APJ Abdul Kalam Technological University

M.Tech Admission Prospectus (2024-25)

APJ Abdul Kalam Technological University (APJAKTU) invites application from enterprising and ambitious engineering minds, to join the following post graduate programmes at the University Schools for the academic year 2024-25.

Why Choose APJAKTU?

- **Global Academic Partnerships**: Engage with leading institutions worldwide, making your learning experience truly global.
- **Cutting-Edge Research Collaborations:** Collaborate with top industries to harness your skills for innovation and research.
- **Centers of Excellence:** To associate with the three Centres of Excellence being established by the University inorder to equip with the cutting-edge knowledge and research skills.
- **Translational Research Centre**: Opportunities to transform innovative and patented ideas into market-ready products that's being created in the University
- **Flexible Curriculum:** Experience a student-friendly curriculum designed to promote startups and entrepreneurship.
- **State-of-the-Art Learning Center:** The upcoming facility at Vilappilsala Campus will offer extensive teaching learning environments with modern amenities.
- **Prime Location:** Study at this strategically located campus in Thiruvananthapuram, with proximity to leading research institutes.

1. General information

This information brochure is for admission to the four PG programs in Engineering and Technology conducted by the four schools of APJ Abdul Kalam Technological University for admission during the academic year 2024-25.

All programs are in full time mode and the duration of all programs is four semesters. The programs are approved by the AICTE.

Admission Categories

Admission categories are defined as:
There will be three categories of admission viz. i) **GATE** ii) **Non-GATE** and, iii) **Sponsored.**

i) GATE candidates: Candidates having valid GATE score for 2024-25 AY admissions will be considered for admission under this category. Rank list of such candidates will be prepared on the basis of valid GATE Score. They are eligible to receive the GATE scholarship as per AICTE norms.

ii) Non-GATE Candidates:
If there are not enough GATE-qualified applicants, vacant seats will be filled through a University Entrance Test/Interview. The rank list for non-GATE candidates will be based on the marks obtained in the test/interview. The test/interview may be conducted online or offline, and registered candidates will receive an email notification with details. The syllabi for the entrance test/interview will be published on the University/School website.

iii) Sponsored candidates: Professionals working in Registered Industry / Organization (Central / State) / Private/ Public Limited Company/ MSMEs, having minimum one year regular/full time experience are eligible under this category. Rank list for the sponsored candidates will be prepared on the basis of experience and qualifying examination marks.

In the case of candidates having identical scores (GATE/University test/interview), the final rank list will be prepared on the basis of Percentage Marks of Qualifying Degree.

If Qualifying Degree Marks are also identical, Date of Birth will be considered (a person born earlier will get a higher preference)

Application Fee: Applicants are *not required* to remit any application fee for the MTech 2024-25 admissions.

2. Schools and Postgraduate Programs

School of Mechanical Sciences and Technology

MTech Mechanical and Materials Technology

The introduction of new technologies has been transforming and revolutionizing automation of many processes eliminating the need for human intervention in hazardous environments, which warrants the development of products, machines and tools suitable for such situations. Materials Technology is an interdisciplinary discipline which focuses on the use of materials and production technologies to design, produce and optimize existing products, as well as develop new ones. Development of new products and processes to address the needs of the industry requires research in the areas of Computational Material Science, thermal-fluidics and hybrid materials. Incorporation of mechatronic systems in conventional machinery also demands studies and research. This Postgraduate program is designed to cater to such research and development needs in Mechanical and Materials Technology.

School of Building Sciences and Technology

MTech Infrastructure Engineering and Management

Infrastructure plays a crucial role in a country's progress and prosperity. Need for transforming a country's infrastructure with megascale projects involving state of the art technologies demand supply of trained manpower who can design, engineer, work and manage such projects. Mass rapid transit systems receive increased attention in the context of the world drive for sustainable and less energy intensive transport systems. The courses cover the topics related to new and sustainable

materials for construction, Development and design of sustainable, socially responsible development models, automation in construction sector, data driven approaches etc.

The demand for newer and sustainable materials for construction, the need for finding new materials, which can supplement conventional ones, through research has arisen. Course content of different subjects/academic works/projects of the PG program are designed exactly to address the demands of the industry and academia. Thus, this Postgraduate program aims to address the changing infrastructure requirements of the times.

School of Electrical Sciences and Technology

MTech in Electric Vehicle Technology

Transportation electrification is rapidly being adopted in the context of increasing demand for alternatives for IC engine driven transport systems for combating climate change. The electric vehicle (EV) ecosystem is supported through significant research in battery technology and drive train design advancements. Advances in the battery chemistry and technology supported by advancements in manufacturing technology have led to a significant reduction in cost, weight and energy density of the batteries, and EVs have thus emerged as a significant alternative to conventional vehicles. It is envisaged that different subsystems of EVs, in particular, battery technology/energy storage systems, electric drive train, and sensor networks will continue their improvement cycle for the next several years. These technologies also find application in mass rapid transit systems, aeronautical systems, and marine vehicles. Extending electrification to air, water, rail and road modes of transport can bring about greater demands for engineers and researchers specialized in electric vehicle technologies. This Postgraduate program addresses the needs of the electric vehicle research and development of the industry.

School of Communication Sciences and Technology

MTech in Embedded Systems Technologies

Embedded systems are integral to modern technological advancements, playing a critical role in applications such as consumer electronics, automotive systems, industrial automation, and medical devices. The M.Tech course in Embedded System Technologies provides a comprehensive understanding of embedded systems' theoretical and practical aspects, focusing on the design, development, and deployment of embedded solutions. This program lies at the intersection of computer science, electronics, and control engineering, offering in-depth knowledge of microprocessor and microcontroller architectures, real-time operating systems, and hardware-software co-design. Students learn to design and implement embedded systems using various programming languages, development tools, and hardware platforms, ensuring proficiency in coding, debugging, and optimizing embedded software.
The program also encourages research and innovation, preparing students for careers in industry and academia with skills in problem-solving, critical thinking, teamwork, and effective communication.

3. Eligibility of applicants

The candidate should have:

i) Bachelor's Degree:

A Bachelor's Degree in Engineering/Technology/Engineering Science with a minimum CGPA of 6.0 on a 10-point scale or 60% aggregate marks.

For SEBC/OBC students, a minimum CGPA of 5.5 or 55%.
For SC/ST and PwD candidates, a pass in the Engineering Degree Programme is sufficient.

The degree should be obtained under the 10+2+4/10+3+3 scheme from APJ Abdul Kalam Technological University (APJ AKTU) or an equivalent degree in the appropriate branch from a university approved/recognized by AICTE/UGC or Deemed Universities in India and abroad recognized for higher studies by APJ AKTU.

OR

A First Class **Master's degree** with appropriate specialization from a university approved/recognized by AICTE/UGC, or deemed universities

in India and abroad recognized for higher studies by APJ AKTU under the 10+2+3+2/10+2+3+3 scheme.

OR

Passed AMIE/AMIETE Examinations and meet the following conditions:
Have a valid GATE score.
A minimum of 60% marks in section B of the AMIE/AMIETE examination.

AND

ii) Valid GATE Score:
A valid GATE score in the appropriate branch

OR

Passed the entrance test/interview conducted by the University.

See **Appendix I** for detailed eligibility requirements specific to each program.

Candidates *whose final results are not available at the closure of online application are required to furnish them at the time of admission or on a prior date prescribed by the University - failing which they will not be given admission.*

4. Seat availability

The total number of seats for each program is 18 (including sponsored seats). **Reservation of seats will be as per Govt. norms**

5. Admission schedule:

(i) **Registration:**
Register on the online application system.

(ii) **Application Form:**
Fill in personal details and complete the application form through the online portal as per the instructions provided. Upload scanned copies of documents and a photograph.

(iii) **Online Verification:**
The university will verify the soft copies of documents submitted via the portal. If any discrepancies are found, you may be asked to submit the correct documents. Failure to comply with the online verification by providing correct and legible information will result in the automatic cancellation of the application without any further communication.

(iv) **Second Stage Verification:**
The concerned schools will conduct a second stage of verification based on uploaded documents and eligibility claims. Eligibility will be provisional, and any mismatch found between submitted claims/uploads and original documents will result in the rejection of the application/selection/admission. The UGC directions being issued from time to time will have to complied appropriately.

(v) **Test/Interview:**
Non-GATE candidates will need to appear for a test/interview (online/offline) on the scheduled date and time.

(vi) **Merit/Rank List:**
Preparation and publication of the merit/rank list for different categories.

(vii) **Final Admission:**
After verification of the original documents, the final admission of the selected candidates will be completed with the remittance of the requisite fees.

Other Relevant Information on Admission:

Candidates must report for admission to the University only after receiving an official announcement from the University. When reporting, candidates should bring the following original documents:

(i) Admission Memo.
(ii) Certificate to prove date of birth.
(iii) Transfer Certificate (TC) from the last attended Institution and Conduct Certificate.
(iv) Consolidated mark list of the Degree examination and Provisional/Degree Certificate.
(v) In the case of under-graduation from a foreign university, an equivalency certificate issued from APJ Abdul Kalam Technological University or any other University within Kerala offering engineering programmes.
(vi) Migration Certificate in case of candidates who have passed their qualifying examination from other Universities.
(vii) Any other documents required to be produced by the University
(viii) GATE score card for GATE qualified candidates.

Candidates are required to report for admission on the date and time prescribed by the University. At the time of admission, candidates must remit

the requisite fee at the University. Details of the fee will be provided in the Admission Memo.

Please refer to **Appendix III** forsemester fee details. Sponsorship certificate applicable to sponsored candidates is given as **Appendix IV.**

Note: The University reserves the right to change any content of this prospectus without any notice. Hence, ***candidates are advised to regularly check the University Website for updates on the admission notification/prospectus contents.***

Registrar

Appendix I

GATE candidates (Selection based on GATE score)

School	PG Program Specialization	Gate Discipline	Basic Qualifying Degree
School of Electrical Sciences and Technology	Electric Vehicle Technology	EE	Bachelor's degree in Electrical Engineering and allied branches / Electronics and Communication Engg. and allied branches/Computer Science and Engg. and allied branches. /Mechanical Engg and allied branches/ AMIE / AMITE /MSc in Electronics/Physics
School of Communication Sciences and Technology	Embedded Systems Technologies	EE/EC/ IN/BM	Bachelor's degree in Electronics and Communication Engg. and allied branches /Electrical Engg. and allied branches/Computer Science and Engg./Mechanical Engg./Biomedical Engg. and equivalent branches.
School of Building Sciences and Technology	Infrastructure Engineering and Management	CE/GE/ EE/ME	Bachelor's degree in Civil Engg and allied branches/Mechanical Engg. and allied

			branches/Electrical Engg.and allied branches/AMIE / AMITE /MSc in Electronics/Physics
School of Mechanical Sciences and Technology	Mechanical and Materials Technology	ME/MT/XE with XE-C as one of the optional	Bachelor's degree in Mechanical Engineering and allied branches

Non-GATE (such Candidates have to pass the University Entrance Test/Interview):

School	**PG Program Specialization**	**Basic Qualifying Degree**
School of Electrical Sciences and Technology	Electric Vehicle Technology	Bachelor's degree in Electrical Engineering and allied branches
School of Communication Sciences and Technology	Embedded Systems Technologies	Bachelor's degree in Electronics and Communication Engg. and allied branches
School of Building Sciences and Technology	Infrastructure Engineering and Management	Bachelor’s degree in Civil Engg.and allied branches
School of Mechanical Sciences and Technology	Mechanical and Materials Technology	Bachelor’s degree in Mechanical Engg. and allied branches

Appendix II

Seat Reservation : As per Govt. of Kerala norms.

Appendix III

Fee structure

	Total fee per semester		
Category ➡️	**GATE**	**Non-GATE**	**Sponsored**
	25000	25000	35000