M.E. in Advanced Electronic Systems and Smart Manufacturing

Supported by

Centre of Excellence (CoE) in Product Development and Smart Electronics Manufacturing
BITS Pilani, Pilani Campus

1. Selection Criteria

Admissions to this programme is conducted through two primary pathways, namely GATE-qualified candidates (with a valid GATE score) and candidates applying through the BITS Higher Degree (HD) Test. All shortlisted applicants are required to participate in a mandatory interview process. The interviews are proposed to be conducted in an online mode to ensure accessibility for candidates across the country.

The selection process follows a structured evaluation framework wherein 70% weightage is assigned to the GATE score or HD Test performance, and 30% weightage is assigned to the interview. The interview will assess conceptual understanding, problem-solving ability, and motivation towards applied engineering and product development.

2. Stipend and Financial Support

The programme offers financial assistance in line with Institute norms for Higher Degree programmes. Candidates admitted through the HD Test pathway are eligible for a stipend of INR 13,400 per month, as per existing BITS Pilani guidelines. GATE-qualified candidates are eligible for the standard GATE scholarship, subject to prevailing Government of India norms along with a tuition fee waiver of 13,400 per month, as per existing BITS Pilani guidelines.

In addition, the Centre of Excellence (CoE) extends additional financial support in the form of tuition fee waivers and academic incentives to selected students. Candidates with GATE ranks < 200 will be designated as *CoE Fellows*. These fellows will be eligible for enhanced academic and financial support

3. Programme Structure (Brief)

This interdisciplinary programme is designed to provide a balanced combination of theoretical foundations, applied learning and working on live industry projects. Key thematic areas include

- Automation, Robotics, and Smart Manufacturing
- Display and Optoelectronics
- Tooling & Moulds, Precision Machining, and Metrology

The curriculum is structured across four semesters. The first semester focuses on foundational courses and laboratory immersion. The second semester emphasizes applied learning through advanced courses and project-based components. The third semester is dedicated to industry-integrated learning through live projects, and the final semester culminates in Practice School (industry internship) or a dissertation.

The programme is developed in collaboration with electronics manufacturing companies, enabling students to work on real-world problem statements, receive industry mentorship, and gain exposure to contemporary manufacturing ecosystems.

4. Essential information related to application

Candidates applying through GATE should have a valid GATE score in relevant papers such as in Civil Engg (CE); Aerospace Engg (AE); Chemical Engg. (CH); Mining Engg. (MN); Electrical & Communications (EC); Engineering Science (XE); Electrical Engg. (EE); Data Science & AI (DA); Instrumentation Engg. (IN); Mechanical Engg. (ME); Production & Industrial Engg. (PI); Metallurgical Engg. (MT); Computer Science & IT (CS).

Candidates must possess an integrated first degree of BITS Pilani in Mechanical/ Manufacturing/ Electrical & Electronics/ Electronics & Instrumentation/ Electronics & Communication/ Chemical/ Civil/ Mathematics & Computing/ Computer Science/ or its equivalent with a minimum of 60% marks.

Candidates who do not possess a GATE score may apply through the BITS HD Test. The HD Test is conducted in accordance with standard BITS Higher Degree admission norms and evaluates candidates based on discipline-specific fundamentals.

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