

**Aerospace Engineering**                      **Division:**  
**Level and Major: Msc Aerospace Eng**

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**Course Title: Unsteady Aerodynamics**                      **Number of Credits: 3**                      **Prerequisite**  
**Lecturer: Dr. Mahmoud Mani**

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**Course Description:**

Basic concepts of unsteady flow and the equations describing it.

**Course Goals and Objectives:**

Getting familiar with unsteady flows and basic concepts and effects of unsteadiness on main aerodynamic coefficients

**Course Topics:**

- Physics of unsteady Flow
- Unsteady flow over airfoil
- Experimental analysis
- Unsteady flow over wings
- Supersonic unsteady flow

**Reading Resources:**

- ulgen Gulcat; “Funamentals of modern unsteady aerodynamics
- Katz, J; “Low-speed aerodynamics”

**Evaluation:**

Final exam: 80%

Projects: 20%