - Structural Health monitoring methods
- Lecture 29 - Damage identification using lumped mass and Element modal stiffness - Part 1

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Damage identification using lumped mass and Element modal stiffness - Part 2
- Lecture 31 - Damage identification by visual Inspection method - Part 1
- Lecture 32 - Damage identification by visual Inspection method - Part 2
- Lecture 33 - Various vibration based method in SHM-1 - Part 1
- Lecture 34 - Various vibration based method in SHM-1 - Part 2
- Lecture 35 - Comparison of Damage Detection Method - II
- Lecture 36 - Damage Detection Method - II
- Lecture 37 - Structural Health Monitoring (SHM) and Statistical Pattern Recognition (SPR)
- Lecture 38 - Long term SHM (Structural Health Monitoring)
- Lecture 39 - Non-Destructive evaluation - I - Part 1
- Lecture 40 - Non-Destructive evaluation - I - Part 2
- Lecture 41 - Non-Destructive evaluation - II
- Lecture 42 - Non-Destructive evaluation - III
- Lecture 43 - Crack detection in Composites
- Lecture 44 - Various sensor technologies - Part 1
- Lecture 45 - Various sensor technologies - Part 2
- Lecture 46 - Fibre Optic sensors - Part 1
- Lecture 47 - Fibre Optic sensors - Part 2
- Lecture 48 - Smart sensing for SHM - Part 1
- Lecture 49 - Smart sensing for SHM - Part 2
- Lecture 50 - Sensing requirements in special structures
- Lecture 51 - The sensor requirements and Data acquisition - Part 1
- Lecture 52 - The sensor requirements and Data acquisition - Part 2
- Lecture 53 - Acquisition system and Networking for SHM - Part 1
- Lecture 54 - Acquisition system and Networking for SHM - Part 2
- Lecture 55 - Wireless Sensor Networking (WSN) - Part 1
- Lecture 56 - Wireless Sensor Networking (WSN) - Part 2
- Lecture 57 - SHM layout design of offshore structures
- Lecture 58 - Vibration Based damage detection
- Lecture 59 - SHM design - Part 1
- Lecture 60 - SHM design - Part 2
- Lecture 61 - Artificial Intelligence (AI) in structural health monitoring (SHM)
- Lecture 62 - Plausibility of errors in SHM
- Lecture 63 - Artificial Neural Network (ANN) in the SHM process.
- Lecture 64 - Damage detection
- Lecture 65 - Application of SHM in Infrastructure Engineering - Part 1
- Lecture 66 - Application of SHM in Infrastructure Engineering - Part 2
- Lecture 67 - Design of sensor layout for SHM - Part 1
- Lecture 68 - Design of sensor layout for SHM - Part 2

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- Lecture 69 - SHM applied to BSLRP - Part 1
- Lecture 70 - SHM applied to BSLRP - Part 2
- Lecture 71 - SHM design for BSLRP - Part 1
- Lecture 72 - SHM design for BSLRP - Part 2
- Lecture 73 - SHM design-2 for BSLRP - Part 1
- Lecture 74 - SHM design-2 for BSLRP - Part 2
- Lecture 75 - SHM design by experimental investigations for lab scale model of TLP-I - Part 1
- Lecture 76 - SHM design by experimental investigations for lab scale model of TLP-I - Part 2
- Lecture 77 - SHM design by experimental investigations for lab scale model of TLP-II - Part 1
- Lecture 78 - SHM design by experimental investigations for lab scale model of TLP-II - Part 2
- Lecture 79 - Structural Health Monitoring (SHM) of lab scale model of TLP-III - Part 1
- Lecture 80 - Structural Health Monitoring (SHM) of lab scale model of TLP-III - Part 2
- Lecture 81 - Structural Health Monitoring (SHM) of lab scale model of TLP-IV - Part 1
- Lecture 82 - Structural Health Monitoring (SHM) of lab scale model of TLP-IV - Part 2
- Lecture 83 - Future Scope of SHM - Part 1
- Lecture 84 - Future Scope of SHM - Part 2

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Advanced Design of Steel Structures

Subject Co-ordinator - Prof. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Form-dominant design - I
Lecture 2 - Form-dominant design - II
Lecture 3 - Failure theories - 1
Lecture 4 - Failure theories - 2
Lecture 5 - Failure theories - 3
Lecture 6 - Material properties - 1
Lecture 7 - Material properties - 2
Lecture 8 - Material properties - 3
Lecture 9 - FGM
Lecture 10 - FGM for marine application - 1
Lecture 11 - FGM for marine application - 2
Lecture 12 - Design methods - 1
Lecture 13 - Design methods - 2
Lecture 14 - Load combinations
Lecture 15 - Dynamic material strength
Lecture 16 - Material properties variations
Lecture 17 - Plastic design - 1
Lecture 18 - Plastic design - 2
Lecture 19 - Plastic design - 3
Lecture 20 - Shape factor examples
Lecture 21 - Plastic analysis - 1
Lecture 22 - Plastic analysis - 2
Lecture 23 - Plastic design - 1
Lecture 24 - Plastic design - 2
Lecture 25 - Plastic design - 2
Lecture 26 - Structural Stability
Lecture 27 - Euler's load
Lecture 28 - Rotation coefficients for stability functions
Lecture 29 - Stability functions - 1

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- Lecture 30 - Stability functions - 2
- Lecture 31 - Stability functions - 3
- Lecture 32 - Buckling and stability
- Lecture 33 - Critical buckling load- Numerical examples
- Lecture 34 - Stability problems- numerical examples
- Lecture 35 - Stability of shells
- Lecture 36 - Unsymmetric bending - 1
- Lecture 37 - Unsymmetric bending - example problems
- Lecture 38 - Shear center - 1
- Lecture 39 - Shear center - 2
- Lecture 40 - Shear center - 3
- Lecture 41 - Curved section
- Lecture 42 - Shear center for curved sections
- Lecture 43 - Shear center for unsymmetric section
- Lecture 44 - Curved beam - 1
- Lecture 45 - Curved beam with large curvature - 1
- Lecture 46 - Curved beam with large curvature - 2
- Lecture 47 - Modified area factor for curved section
- Lecture 48 - M factor for curved beams
- Lecture 49 - Crane hook
- Lecture 50 - Thin-walled section
- Lecture 51 - Open thin-walled section
- Lecture 52 - Lateral torsional buckling
- Lecture 53 - Design for LTB-1
- Lecture 54 - Design check for LTB-2
- Lecture 55 - LTB example problem
- Lecture 56 - Ice loads
- Lecture 57 - Ice spectrum
- Lecture 58 - Blast resistant design - 1
- Lecture 59 - Blast resistant design - 2
- Lecture 60 - Blast-resistant design - 3
- Lecture 61 - Blast-resistant design - 4
- Lecture 62 - Fire-resistant design - 1
- Lecture 63 - Fire-resistant design - 2
- Lecture 64 - Analysis under impact loads

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - Marine Instrumentation - Laboratory

Subject Co-ordinator - Prof. Tharun

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Oscilloscope, Function Generator and Tilt meter

Lecture 2 - Strain Gauges and Load Cells

Lecture 3 - Wheatstone Bridge Circuit and RC Circuits on a Breadboard Design and Testing of Wheat - 1

Lecture 4 - Wheatstone Bridge Circuit and RC Circuits on a Breadboard Passive Low Pass RC Filter - 2

Lecture 5 - Wheatstone Bridge Circuit and RC Circuits on a Breadboard Rc High Pass Filter Lab - 3

Lecture 6 - Opamps, Differentiator and Integrator Circuits Design and Testing Integrator and Differ - 1

Lecture 7 - Opamps, Differentiator and Integrator Circuits Design and Testing Integrated and Differ - 2

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Surface Facilities for Oil and Gas Handling

Subject Co-ordinator - Prof. Abdus Samad

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction to Oil and Gas - 1
Lecture 2 - Introduction to Oil and Gas - 2
Lecture 3 - Drilling and Completion - 1
Lecture 4 - Drilling and Completion - 2
Lecture 5 - Well Completion
Lecture 6 - Basics of Surface Facilities
Lecture 7 - Fluid Properties
Lecture 8 - Introduction to Separators - 1
Lecture 9 - Introduction to Separators - 2
Lecture 10 - Flow Control - 1
Lecture 11 - Flow Control - 2
Lecture 12 - Principle of Separation - 1
Lecture 13 - Principle of Separation - 2
Lecture 14 - Heat calculations for separation
Lecture 15 - Fluid Properties and Two-Phase Separator - 1
Lecture 16 - Fluid Properties and Two-Phase Separator - 2
Lecture 17 - Introduction to Separators
Lecture 18 - Horizontal Separator and Sizing - 1
Lecture 19 - Horizontal Separator and Sizing - 2
Lecture 20 - Horizontal Separator and Sizing: Numerical
Lecture 21 - Three Phase Separation - 1
Lecture 22 - Three Phase Separation - 2
Lecture 23 - Vertical Separator Sizing - 1
Lecture 24 - Vertical Separator Sizing - 2
Lecture 25 - Horizontal and Vertical Separator: Numerical
Lecture 26 - Heater Treater - 1
Lecture 27 - Heater Treater - 2
Lecture 28 - Gunbarrel
Lecture 29 - Gunbarrel: Numericals

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Heat Calculation - 1
- Lecture 31 - Heat Calculation - 2
- Lecture 32 - Introduction to Electrostatic Treater - 1
- Lecture 33 - Introduction to Electrostatic Treater - 2
- Lecture 34 - Heater Treater and Gunbarrel - 1
- Lecture 35 - Heater Treater and Gunbarrel - 2
- Lecture 36 - Heater Treater and Gunbarrel: Numerical - Part 1
- Lecture 37 - Heater Treater and Gunbarrel: Numerical - Part 2
- Lecture 38 - Desalting of Crude Oil - 1
- Lecture 39 - Desalting of Crude Oil - 2
- Lecture 40 - Water Treatment - 1
- Lecture 41 - Water Treatment - 2
- Lecture 42 - Produced Water Treatment - 1
- Lecture 43 - Produced Water Treatment - 2
- Lecture 44 - Produced Water Treatment - 3
- Lecture 45 - Produced Water Treatment: Numerical
- Lecture 46 - Natural Gas Processing - 1
- Lecture 47 - Natural Gas Processing - 2
- Lecture 48 - Acid Gas Treating
- Lecture 49 - Amine System for Gas Sweetening - 1
- Lecture 50 - Amine System for Gas Sweetening - 2
- Lecture 51 - Gas Dehydration
- Lecture 52 - Crude Oil Storage Facilities - 1
- Lecture 53 - Crude Oil Storage Facilities - 2
- Lecture 54 - Crude Oil Storage Facilities - 3
- Lecture 55 - Flow Measurement Techniques - 1
- Lecture 56 - Flow Measurement Techniques - 2
- Lecture 57 - Heat Transfer Mechanisms
- Lecture 58 - Thermodynamic Laws
- Lecture 59 - Introduction to Heat Exchanger - 1
- Lecture 60 - Introduction to Heat Exchanger - 2
- Lecture 61 - Introduction to Heat Exchanger - 3
- Lecture 62 - Introduction to Heat Exchanger - 4
- Lecture 63 - Pressure Vessel - 1
- Lecture 64 - Pressure Vessel - 2
- Lecture 65 - Pressure Vessel - 3
- Lecture 66 - Wall Thickness Criteria
- Lecture 67 - Introduction to Pumps - 1
- Lecture 68 - Introduction to Pumps - 2

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 69 - Introduction to Pumps - 3
- Lecture 70 - Introduction to Reciprocating Pumps
- Lecture 71 - Introduction to Compressor
- Lecture 72 - Introduction to IC/CI Engine - 1
- Lecture 73 - Introduction to IC/CI Engine - 2

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Ocean Engineering - NOC:Marine Engineering

Subject Co-ordinator - Prof. Abdus Samad

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Course Overview
Lecture 2 - Basics of Thermodynamics
Lecture 3 - Work and Heat transfer
Lecture 4 - Second law of thermodynamics
Lecture 5 - Reversible Heat Engine
Lecture 6 - Basic mode of heat transfer
Lecture 7 - Conduction
Lecture 8 - Convection
Lecture 9 - Radiation
Lecture 10 - Concept of Resistance
Lecture 11 - Heat flow through pipes and walls
Lecture 12 - Heat Exchangers
Lecture 13 - Fins
Lecture 14 - LMTD
Lecture 15 - Pumps and its types
Lecture 16 - Centrifugal pump
Lecture 17 - Characteristic curves of pumps
Lecture 18 - Cavitation
Lecture 19 - Positive displacement pump
Lecture 20 - Pumps in series/parallel
Lecture 21 - Compressors
Lecture 22 - Intercooler
Lecture 23 - Rankine cycle
Lecture 24 - Injectors and Pumps
Lecture 25 - Numerical problem
Lecture 26 - Boilers
Lecture 27 - Fouling and Scaling
Lecture 28 - Fuel and method of firing
Lecture 29 - Boiler efficiency

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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- Lecture 30 - Turbine Basics
- Lecture 31 - Turbine aerodynamics
- Lecture 32 - Cascade view and Meridional view
- Lecture 33 - Impulse and Reaction Turbine
- Lecture 34 - Steam Turbine
- Lecture 35 - Regenerative thermal power plant
- Lecture 36 - Mollier diagram
- Lecture 37 - IC Engines
- Lecture 38 - Otto/Diesel Cycle
- Lecture 39 - Components of IC engines - Part 1
- Lecture 40 - Components of IC engines - Part 2
- Lecture 41 - Fuel Injection/Scavenging
- Lecture 42 - IC engine: Numerical problems
- Lecture 43 - IC Engine - Fuel
- Lecture 44 - Marine Fuel and Properties
- Lecture 45 - Combustion
- Lecture 46 - Fuel Oil properties
- Lecture 47 - Lubrication/Cooling
- Lecture 48 - IC engine-Numerical Problems
- Lecture 49 - Gas turbine - Basics
- Lecture 50 - Gas turbine - Basics (Continued...)
- Lecture 51 - Gas turbine, formula, calculations
- Lecture 52 - Gas turbine: Regeneration, Reheat, Intercooling
- Lecture 53 - Numerical Problems
- Lecture 54 - Binary cycle/Rankine-Brayton cycle
- Lecture 55 - Numerical problems
- Lecture 56 - HVAC- Heating, ventilation, and air conditioning
- Lecture 57 - Refrigerants
- Lecture 58 - Vapor compression Refrigeration system
- Lecture 59 - HVAC - VCRC components
- Lecture 60 - HVAC - Psychrometric
- Lecture 61 - HVAC - Numerical problems
- Lecture 62 - Fire Fighting Machinery
- Lecture 63 - Desalination
- Lecture 64 - Energy recovery device (ERD)
- Lecture 65 - Desalination/Fire fighting/Numerical problems
- Lecture 66 - Numerical problems
- Lecture 67 - Steering gear/propeller/rudder/incin
- Lecture 68 - Power transmission system, shafting, bearing, gear, lubrication, Electric propulsion

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- Lecture 69 - Stern Tube Bearings and Misalignment
- Lecture 70 - Shaft
- Lecture 71 - Shaft Design
- Lecture 72 - Gears
- Lecture 73 - Seals and Bearings
- Lecture 74 - Oil water separation, electrical systems
- Lecture 75 - Bilge water flocculant
- Lecture 76 - Gravity OWS
- Lecture 77 - Centrifuge
- Lecture 78 - Membrane Technologies
- Lecture 79 - Electrical systems
- Lecture 80 - Motor

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NPTEL Video Course - Ocean Engineering - FEM Applied to Ocean Engineering

Subject Co-ordinator - Prof. S. A. Sannasiraj

Co-ordinating Institute - IIT Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction to the basic concept of Finite Element Method and application

Lecture 2 - Formulation of FEM model and approaches to FEM

Lecture 3 - Rayleigh Ritz method and Galerkin method

Lecture 4 - Relation between force and displacement

Lecture 5 - Beam element and plane stress element

Lecture 6 - Plane strain element and Rayleigh Ritz method

Lecture 7 - Galerkin method and formulation of displacement function

Lecture 8 - Formulation of shape function-Shape function approach-Lagrangian formulation-Hermite formulation

Lecture 9 - Natural coordinate system

Lecture 10 - Stiffness matrix for quadratic element

Lecture 11 - Gaussian Quadrature rule (Continued...)

Lecture 12 - FEM solution for beam

Lecture 13 - Two dimensional problem

Lecture 14 - Isoparametric element problem (Continued...)

Lecture 15 - Variational formulation: Beam buckling

Lecture 16 - Problems

Lecture 17 - Problem - Formulation of shape function

Lecture 18 - FEM system of equations and stiffness matrix

Lecture 19 - Solving a truss using FEM

Lecture 20 - Partial differential equation; Classification of physical problems

Lecture 21 - IVP, BVP, Variational principle

Lecture 22 - Fluid flow problem

Lecture 23 - Steady state flow around a circular cylinder (Full Solution)

Lecture 24 - Steady state flow around a circular cylinder (full solution) (Continued...)

Lecture 25 - Wave Diffraction : Wave interaction with the vertical wall

Lecture 26 - FEM Analysis by software Application

Lecture 27 - Analysis of Jacket using SACS

Lecture 28 - Diffraction-radiation problem

Lecture 29 - Solution of heave added mass

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- Lecture 30 - Solution of heave added mass (Continued...)
- Lecture 31 - Oblique long wave interaction
- Lecture 32 - Wave propagation in shallow water
- Lecture 33 - Combined refraction-diffraction
- Lecture 34 - Solution of mild slope equation using FEM
- Lecture 35 - Sloshing, fluid Structure Interaction
- Lecture 36 - Sloshing, fluid structure interaction (Continued...)
- Lecture 37 - Non-linear free surface wave interaction with a body
- Lecture 38 - Non-linear sloshing and unstructured mesh
- Lecture 39 - Non-linear wave simulation in 3D tank