Course Number	M2795.005800	Lecture Number	001	Course Title (Subtitle)	Plate and Shell Theory	Credits	3

Instructor	Name	Ji-Hwan Kim	Position	Professor	Homepage	http://odyssey.snu.ac.kr	
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	Consult Time & Place		Tue,Thur. pm: 5:00~6:15 , Room : 301-303				

Prerequisites courses	Theory of elasticity

* 1. Goals	Topics of this course are to develope systematic approach to derive the theory of plates and shells. In the lecture, variational principle is to introduce and precise mathematical concepts are summerized. And then, classical, first-order shear deformation and higher-order theories of plate and shell are derived.
* 2. Texts and References	Text: Lecture note. Ref.) Dym, Solid Mechanics, Chia, Nonlinear Analysis of Plate Soedel, Vibrations of Shells and Plates

* 3. Evaluation	Attendance	Assignment	Mid-term	Final	Quiz	Class Partcipation	Others	Total
	10 %	15 %	25 %	25 %	15 %	5 %	5 %	100%
	Remarks :							

* 4. Lecture Plan	Lecture Contents	
	Week	
	1	Preliminary mathematics : Indicial notations
	2	Calculus of Variation
	3	Review of 3-Dimensional Elasticity
	4	- Lagrangian Strains and Stress tensor
	5	- Equlibrium Equations and Variational Priciples
	6	Statics of plates – Classical linear theory
	7	First-order and Higher-order shear deformation theory
	8	. von Karman Non-linear Plate theory
	9	Deep Shell Theory – General aspects
	10	Shell coordinates and Infinitesimal distance in shell layer
	11	Fundamental form parameters (Lame parameters)
	12	Stress-Strain Relationships , Strain-displacement relations
	13	Love simplifications
	14	- Membrane forces, Bending moments
	15	Additional comments for applications

5. Guideline for students	