

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 & Aft 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 & Controllability
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 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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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

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 characteristics - I
Lecture 7 - Sediment characteristics - 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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NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

- 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 Petr

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
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Lecture 20
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Lecture 29

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

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

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

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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- 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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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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- 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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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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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

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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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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 - VCRS 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/propulsion
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