Aerospace Engineering

Course Title: **Subsonic Aerodynamics** **Number of Credits: 3**

Course Topics:

- Introduction and background
- Fundamental of inviscid incompressible flow
- General solution of incompressible potential flow equations
- Small-disturbance Flow over Three-dimensional Wings
- Small-disturbance Flow over Two-dimensional Airfoils
- Exact Solutions with Complex Variables
- Perturbations theory
- Three-dimensional Small-disturbances Solutions
- Two-dimensional numerical (panel) method
- Three-dimensional numerical (panel) method

Reading Resources:

- Katz, Joseph. Plotkin, Allen. “Low Speed Aerodynamics”. Cambridge University Press, 2001.
- Bertin, John J. Smith, Michael L. “Aerodynamics for Engineers”. Prentice Hall, 1989.
- Anderson, John D. “Fundamental of Aerodynamics”. McGraw-Hill, 2001.
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