



**UNIVERSITÀ DEGLI STUDI DELL'AQUILA
CORSI DI INGEGNERIA**

**A.A. 2024/2025
Mechanics of plates and shells (I4Z)
- Giorgio Ivan -**

(Aggiornato il 19-08-2024)

Contenuti del corso (abstract del programma):

- 1) Basic notes on mono-dimensional structural elements: straight, planar beam; straight, planar beam on elastic soil (Winkler model); planar curved beam; ring beam.
- 2) Bi-dimensional planar elements: planar membrane of generic shape; plate of generic shape (Mindlin and Kirchhoff models).
- 4) Basic notes on curved two-dimensional elements: cylindrical shell; axial-symmetric shell (spherical dome, Reissner and Geckeler models).

Programma esteso:

- 1) Basic notes on mono-dimensional structural elements: straight, planar beam; straight, planar beam on elastic soil (Winkler model); planar curved beam; ring beam.
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- 4) Basic notes on curved two-dimensional elements: cylindrical shell; axial-symmetric shell (spherical dome, Reissner and Geckeler models).

Modalità d'esame:

Oral exam.

Risultati d'apprendimento previsti:

The main objectives of the course are: i) the mathematical formalization of non-standard mono- and bi-dimensional structural elements; ii) to highlight the behavioral characteristics and the phenomenology of the single structural elements and of complex structures.

Testi di riferimento: