

**Technical Minor**  
**Department of Mechanical Engineering and Mechanics**

**AEROSPACE ENGINEERING**

The minor in aerospace engineering provides a foundation for students who intend to pursue a career in the aerospace industry. This minor will also provide sufficient technical background in aerospace studies for undergraduates who plan to enter graduate programs in this field. The minor requires a minimum of 15 credits from the following course selection:

**Two Required Courses (total 6 credits):**

**ME 255 Introduction to Aerospace Eng.** Offered Fall & Spring, C elective. An introductory course in the core engineering principles used in the aerospace industry: aerodynamics, controls, propulsion, and structures. The course is designed for any engineering student who may intend to work in the aerospace industry and develops a basic understanding of the technologies used in the design and operation of today's aircraft, rockets, and spacecraft. **Prerequisite: ME 104 Thermodynamics.**

**MECH 326 Aerodynamics** Offered Fall, B elective. Application of fluid dynamics to flows, past lifting surfaces. Normal force calculations in inviscid flows. Use of conformal mappings in two-dimensional airfoil theory. Kutta condition at a trailing edge; physical basis. Viscous boundary layers. Thin airfoil theory. Section design; pressure profiles and separation. Lifting line theory. Compressible subsonic flows; Prandtl-Glauert Rule. Airfoil performance at supersonic speeds. **Prerequisite: ME 231 Fluid Mechanics.**

**Choose At Least Three Elective Courses (9 credits):**

<b>Fall</b>		<b>Prerequisites</b>
ME 331	Advanced Fluid Mechanics*	ME 231
ME 343	Control Systems*	ME 242 or 245 or ECE 125
ME 348	Computer-Aided Design**	ME 10, MECH 12 and 102, and MATH 205
ME 356	Astrodynamics**	ME 255
MECH 305	Advanced Mechanics of Materials*	MECH 12 and MATH 205
MECH 328	Aircraft Design Engineering**	ME 255
<b>Spring</b>		<b>Prerequisites</b>
ME 309	Composite Materials**	MECH 3 and MAT 33
ME 322	Gas Dynamics*	ME 104 and 231
ME 333	Propulsion Systems**	ME 104 and MECH 326 Mech 326 can be taken concurrently
ME 354	Automatic Control of Aerospace Vehicles**	MECH 326 and ME 343
ME 355	Spacecraft Systems Engineering**	ME 255
MECH 302	Advanced Dynamics*	MECH 102 and MATH 205
MECH 312	Finite Element Analysis**	MECH 12

\*BSME A Tech Elective, \*\*BSME B Tech Elective

These online FAA video courses do not count toward the 15 credits needed for the minor, but they do provide a background that can be particularly helpful to those students who are interested in careers in the aviation industry:

**ME 141** General Aviation Technology and Operations, offered Fall & Spring, 2 credits

**ME 142** Instrument Ground Training, offered Fall & Spring, 2 credits PRE-REQ, ME 141 or Private Pilot Certificate

**Minor Chair: Professor Terry Hart, [tjhart@lehigh.edu](mailto:tjhart@lehigh.edu)**

If you would like to join the Lehigh Aerospace Alumni Group on LinkedIn, please contact:  
Mae Anderson, [maa522@lehigh.edu](mailto:maa522@lehigh.edu)

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**AEROSPACE TECHNICAL MINOR DECLARATION FORM**

<b>Student's Name:</b>			
<b>Student LIN #:</b>			
<b>Student email:</b>			
<b>Major Department:</b>		<b>Expected Graduation Date:</b>	
<b>Major Advisor:</b>			

<u>Required Courses:</u>	<u>Credit Hours</u>	<u>Semester/Year</u>
ME 255 Introduction to Aerospace Engr	3	
MECH 326 Aerodynamics	3	
<u>Optional Courses: (List Three)</u>		
[Choose one]	3	
[Choose one]	3	
[Choose one]	3	

**Remarks**

<b>Student Signature</b>	<div style="border: 1px solid black; height: 30px;"></div>	<b>Date:</b>	<div style="border: 1px solid black; height: 30px;"></div>
<b>Approved by:</b>	<div style="border: 1px solid black; height: 30px;"></div> Terry Hart, Aerospace Minor Chair	<b>Date:</b>	<div style="border: 1px solid black; height: 30px;"></div>
<b>Approved by:</b>	<div style="border: 1px solid black; height: 30px;"></div> Christina Haden, Associate Chair, MEM Department	<b>Date:</b>	<div style="border: 1px solid black; height: 30px;"></div>