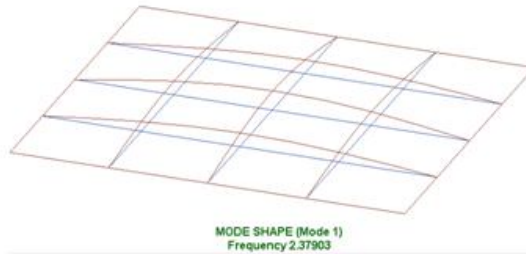
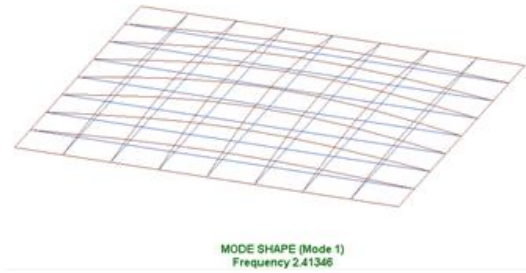
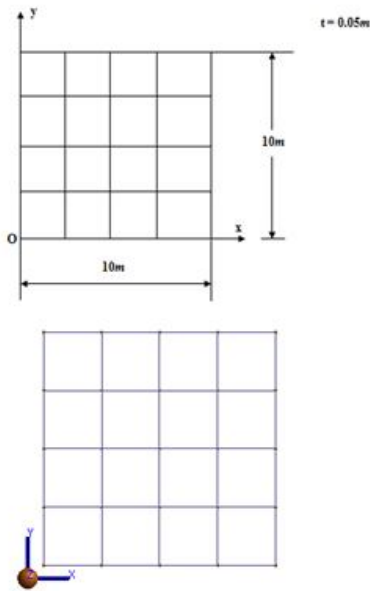


Free vibration analysis of simply supported thin square plate



Boundary condition	$U_x = U_y = R_z = 0$ at all nodes, $U_z = R_x = 0$ along edges $x = 0$ and $x = 10$, $U_z = R_y = 0$ along edges $y = 0$ and $y = 10$.		
Material property	$E = 200 \text{ GPa}$, $\nu = 0.3$, Specific gravity = 8		
Element type	Thin shell element, thickness = 0.05 m		
Mesh type	4 Node: 8 x 8 8 Node: 4 x 4		
Finite element statistics	Number of elements	Number of nodes	Degrees of freedom
	16	65	127

Mode	4 Node			8 Node		
	NAFEMS	FEAST ^{SMT}	NASTRAN [®]	NAFEMS	FEAST ^{SMT}	NASTRAN [®]
1	2.15	2.41	2.33	2.38	2.38	2.37
2	6.33	6.31	5.79	5.91	6.04	5.94
3	6.33	6.31	5.79	5.91	6.04	5.94
4	10.19	10.11	8.96	9.59	10.67	9.75
5	13.99	13.90	11.67	11.69	12.67	11.87
6	13.99	13.90	11.67	11.69	12.67	11.87