

Mechanics of Laminated composite structure - Web course

COURSE OUTLINE

The course covers lessons in Introduction, Classification of Composites, Behavior of Unidirectional Composites, Analysis of an Orthotropic Ply, Thermal Stresses in Plates 2, Analysis of a Laminated Composite 2, Thermal Stresses in Plates, Finite Rectangular Plates, Energy Methods, Stability of Conservative Systems, Buckling of Plates, Closure .

COURSE DETAIL

S.No	Lecture Name
1	Introduction
2	Classification of Composites
3	Fibers and whiskers
4	Matrix
5	Behavior of Unidirectional Composites
6	Behavior of Unidirectional Composites (contd...)
7	Behavior of Unidirectional Composites 2
8	Analysis of an Orthotropic Ply
9	Analysis of an Orthotropic Ply (contd...)
10	Analysis of an Orthotropic Ply 2
11	Thermal Stresses in Plates 2
12	Analysis of a Laminated Composite
13	Analysis of a Laminated Composite (contd...)
14	Analysis of a Laminated Composite 2
15	Equilibrium Equations for Plates
16	Boundary Conditions for Rectangular Plates
17	Semi-Infinite Plates
18	Semi-Infinite Plates (contd...)
19	Semi-Infinite Plates 2
20	Thermal Stresses in Plates
21	Finite Rectangular Plates
22	Simply Supported Plates with Normal Load
23	Rectangular Plates with SS on Two Sides
24	Rectangular Plates with SS on Two Sides (contd...)
25	Virtual Work Approaches
26	Application of Galerkin Method
27	The Galerkin Method (contd...)
28	The Role of D16 in a Simply?
29	Energy Methods
30	Energy Methods (contd...)
31	Energy Methods 2



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Mechanical Engineering

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32	Energy Methods 2 (contd...)
33	Stability of Conservative Systems
34	Geometric Nonlinearity in Composite Plates
35	Buckling and Geometric Nonlinearity
36	Buckling of Plates
37	Buckling of Plates (contd...)
38	Behavior of Short?Fiber Composites
39	Behavior of Short?Fiber Composites (contd...)
40	Closure

