M.Tech in Translational Engineering

Government Engineering College, Bartonhill

Admissions- 2020

TPLC

Introduction

Government Engineering College Barton Hill is pleased to offer the two year interdisciplinary M.Tech programme in Translational Engineering under the initiative of the Higher Education Department facilitated through Directorate of Technical Education, Government of Kerala. The programme is run through the Translational and Professional Leadership Centre (TPLC) housed in Government Engineering College, Barton Hill. The centre works with close association and guidance from the Indian Institute of Technology Madras, Indian Institute of Technology Bombay, **Indian Institute of Technology Delhi,** Technical University Delft, Netherlands, and other Government departments. This programme is approved by the All India Council for Technical Education (AICTE) and is affiliated to the APJ Abdul Kalam Technological University (KTU). The total intake of the programme is 18 candidates.

Government Engineering College, Barton Hill

Government Engineering College, Barton Hill (GECBH) is one of the prominent technological institutes in Kerala. The college now offers five full time B.Tech. degree courses and five full time M. Tech degree courses. In addition the institution conducts a one year Advanced Diploma in Automotive Mechatronics in association with M/s Mercedes Benz India. It has collaboration with various industry partners such as Mercedes Benz, BOSCH Ltd, Academic partners such as IIT Madras, and scientific research organizations such as VSSC, CDAC etc. The college has signed MOU with various organizations such as Goethe Zentrum, ICT Academy etc., for enhanced collaboration in professional activities.

What is Translational Engineering?

Translational Engineering is a niche area that focuses on extending technology to the society in a seamless and humanistic manner. It is an approach applicable to each branch of Engineering, retaining the nature andscope of the respective branch of Engineering, bringing in an additional multidisciplinary aspect. This discipline holds its place between research and practice of all branches of Engineering, translating between the abstractions of research and practice.The involvement of government departments/industry in the discussions and mentoring of research institutions can help to orient research and education activities towards addressing the grand engineering challenges of the 21st century society, bring expertise to support knowledge transfer initiatives, and signal willingness to introduce innovation-oriented approaches in all activities. The professionals working on such knowledge transfer must possess a wide range of skills in order to carry out their tasks effectively and they have to prove themselves to be responsible engineers with a strong social commitment coupled with ethical values.The pedagogy at TPLC focus on developing skills for young engineers to respond to uncertain situations, adaptiveness in multicultural global environments and ability to innovatively leverage the opportunities with fast changing technologies.TPLC endeavours to mould students in such a way that they are able to operate effectively in an environment of change and be an active participant in all the sectors of the economy. It also works towards bringing a transformational change in the skill sets of engineers in Government Departments.

Vision

- To present, discuss and debate the transformation of basic knowledge into ideas and candidates for translation so as to deliver sustainable innovative products and services for the benefit ofsociety
- To empower the student community with professional, ethical and social awareness, there-by moulding them to become smart and wise professionals with a global outlook and socialcommitment.
- To analyze the social, political, economic and cultural aspects under the technology umbrella.

Mission

- To build Responsible Engineers who hold paramount importance to the health, safety and welfare of the generalpublic.
- To inculcate the concept of sustainability and green technologies in Engineering disciplines.
- To sensitize students to the practical challenges that organizations face and understand the nuances and realities of the industry apart from technicalknowledge.
- To inculcate the spirit of working in multi-disciplinary teams and gain on- the- job experience through active and challenging work on real engineeringprojects.
- To foster creative talents, innovative research, self-awareness and life-long learning.

Translational Research and Professional Leadership Centre (TPLC)

Translational Research and Professional Leadership Centre (TPLC) at Government Engineering CollegeBartonhill (GECBH), Thiruvananthapuram, India, is working with a motto "Transforming Professionals to Transform the Nation". It is a promising research Centre, which imparts timeless leadership activities, self-awareness and integral education, visiting scholar programs featuring Nobel laureates, erudite weeks and conducting workshops on social responsibility projects. In addition, industrial visits are facilitated to give hands on training on real-time Engineering projects.

Translational Research and Professional Leadership Centre (TPLC) is supported by prestigious institutions spread over India and Abroad. To expose the students to the challenges of the real world, a mandatory internship program spanning **minimum of** six weeks (one and a half month), as envisaged in the curriculum of the APJ Abdul Kalam Technological University is facilitated by Technical University, Delft, Netherlands, Regen Power Australia, **AIMST University in Malasyia,** IIT Madras, IIT Bombay, **IIT Indore, IIT Palghat, Sree Chitra Institute for Medical Sciences and Technology** and Loyola college, Trivandrum.

TPLC, GEC Barton Hill, has signed a memorandum of understanding with IIT Madras on academic and research activities on the following categories on December 16, 2016.

- Academic and Research collaboration in the areas of mutual interest.
- Exchange of academic information, scholarly information, materials and publications.
- Exchange of students and faculty.
- Sponsorship of cooperative seminars, workshops and other academic meetings.

TPLC, GEC Barton Hill has also signed MoU's with Water and Power Consultancy Services Limited (WAPCOS) under the Ministry of Jal Shakti of the Government of India for resource sharing in project implementation. TPLC, GEC Barton Hill also signed an MoU with The Central Polytechnic College, Thiruvananthapuram.

M.Tech in Translational Engineering

1. General

The duration of the M.Tech Translational Engineering Degree Programme is two academic years spanning four semesters. A student who successfully completes the programme will be awarded M.Tech degree in Translational Engineering by the APJ Abdul Kalam Technological University (KTU).

2. Eligibility

2.1. The candidates for admission to M.Tech Translational Engineering programme should have passed B.Tech or any equivalent degree in any Engineering discipline from a University approved by AICTE/UGC. If the degree is from a University outside India, certificate of equivalency issued by AIU is mandatory.

2.2. The candidate should have a minimum CGPA which is equivalent to 60% aggregate marks. For SC/ST candidates a pass in the Engineering degree course is sufficient. For SEBC(OBC) students, a minimum CGPA equivalent to 54% aggregate marks in the Engineering degree examination is mandatory.

2.3. Candidates who have passed AMIE/AMIETE examination and satisfying the condition of a minimum mark of 55% for section B in AMIE/AMIETE examinations are also eligible for admission to M.Tech Translational Engineering.

2.4. Sponsored candidates from the Government Departments can apply for the programme through proper channel.

2.5. Candidates who have appeared for the final semester examination can also apply, provided he/she has passed all the subjects up to and including the 6th semester exam. Confirmation of admission of such candidates shall be subject to the production of qualifying degree satisfying clauses 2.1 to 2.3 as applicable on or before November 30, 2020.

2.6. The sponsored candidates, If they fail to qualify within the period specified in KTU ordinance/regulations, the entire expense incurred by Govt. for them should be refunded to the concerned department. Within 6 months after qualification, they have to present a demo of a project before Director of Technical Education how the knowledge they have acquired can be applied in their department/agency in an Engineering project. They have to execute a bond to this effect before admission to this course.

3. No. of seats, Age limit and Reservation of seats

a) The total number of seats for the Programme is 18. Out of the 18 seats, 8 seats are reserved for sponsored candidates from Government sector/Industry/NGO and 10 seats for non-sponsored candidates.

b) For sponsored candidates from Government departments the maximum age limit is **44 years**. (Not born before June 1st 1976). However, age limit does not apply to non-sponsored and self-funded candidates from Government sector/Industry/NGO.

c) 30% Seats are reserved for candidates belonging to Socially and Educationally Backward Classes (SEBC). Candidates belonging to SEBC (OBC) and OEC should produce a certificate to the extent that the candidate belongs to the community which is designated as an SEBC (OBC) / OEC and does not belong to the category of Creamy Layer.

d) 10% Seats are reserved for SC/ST Candidates (SC-8%, ST-2%).

e) The seats reserved for each category will be distributed among the eligible communities by observing the pattern of general reservation rules of the state.

f) 5% seats are reserved for different abled candidates.

4. Fees

The programme is conducted through the Directorate of Technical Education and the tuition fee for the Programme is **Rs.45000/- per semester for all categories.**

5. International Internships

The non-sponsored candidates who are offered internships in International Universities based on their performance are given internship allowance of a maximum of Rs 1,00,000/- from their paid fees of Rs.1,80,000 as per G.O(Rt) No. 1978/2017/H.Edn.dated 1.11.17. For sponsored candidates the internship fees will be sponsored by the government based on G.O (Rt) No. 243/2018/H.Edn. dated 5.12.17, issued from time to time,which is a policy decision of the Government.

6. Admission

Admission to the M. Tech Programme in Translational Engineering is made on the basis of total marks obtained for the qualifying examination and a personal interview. This is applicable to all categories of students. **The selection of candidates is done by Admission Committee, consisting of experts from various disciplines, constituted by Admin Committee of GEC Barton Hill, headed by Principal, GEC Barton Hill.**

For sponsored candidates who wish to take admission in M.Tech Translational Engineering, must submit a two page proposal of an issue or problem in your department or any social problems for which you will carry out the research and bring up the solution at the end of the course.

7. No Liquidated Damages

As per G.O (Rt)No.77/2019/H.Edn dated 18/01/2019, the liquidated damages are fully exempted and stated that the clause of chapter 7.13 of AICTE approval process Hand Book 2019-20 stated as follows.

a) In the extent of a student withdrawing before the start of the course, the entire fee collected from the student, after a deduction of the processing fee of not more than Rs.1,000/- (Rupees One Thousand only) and proportionate deductions of monthly fee and hostel rent, where applicable.

b) In case, if a student leaves after joining the course and if the vacated seat is consequently filled by another student by the last date of admission, the Institution must refund the fee collected after a deductions of processing fee not more than Rs.1,000/-(Rupees One Thousand only) and proportionate deductions of monthly fees and hostel rent, where applicable.

c) In case the vacated seat is not filled, the Institution should refund the security deposit and return the original documents.

d) The Institution should not demand fee for the subsequent years from the students cancelling their admission at any point of time. Fee refund along with the return of certificates should be completed within 7 days.

e) Institution not following guidelines issued by the council regarding refund of fee for cancellation of admission or delaying refunds shall be liable to anyone or more of the following punitive actions by the council.

- Fine for Non- Compliance of refund rules of the fee levied against each case shall be five times the total fee collected per student
- Suspension of approval for NRI and supernumerary seats, if any for one academic year
- Reduction in "Approved Intake"
- No admission in one/more course (s) for one academic year withdrawal of approval for Programme(s)/Course(s)

8. Mandatory requirements of M.Tech Translational Engineering

a) Departmental Assistance for 8 hours/week for all students.
b) Transformative programmes: Maximum of six for all students.
c) Industrial visits: Minimum three industrial visits for the entire programme for all students.
d) Socially responsible activities- Each student has to attend a socially relevant camp for

minimum 10 days duration outside their home station involving in socially responsible activities.

e) The students of Translational Engineering should undergo a minimum of six weeks mandatory internship at reputed national/International Institutes, supported by the Institution/Government of Kerala. Internships at Private Institutes shall not be encouraged. Students will be sent for Internships based on the approved guidelines published in TPLC website for respective academic years. This is facilitated to expose the students to real-time projects and different working cultures and social problems, thereby moulding them into socially responsible professionals.

f) Acceptance of the Project/Thesis work in any reputed National/International Journal publication. The specifications of the journal will be issued by TPLC.

g) Completing one MOOC course per semester of not less than 8 weeks duration.

h) After the final University exams, a compulsory on the job training is facilitated under a Governmental/Non-Governmental Organisation/Industry spanning 3 months named the "Social Butterfly Programme" ("ജനശലഭപദ്ധതി"), to address the ongoing and emerging global challenges and collective transformation of individuals through a technological, economical and cultural restructuring framework.

9. Scholarships/Awards

a) GATE Stipend for GATE qualified candidates

b) Financial support for internships based on performanceevaluation.

c) Best Project Award

d) Best outgoing student Award

10. Any other details not specifically covered in the prospectus given will be decided by the Director of Technical Education and his/her decision will be final and also empowered to cancel any admission found to be illegal subsequent to the admission.

Important Dates

Registration of application form will open on	*As per notification by DTE office/KTU for the M.Tech course of the current academic year
Last date for application	
Date of interview	
Publication of Results	
Date of joining	
Admission closes on	*As per DTE office for the M.Tech course of the current academic year
Commencement of Classes	*As per notification by DTE office/KTU for the M.Tech course of the current academic

How to apply

The application can be downloaded from the TPLC website *www.gecbh.ac.in* or *www.tplc.gecbh.ac.in*

The application fee is Rs.500/- for GEN/OBC/OEC and Rs.100/- for SC/ST. The fee can be paid by ANY ONE of the following methods.

1. By Cash – At TPLC,4th Floor, Government Engineering College Barton Hill.
2. Demand Draft – In favor of "Coordinator, TPLC, GEC Barton Hill".
3. Online Banking – TPLC Account No: 67314066447, IFSC Code: SBIN0070415.

Contact Us

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Translational Research and Professional Leadership Centre [TPLC]
Government Engineering College, Barton Hill
Thiruvananthapuram - 695035

Website: *tplc.gecbh.ac.in*
https://tplcinternships.in/

E-Mail: *tplc.gecbh@gmail.com*

Phone/Fax: 7736136161/9495058367

https://www.facebook.com/translationalengineering/

https://www.instagram.com/tplcgecbh/

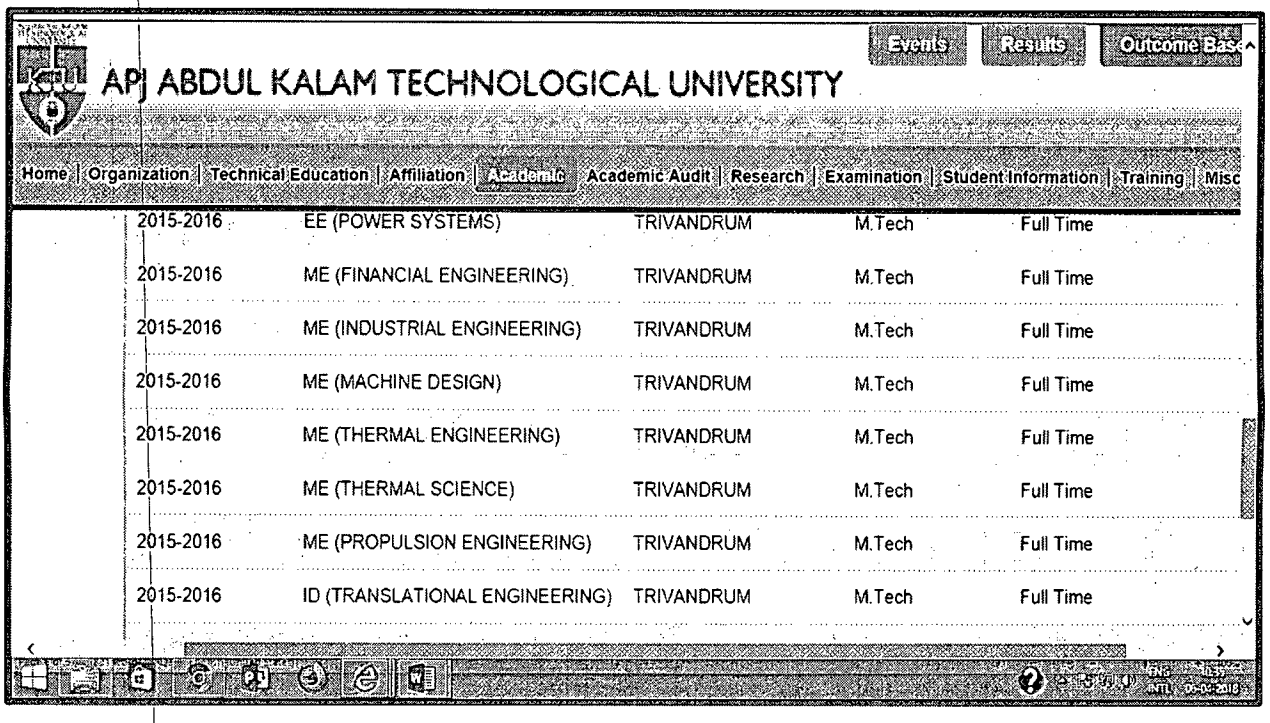
https://twitter.com/tplcgecbh

Translational Engineering Course listed in Approval Process Hand Book 2020-21

Sl.No.	Name of the Course
529	Power Systems Engineering
530	Pre Stressed Concrete
531	Printing Engineering and Graphics Communication
532	Printing Technology
533	Process and Food Engineering
534	Process Control
535	Process Control instrumentation
536	Process Dynamics and Control
537	Process instrumentation
538	Process Metallurgy
539	Product Design
540	Product Design and Commerce
541	Product Design and Development
542	Product Design and Manufacturing
543	Production and Industrial Engineering
544	Production Design and Manufacturing
545	Production Engineering
546	Production Engineering and Engineering Design
547	Production Engineering System Technology
548	Production Management
549	Production Technology
550	Production Technology and Management
551	Project Management
552	Propulsion Engineering
553	Public Health Engineering
554	Quality Engineering and Management
555	Radar and Communication
556	Radio Frequency and Microwave Engineering
557	Radio Physics and Electronics
558	Refrigeration and Air Conditioning
559	Reliability Engineering
560	Remote Sensing
561	Remote Sensing and GIS
562	Remote Sensing and Wireless Sensor Networks
563	Renewable Energy
564	Robotics and Automation
565	Robotics and Mechatronics
566	Rocket Propulsion
567	Rubber Technology
568	Rural Technology
569	Science in Software Engineering
570	Scientific Computing
571	Seismic Design and Earthquake Engineering
572	Sensor Technology
573	Signal Processing

Sl.No.	Name of the Course
600	Telecommunication Engineering
601	Telematics
602	Textile Chemistry
603	Textile Engineering
604	Textile Processing
605	Textile Processing Technology
606	Textile Technology
607	Textile Technology (Design and Manufacturing)
608	Thermal and Fluid Engineering
609	Thermal Engineering
610	Thermal Engineering (Refrigeration and Air Conditioning)
611	Thermal Power Engineering
612	Thermal Science Engineering
613	Thermal Sciences and Energy Systems
614	Thermal Systems and Design
615	Tool Design
616	Tool Engineering
617	Town and Country Planning
618	Traffic and Transporting Engineering
619	Transport Science and Technology
620	Transportation Engineering
621	Translational Engineering
622	Transportation Engineering and Management
623	Transportation System Engineering
624	Tribology and Maintenance
625	Turbo Machinery
626	Urban Engineering
627	Virtual Prototyping and Digital Manufacturing
628	VLSI
629	VLSI and Embedded Systems
630	VLSI and Embedded Systems Design
631	VLSI and Microelectronics
632	VLSI Design
633	VLSI Design and Embedded Systems
634	VLSI Design and Signal Processing
635	VLSI Design and Testing
636	VLSI System Design
637	VLSI Systems
638	Waste Water Management, Health and Safety Engineering
639	Water and Environmental Technology
640	Water Engineering and Management
641	Water Resource Engineering
642	Water Resource Management

Translational Engineering M.Tech course listed in APJ Abdul Kalam University Website



List of students who had undergone Internships in International and National Institutions/ Universities

2015-17 batch

Technical University, Delft , Netherlands	Sponsored 4	Non-sponsored 2
Regen Power Australia		1
IIT Madras		1
IIT Bombay	2	
Loyola College	3	
Kerala State Pollution Control Board		1
HLL		1
Mitra Niketan	1	1

2016-18 batch

Technical University, Delft , Netherlands	Sponsored 3	Non-sponsored 5
HLL Management Academy	4	
Regional Training Centre, Kerala Agricultural University	2	

2017-19 batch

Technical University, Delft, Netherlands	Sponsored 1	Non-sponsored 5
Habitat Technologies	2	1

4531361/2020/H EDN

GOVERNMENT ENGINEERING COLLEGE
BARTON HILL
THIRUVANANTHAPURAM- 695035

Affix your recent colour photograph here

Application Form for Admission to M.Tech in TRANSLATIONAL ENGINEERING

(Approved by AICTE and Affiliated to APJ Abdul Kalam Technological University)

1. **Name of the Applicant:** Mr./Ms. .....

   (in Block Letters)

2. **Father's Name:** .....

   (in Block Letters)

3. **Mother's Name:** .....

   (in Block Letters)

4. **Sex:** Male/Female

5. **Marital Status:** Married/Unmarried

6. **Nationality:** [ ] If foreign national, Passport No. [ ]

7. **Date of Birth:** | D | D | M | M | Y | Y |

8. **Place of Birth :**.....

9. **Address for Correspondence:** .....

   .....Pincode .....

   Phone No.....Mobile No. .....E-Mail .....

10. **Permanent Address:** .....

    .....Pincode.....

    Phone No.....Mobile No. .....E-Mail .....

11. Religion & Caste ....

12. Reservation Category.....(GEN/OBC/SEBC/SC/ST)

    * *Attach copies of community and income certificate to claim reservation.*

13. **Application Fee remitted:** ..... (Rs.500/- for GEN/OBC/OEC and Rs.100/- for SC/ST)

    - **Method of remittance:** .....(TPLC, GEC Barton Hill/ DD/ Internet Banking)
    - **Details***.....

    (* Provide the DD Number/ Transaction ID and date of remittance)

14. Details of Academic Record/ Experience:

A. Whether qualified GATE --- YES/NO

Roll No:	*Stream*	*GATE Score*	*Year*

* *Attach copy of GATE score card if qualified.*

B. Qualifying degree already obtained or in progress

College Name	University	Discipline	Degree	Date of passing	Percentage of Marks or CGPA

* *Attach copies of consolidated mark list, and degree/provisional certificates*

C. Other qualifications: High school onwards

Institute/College	*University/Board*	*Discipline*	*Degree*	*% Marks or Grade Point*	*Date of passing*

* *Attach copies of score card, certificates, mark sheets, etc.*

D. Working experience:

Date *(From ..... To .....)*	**Department/Organization**	**Designation**	**Nature of Work**

**Attach the copies of experience certificates.*

15. Declaration by the Applicant

Certified that all the information provided by me on this form is correct to the best of my knowledge and belief. I understand that any willful misinterpretation of facts will result in my dismissal from the Institute. If admitted, I shall abide by all the rules and regulations of the Institute.

Date: ..... Signature: .....

Form – I

(Format of the Certificate to be submitted by the candidates who are unable to produce the final mark-sheet of the qualifying Examination at the time of written test/ interview)

CERTIFICATE

This certificate must be signed by the Principal/ Registrar/ Director of the Institution from which the candidate wrote his/her qualifying examination.

This is to certify that Mr./Ms. _____
(Name of the Candidate)

_____ has appeared in the final examination of _____
(Examination Roll No.) (B.Tech)

in _____ (including all papers in theory,
(Discipline)

practical, Project, oral, etc.) in all subjects and has no back papers. He/She is only waiting for the results.

_____
(Signature and Name of the Signing Authority)

Date: _____

Position: _____

Name of the Institution: _____

_____

_____

_____

(Seal of the Institution)

Form – II

NO OBJECTION CERTIFICATE

This is to certify that Mr./Ms. _____

S/o/D/o._____ working as a _____

in the department of _____ from

_____is an employee of our department/organization. We have no objection to his/her joining in M.Tech. (full-time) programme in Translational Engineering.

Date:

Signature

Authority with stamp

Note: To be submitted on the Letter Head of a registered firm/company/Industry/educational & research Institutions/any Government departments or Govt. Autonomous Organizations.