CIE4180: Plate Analysis: Theory & Applications
November 2021 - January 2022
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TU Delft

This schedule is subject to change.
Changes will be announced in class / Brightspace

The course focusses on:
plates loaded in their plane (membrane state, IP)
plates loaded out of their plane (bending state, OOP)

08-Nov-21	Mon	3:45 PM	Introduction, Membrane plates (Lecture hall D)	IP	Vol. 1, Ch. 1	MH
10-Nov-21	Wed	1:45 PM	Membrane plates (D)	IP	Vol. 1, Ch. 1	MH
12-Nov-21	Fri	1:45 PM	Applications of plate membrane theory (C)	IP	Vol. 1, Ch. 2	MH
15-Nov-21	Mon	3:45 PM	(no lecture)			
17-Nov-21	Wed	1:45 PM	Applications of plate membrane theory (D*)	IP	Vol. 1, Ch. 2	MH
19-Nov-21	Fri	7:00 AM	Assignment 1: published via Brightspace			
19-Nov-21	Fri	1:45 PM	(no lecture)			
22-Nov-21	Mon	3:45 PM	Membrane plates. Approximations & FEM (D*)	IP	Vol. 2, Ch. 1,2	P/M
24-Nov-21	Wed	1:45 PM	Membrane plates. Finite Element Method (D*)	IP	Vol. 2, Ch. 3	MH
26-Nov-21	Fri	1:45 PM	(no lecture)			
29-Nov-21	Mon	3:45 PM	Thick plates in bending and shear (D*)	OOP	Vol. 1, Ch. 3	PH
01-Dec-21	Wed	1:45 PM	Thin plates in bending (D*)	OOP	Vol. 1, Ch. 4	PH
03-Dec-21	Fri	1:45 PM	(no lecture)			
06-Dec-21	Mon	3:45 PM	Thin plates in bending. Boundary cond. (D)	OOP	Vol. 1, Ch. 4	PH
08-Dec-21	Wed	1:45 PM	Applications of thin plate theory (D)	OOP	Vol. 1, Ch. 5	PH
09-Dec-21	Thu	11:59 PM	Assignment 1: due date, submit via Brightspace	IP		
10-Dec-21	Fri	7:00 AM	Assignment 2: published via Brightspace	OOP		
10-Dec-21	Fri	1:45 PM	(no lecture)			
13-Dec-21	Mon	3:45 PM	Beams. Plates in bending. Approx. & FEM (D)	OOP	Vol. 2, Ch. 6-8	PH
15-Dec-21	Wed	1:45 PM	Reinforcement design using linear analysis (D)	I/O	Book, Ch. 16	PH
17-Dec-21	Fri	1:45 PM	(no lecture)			
20-Dec-21	Mon	3:45 PM	Recap, Q&A about the course or assignment 2	I/O		P/M
22-Dec-21	Wed	1:45 PM	(no lecture)			
24-Dec-21	Fri	1:45 PM	(no lecture)			
24-Dec-21	Fri	11:59 PM	Assignment 2: due date, submit via Brightspace	OOP		
27-Jan-22	Thu	1:30 PM	Exam			

D*: self-enrollment is required! See announcement

The reader, authored by Johan Blauwendraad is available on Brightspace and comprises two volumes. Students of the TU Delft also have free access to the book 'Plates and FEM' from the same author which is based on the reader.

The assignments will be published on Brightspace.
The reports of the assignments should be submitted via Brightspace.
It will be individual assignments including finite element exercises.

All assignments are individual assignments.
Brainstorming with other students is permitted.
Copying (or allowing to be copied) from others is plagiarism.

This course was previously taught by Xueyan Liu, Cor Kasbergen and Alexendar Schmetz. Most of the presentation materials used in this edition of the course is from their hands. The set-up of the course and the arrangements of the assignments has changed however.

The final grade is a weighted average:

Assignment 1	10%
Assignment 2	10%
Exam	80%

There will be no retakes for the assignments.
The results of the assignments are valid only in combination with exam results of the same academic year.