

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

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

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

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

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

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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 - 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

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- 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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- 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

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- 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

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- 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

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- 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

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- 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

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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

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- 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 Petroleum Engineering

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

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

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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

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- 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