



Module PMRF-ISSS094/II/2025

# Turbomachine Design

## Name of the PMRF student

Goutam Mandal

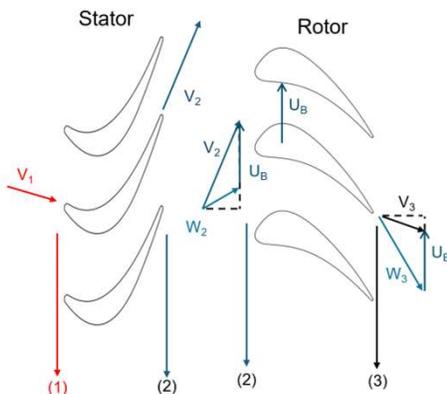
## Details of the content of the module

### Required background of the students taught

Engineering Mechanics  
Fluid Mechanics  
Thermodynamics



Axial-flow gas turbine turbojet, the J85  
Source: Wikipedia



Velocity triangle for an axial turbine stage

This course introduces the concept of turbomachines for the application of propulsion and power generation. Starting with the basic equations, we will work towards preliminary methodologies to design turbomachines. There will be ample problem-solving sessions. At the end of the course, there will be a brief discussion on design of each process using available softwares. The overall course looks as follows:

1. Introduction to Turbomachines
2. Design of Axial Compressors
3. Design of Axial Turbines
4. Design of Radial Machines
5. Tutorials using Excel Worksheet / MATLAB

### Schedule of the module

Start Date: 14<sup>th</sup> Sept, 2025 (tentative)

End Date: 20<sup>th</sup> Oct, 2025 (tentative)

Timings: Saturday (8:30 AM – 10:30 AM)

Sunday (8:30 AM – 10:30 AM)

Meeting link : Will be shared later

[Link](#)

Contact email ID: [iss.s.forum@gmail.com](mailto:iss.s.forum@gmail.com)

Registration link:

<https://forms.gle/rjThY7gs...>