



**THE OHIO STATE UNIVERSITY**  
COLLEGE OF ENGINEERING

# Internal Flows in Turbomachinery

## AEROENG 7862

**Credit Hours:**

3.00 - 3.00

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**Course Levels:**

Graduate (5000-8000 level)

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**Course Components:**

Lecture

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**Course Description:**

Detailed study of swirling, rotating, compressible, and unsteady internal flows found in turbomachinery.

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**Prerequisites and Co-requisites:**

Prereq: 3560 (560) and 5751 (751), or permission of instructor.

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**Course Goals / Objectives:**

- Designed to give graduate students a detailed understanding of swirling, rotating, compressible, and unsteady internal flows
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**Course Topics:**

- Review of basic fluid concepts
  - Vorticity and Circulation
  - Shear Layers
  - Losses
  - Unsteady Flow
  - Rotating Flow
  - Swirling Flow
  - Generation of Streamwise Vorticity
  - Compressible Internal Flow
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**Designation:**

Elective