Aerospace

Engineering Department

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Department of Aerospace Engineering at SUT is nationally known for teaching and research that address both challenges and opportunities facing the aerospace profession. The goal of the department is to provide students with an understanding of basic principles, including mathematics, physics and aerospace and develop their ability to analyze, model, build, measure, design and implement solutions throughout a broad spectrum of engineering fields. Students are taught to understand product development and manufacturing processes and are encouraged to work effectively in a multidisciplinary team environment.

Undergraduate Course Structure

<table>
<thead>
<tr>
<th>1st year</th>
<th>2nd year</th>
<th>3rd year</th>
<th>4th year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math.</td>
<td>Dynamics</td>
<td>Vibrations</td>
<td>Flight Dynamics (II)</td>
</tr>
<tr>
<td>Physics</td>
<td>Strength Of Materials (I)</td>
<td>Heat Transfer (I)</td>
<td>Aircraft Design (I)</td>
</tr>
<tr>
<td>Statics</td>
<td>Thermodynamics (I)</td>
<td>Thermodynamics (II)</td>
<td>Materials &amp; Construction Methods</td>
</tr>
<tr>
<td>Aerospace Engineering</td>
<td>Aerodynamics (I)</td>
<td>Aerodynamics (II)</td>
<td>Three advanced courses with a choice from a wide variety of options</td>
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<tr>
<td>Statics</td>
<td>Fluid Mechanics (I)</td>
<td>A/C Structural Analysis</td>
<td>Research under the supervision of a member of the academic staff</td>
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<tr>
<td>Statics</td>
<td>Orbital Mechanics</td>
<td>Automatic Control</td>
<td></td>
</tr>
<tr>
<td>Statics</td>
<td></td>
<td>Propulsion Principle</td>
<td></td>
</tr>
<tr>
<td>Statics</td>
<td></td>
<td>Flight Dynamics (I)</td>
<td></td>
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</table>

Graduate Program

In accordance with the requirements of the graduate office at SUT, this department offers M.Sc. and Ph.D. degrees in advanced areas of aerospace engineering, including the following topics of research:

- Aerodynamics
- Aero-Acoustics
- Computational Fluid Dynamics (CFD)
- Combustion
- Propulsion
• Aerospace Structures  
• Aerospace Design  
• Space Engineering  
• Flight Dynamics and Control  
• Optimization

**Research Facilities**

• Aerodynamics Laboratory  
• CFD/ Parallel Computing Laboratory  
• Instrumentation Laboratory  
• Combustion Laboratory

• Control Laboratory  
• Structures Laboratory  
• Jet and Piston Engines Workshop  
• Model Airplane Workshop  
• Composite Materials Laboratory  
• Mechanics of Smart Materials Laboratory  
• Fast Computing Laboratory (HPCL)  
• Remote Access Lab  
• Laboratory of hydrodynamic calculations and design optimization

**Career Opportunities Aerospace**

A Sharif degree will fast-track one’s career, enabling one to go further more quickly. Aerospace graduates are sought after by top employers in industry and commerce, government organizations and academia. 74% of aerospace graduates are in relevant employment or further study within six months of graduation, securing jobs in some of the best known companies in Iran.