

# AEROSPACE UNDERGRADUATE ACADEMIC CERTIFICATE

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## Objectives

The Aerospace Certificate aims to provide students with a foundational understanding of the principles and practices of aerospace engineering with a focus on the key areas of aerodynamics, propulsion, materials, and aero-structures.

The certificate program is designed to enhance students' knowledge and skills in aerospace engineering and to prepare them for careers in the aerospace industry or for advanced studies in the field. It may also be helpful for students who are interested in pursuing related fields such as mechanical engineering, electrical engineering, or computer science. The required coursework must be completed with a grade of 'C' or better.

## Required Coursework

Code	Title	Hours
Choose 4 courses from the following:		12
ME 417	Turbomachinery	
ME 412	Gas Dynamics	
ME 450	Fundamentals of Computational Fluid Dynamics	
ME 451	Experimental Methods in Fluid Dynamics	
ME 415	Materials Selection and Design	
ME 458	Finite Element Applications in Engineering	
ME 461	Fatigue and Fracture Mechanics	
<b>Total Hours</b>		<b>12</b>

### Course to total 12 credits for this certificate.

Students should consult with their academic advisor regarding this certificate.

1 - Attain career advancement in the aerospace sciences or related fields based on knowledge and skills gained from the certificate in aerospace.

2 - An ability to develop and design aerospace systems or components using basic engineering principles while following real-world constraints.

3 - An ability to effectively communicate to clients, engineers, or the general public on topics related to engineering solutions in aerospace engineering, technologies, and/or related fields.