



**ALLIANCE
UNIVERSITY**

Private University established in Karnataka State by Act No.34 of year 2010
Recognized by the University Grants Commission (UGC), New Delhi

Alliance College of Engineering and Design

B. TECH. in MECHANICAL ENGINEERING *(Lateral Programme)*

in collaboration with



**NETTUR
TECHNICAL
TRAINING
FOUNDATION**



ALLIANCE UNIVERSITY

Alliance University is a Private University established in Karnataka State by Act No.34 of year 2010 and is recognized by the University Grants Commission (UGC), New Delhi. The University was founded with an ambition to serve society with education and research and promote a global outlook that defines the future trajectory of its students.

In a realm where innovation propels progress and technology shapes destinies, welcome to a place where your aspirations are engineered into reality. The Alliance College of Engineering and Design at Alliance University is your launchpad to a future fueled by cutting-edge technology and driven by relentless innovation.

We are a movement of forward-thinkers, visionaries, and tech enthusiasts. Our mission is clear: to sculpt individuals into tech pioneers, design virtuosos, and solution architects of the digital age. In this fast-paced world, we recognize that success is not merely about knowledge, but the practical application of it. At our core, we blend theory with practice to create engineers who are not just informed but transformed.

NETTUR TECHNICAL TRAINING FOUNDATION (NTTF)

Established in 1959 in Nettur, Kerala, with the support of Swiss Govt. & HEKS NGO and Indian Govt. NTTF is one of the premier institutions in the country imparting technical education pan India. Started with single Tool & Die-making training centre, over the last 65 years. NTTF has grown with 14 Hi-tech vocational and technical training centres across the country accommodating over 5,000 students every year. More than 75,000 students have graduated from NTTF till date and over 1,00,000 industry employees are upgraded in terms of skills. NTTF's motto is to impart industry-focused niche skills to youth, making them highly employable.

NTTF is a recognised 'AWARDING BODY & ASSESSMENT AGENCY' by the **National Council for Vocational Education and Training (NCVET)** under the aegis of Ministry of Skill Development & Entrepreneurship (MSDE), Govt of India. Henceforth, all the Diploma programmes offered by NTTF would be under the framework of NCVET Guidelines.

NTTF offers long-term vocational programmes at Diploma, Post Diploma, Postgraduate and certificate levels.



B. TECH. IN MECHANICAL ENGINEERING

(LATERAL ENTRY) - THREE YEARS (FULL-TIME)

The programme is aimed at preparing graduates in Mechanical Engineering who are adept at designing innovations and technological advancements in the high technology areas of mechanical systems, robotics, nanotechnology, and mechatronics, and are renowned for their generalist engineering expertise. At the Alliance College of Engineering and Design, the B. Tech. in Mechanical Engineering is crafted with a high emphasis on the design aspects of mechanical engineering: tool and die design, industrial robotics, gears, and cams as well as oil hydraulics and pneumatics.

SPECIALIZATION ELECTIVES

SMART MANUFACTURING TECHNOLOGIES	ROBOTICS AND AUTOMATION
<ul style="list-style-type: none">· Digital Manufacturing & Rapid Prototyping· Smart Materials & Structures· Product Design, Development & Life Cycle Management· Big Data Analytics in Manufacturing· Human-Machine Interaction & Interface· Industrial IoT & Data Analytics· Digital Twin & Bio-mimicry in Manufacturing	<ul style="list-style-type: none">· Kinematics & Dynamics of Robotics· System Design for Robots & Drones· Soft Robotics· Power Electronics & Drives· Application of AI in Robotics & Automation· Control System & Automation· Mobile Robots

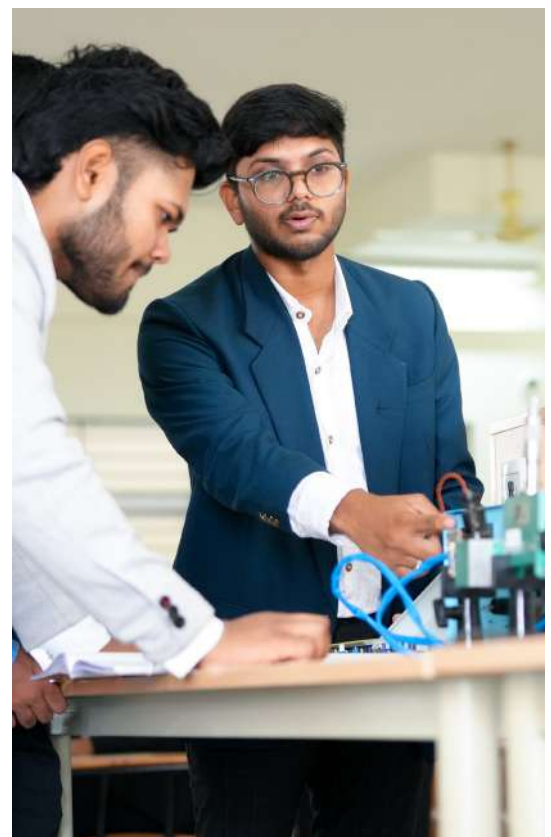
PROGRAMME STRUCTURE

SEMESTER III	SEMESTER IV	SEMESTER V
<ul style="list-style-type: none">· Engineering Mechanics· Transforms & Partial Differential Equations· Strength of Materials· Materials Science and Metallurgy· Manufacturing Technology· Open Elective 1	<ul style="list-style-type: none">· Design Project - I· Fatigue & Fracture Mechanics· Probability & Statistics· Elective - I· Elective - II· Fluid Mechanics & Machinery· Thermodynamics	<ul style="list-style-type: none">· Design Project - II· Design of Machine Elements - I· Elective - III· Finite Element Method· Theory of Machine Elements - I· Numerical Methods using Python· Computer Integrated Manufacturing
SEMESTER VI	SEMESTER VII	SEMESTER VIII
<ul style="list-style-type: none">· Design of Machine Elements - II· Mechatronics· Heat and Mass Transfer· Elective - IV· Elective - V· Theory of Machine Elements - II	<ul style="list-style-type: none">· Computational Fluid Dynamics· Mechanical Modelling & Simulation· Elective - VI· Capstone Project - I· Internship· Production Planning and Control	<ul style="list-style-type: none">· Constitution of India· Elective - VII· Environment Science· Open Elective 2· Capstone Project - II

ELIGIBILITY

Passed Diploma examination with at least 50% marks in relevant branch of Engineering & Technology. A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST.

CUTTING-EDGE LAB FACILITIES



SCAN TO APPLY



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