Veermata Jijabai Technological Institute, Mumbai

M.Tech in Defense Technology

Academic Year 2025-2026 Brochure

Specialization

1. Aerospace Technology
2. Communication System and Sensors

In collaboration with

Institute of Defense Scientist and Technologists

Defence Research and Development Organisation

All India Council for Technical Education

About VJTI

Established in 1887 as Victoria Jubilee Technical Institute, VJTI Mumbai has pioneered India's Engineering education, research and training ecosystem and has been shifting itself from a training institute to capacity building institute with focus on research, innovation, and technology for society. Our institute strives to establish global leadership in the field of technology and develop competent human resources for providing service to society. The mission of the institute is to provide students with comprehensive knowledge of principles of engineering with a multi-disciplinary approach. To create an intellectually stimulating environment for research, scholarship, creativity, innovation and professional activity. To foster relationship with other leading institutes of learning and research alumni and industries in order to contribute to National and International development.

Defence Technology

The VJTI Mumbai in MOU with Institute of Defense Scientists and Technologists (IDST) offers M.Tech program in Defense Technology. The course was launched in 2021 to impart education and train young minds in aerospace technology, communication systems, and modern warfare. This program has successfully trained three batches who are now serving towards nation's defense at reputed organizations. The program provide application-oriented course taught by experts from ISRO, DRDO and IDST and guide students through projects and facilitate industry academia collaborations to bridge the gap between theoretical and real-world applications. It gives the students chance to dive into advance technologies, engage in innovative projects, and connect with esteemed scientists and industry leaders.

Need of Defence Technology

This program is designed to develop highly skilled professionals specialized in defence techniques and tools to enhance the national security and promote technological self-reliance. This program will make students familiar with necessary fundamentals of system warfare and advance defence techniques, experimental knowledge, skill and aptitude in various defence technologies areas. The trained individuals from this program can contribute to enhancing India's defense capabilities by leveraging advanced technological solutions in defense sector and will be an asset to the country. Key objectives of this program include,

- Enhancing defence capabilities
- Addressing technological gaps
- Promoting indigenous defence industry
- Strategic autonomy
- Human capital development

Vision of Defence Technology

VJTI visions to become a leading institution in the field of defence technology known for excellence in education, innovation, and research. The M.Tech program aims to advance knowledge in communication systems, electronic warfare, and aerospace technologies. By fostering academic rigor and strategic thinking, the program strives to produce competent professionals who will contribute significantly to national defence, technological self-reliance, and the development of cutting-edge systems for safeguarding the nation's security and sovereignty.

Mission of Defence Technology

The M.Tech program in Defence Technology at VJTI is dedicated to developing skilled engineers and researchers through a robust curriculum in communications, system warfare, and aerospace technologies. The program offers hands-on training, interdisciplinary research, and teamwork with defence and aerospace organizations. It focuses on ethical responsibility, innovation, and problem-solving. The goal is to prepare students for present and future challenges in national security and help India achieve self-reliance and technological leadership in the global defence sector.

Message from Chairman of IDST

On November 6, 2024, Veermata Jijabai Technological Institute (VJTI), Mumbai, signed a Memorandum of Understanding (MOU) with the Institute of Defence Scientist and Technology (IDST), Pune. This partnership aims to foster advancements in academia and industry, particularly in the field of defense technology. Conceptualised for utilizing the vast pool of knowledge, experience and technical know-how of the retired scientists of DRDO for the benefit of DRDO as well as country. DRDO recognized IDST as a "Deemed Academic Institution" for the purpose of acquisition of professional service from IDST. The Department of Scientific and Industrial Research (DSIR) of the Ministry of Science and Technology have accorded recognition to IDST as a Scientific and Industrial Research Organisation. I wish for a wonderful academic journey ahead with VJTI, Mumbai.

Dr Desai Bapurao Sarwade
Chairperson
IDST

Message from Chairman of VJTI

I am excited to welcome all students interested in the M.Tech course in Defence Technology at Veermata Jijabai Technological Institute, Mumbai (VJTI). As one of the top engineering institutes in the country, we are proud to offer this important course designed by DRDO and approved by AICTE. Defence has become most crucial component of our country, and the need for defence technologists has increased. This program aims to make a difference in the country's security, innovation goals, and self-sufficiency. The course combines fundamentals of defence technology with practical experience, which includes internships and interactions with top scientists and defence industry professionals in India. At VJTI, we are dedicated to academic integrity, innovation, and working closely with the industry. With our committed faculty, modern facilities, and strong industry ties, we believe students will seize the opportunities and face the challenges ahead. Join us to help shape the future of defence technology. Contribute to the country's security and self-reliance goals. Once again, best wishes for a great academic journey.

Dr. Anand Deshpande

Chairman, Board of Governors

VJTI Mumbai

Message from Director of VJTI

It brings me immense pleasure to address you all as the director of the Veermata Jijabai Technological Institute (VJTI). We are very honoured since we are one of the institutions in the country to run the M.Tech programme in Defence Technology, which is the course designed by DRDO and approved by AICTE. The field of defence technology is constantly evolving at the forefront of scientific and engineering innovation. It plays a crucial role in safeguarding our nation and its interests. By choosing this program, you will embark on a path that is both intellectually and deeply impactful. Our program goes beyond traditional lectures. You will have the access to state-of-art DRDO labs where you gain hands-on experience with cutting edge technology. Additionally, lectures from former DRDO scientists and lab visit to relevant facilities will provide a well-rounded learning experience. As the director of the institute, I would like to invite you to be a part of this course. Our faculties are committed to providing you the support and guidance you need to succeed.

Dr. Sachin Kore
Director
VJTI, Mumbai

Message from Dean Academics of VJTI

I am delighted to welcome the new batch of M.Tech in Defence Technology at our esteemed institution VJTI Mumbai. This program is designed to educate students about the country's defence tactics, armaments and electronic warfare systems used by armed forces. The course is specially designed to instil curiosity in young innovative minds and modified every year to ensure quality and to keep up with advance technologies. This course provide students with excellent teaching and project guidance from faculties and scientists in defence organizations. In order to increase their practical exposure, we encourage students to join internship in defense organizations and industries. Our goal is to develop each participant's capacity for creativity, problem-solving, and leadership. Our shared goal is to help the country become more self-sufficient in defense technologies.

Dr. K.K. Sangle
Dean Academics
VJTI, Mumbai

Message from Course Coordinator

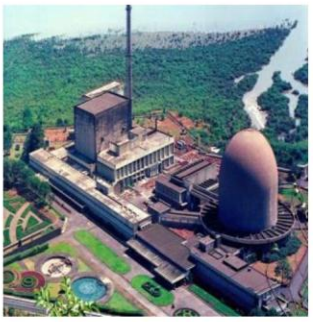
Our institute is offering M.Tech degree in Defence Technology, since we realize the need to produce aspirants to carry our Research and Development in defence by providing them with skills in various areas of defence technologies. The Defence Technology program offers a comprehensive and engaging learning experience. My goal is to ensure you have the resources and support needed to succeed. Beyond the curriculum, we will also be conducting seminar sessions, which will be personally guided by me. Through these sessions, students will be able to learn about the latest advancements in the field of defence, thus keeping themselves up to date. As the program coordinator, I am here to support you throughout your academic journey in this exciting field.

Dr. V.M. Phalle
Program Coordinator, Defense Technology
VJTI Mumbai

Pioneers of Defense Technology

Dr. Homi Jehangir Bhabha (1909-1966)

He was an Indian nuclear physicist who is widely credited as the "Father of the Indian Nuclear Programme". He was the founding director and professor of physics at the Tata Institute of Fundamental Research (TIFR), as well as the founding director of the Atomic Energy Establishment, Trombay (AEET) which was renamed the Bhabha Atomic Research Centre in his honour. He was a strong proponent of developing nuclear weapons for national security.



Dr. Anil Kakodkar (1943)

VJTI Mechanical Engineering Alumni (1963) He played a crucial role in India's defense system through his contributions to the nation's nuclear program. He was instrumental in the development of India's nuclear weapons program, including the peaceful nuclear explosion in 1974 and the 1998 nuclear tests at Pokhran. He also focused on self-reliance in nuclear technology and energy, particularly through the development of the Pressurised Heavy Water Reactor (PHWR) technology.

Former president of India (2002-2007) is widely regarded as one of India's first and most influential defense scientists. He is often referred to as the "Missile Man of India" for his crucial role in developing India's missile technology and his leadership in the Integrated Guided Missile Development Programme. He also made significant contributions to Pokhran-II nuclear test in 1998 and India's civilian space program.

Dr. A. Sivtahanu Pillai (1947)

He is regarded as the "Father of Brahmos", the joint venture between India and Russia to design, develop, produce and market the supersonic cruise missile BrahMos and he is the chief executive and managing director of BrahMos Aerospace. He joined DRDO in 1986 and was the Programme Director of IGMDP under the leadership of A. P. J. Kalam. He contributed to the successful development of SLV III as a core team member and to the evolution of PSLV configuration for ISRO.

Dr. Tessy Thomas (1963)

She is an Indian aerospace engineer, joined DRDO in 1988 and is the first woman scientist to head a missile project in India Agni-IV ballistic missile in DRDO and is former Director General of Aeronautical Systems. She initially contributed to the guidance and control systems, focusing specifically on inertial navigation systems. She received the Lal Bahadur Shastri National Award for her contribution for making India self-reliant in the field of missile technology.

Contents

Overview of Course Curriculum

Semester-1

Common Subjects	
Core	**Electives**
1. Systems and Warfare Platforms 2. Warfare Simulations and Strategies 3. Advanced Engineering Mathematics	1. Numerical Methods in Science and Engineering 2. Autonomy and Navigation Techniques

Semester-2

Aerospace Technology	Communication System and Sensors
Core Subject	
1.Aerospace System Configuration Design and Simulation 2. Guidance and Control 3. Aerospace Propulsion	Radar Technologies 1. Digital and Satellite Communication and Navigation from Space 2. Tactical Battlefield Communication and Electronic Warfare
Electives	
1. Advanced Lightweight and Composite Structures 2. Computational Aerodynamics	1. Defence Electro Optics and Imaging Systems 2. Advanced Digital Modulation Technologies and Standards
Program Outcomes	
1. Scholarship of knowledge 2. Critical thinking 3. Research skill 4. Usages of modern techniques 5. Design, development & solutions individual & team work	

Faculties from IDST

Dr. S.M. Bhave

Subject: Systems and Warfare Platforms

He has a total of 38 years of work experience in Defence R&D. He received the Technology Award-2000 from Scientific Adviser to Raksha Mantri, The Commendation Certificate -2005 from Chairman ISRO & SA, The Titanium Medal Award 2007 from SA, DRDO and The Agni Award for Excellence in Self Reliance 2018 from Raksha Mantri.

Navneet Bhushan

Subject: Warfare Simulations & Strategies

With more than two decades of experience in the fields of Defense Research and Management Research with various firms including Government R&D and private Information Technology companies, e is a leading expert, researcher, author and consultant on Innovation, Software Development, Management, Research and IP Analysis.

Dr. R K Sharma

Subject: Aerospace System Configuration, Design & Simulation

He has 40 years of experience in Aerodynamic design, evaluation, CFD, testing and analysis of flight vehicle configurations and Project Management. He is a Member of core team for aerodynamic design and successful flight demonstration of AGNI series of Missiles – Chief Designer of Air-to-Air missile 'ASTRA'. He is currently the Project Director of Hypersonic Technology Demonstrator Vehicle (HSTDV).

Dr. Raghavendra Rao

Subject: Tactical Battlefield Communication and Electronic Warfare

Former Associate Director and Scientist 'G' at CHESS DRDO Hyderabad. Worked in Trishul – A surface to air missile. Also worked in development of RF, MW, Radar sub systems integration with other labs.

Faculties from IDST

Dr. Indira Narayanamurthy

Subject: Advanced Engineering Mathematics

She has more than 30 years of experience in the field of defence R&D. She joined Aeronautical Development Agency (ADA). She was the Technology Director (TD) of Aerodynamics & Performance (AR&D&P) Directorate for almost 4 years at ADA. She has authored over 150 Technical reports & several research papers in National and International Conferences.

Dr. Achintya Sarkar

Subject: Guidance and Control

He pursued B.Tech in Aeronautical Engineering from IIT Kharagpur, M.Tech in Computer Science from IIT Madras and Ph.D in 'Estimation Theory' from IISc Bangalore. He worked as a Scientist in Defence Research and Development Laboratory (DRDL), Hyderabad for around 34 years and was Superannuated as a Technology Director (Systems). He worked as a professor in DIAT Pune, NITTE Meenakshi Institute of Technology and ACS College of Engineering, Bangalore in Aeronautical Engineering Department. He also worked as a Defence consultant on Avionics in Zeus Numerix.

Dr. Dinesh G. Thakur

Subject: Advanced Lightweight and Composite Structures

He is currently working as a Professor at the Department of Mechanical Engineering, DIAT, Pune and has 25 years of teaching experience. He earned his Ph.D. in High-Speed Machining of Aerospace Materials from IIT, Madras in 2009 and has authored 75 publications in reputed peer-reviewed journals and a good number of publications in various national/international conferences.

Faculties from VJTI

Dr. V. M. Phalle

He is an associate professor and the former head of the Mechanical Engineering Department, VJTI. He pursued his Master's degree in Mechanical Engineering from VJTI Mumbai and PhD in Mechanical Engineering from IIT Roorkee. He has around 30 years of Teaching and Research experience. He was the prof. in charge of training placement and the QIP coordinator. His areas of research include machine design, tribology, bearing and vibration, design of experiments, crane design, etc. He has around 150+ publications and has attended various National and International conferences. Received AICTE Visvesvaraya best teacher awardee GOI.

Dr. P. A. Rajiwade

He pursued his post-graduation at Sardar Vallabhbhai National Institute of Technology (SVNIT) and pursued Ph.D at IIT Bombay. He has also undergone on-the-job training at the Gas Turbine Research Establishment (GTRE–DRDO Lab), Bangalore. He has been awarded prestigious fellowships, including the Post-Graduate Teaching Assistant Fellowship for M.Tech. and Ph.D., awarded by the Ministry of Human Resource Development, India. His research has been published in peer-reviewed journals, and he has presented his work at international conferences, including the 70th APS-DFD meeting in Denver, US, and the 24th National and 2nd International ISHMT-ASME Heat and Mass Transfer (IHMTC) in BITS Pilani, Hyderabad, India.

Dr. Kajal Vinayak

She has done Ph.D. in "Infrared signatures of aircraft from frontal aspect" from Department of Aerospace Engineering, IIT Bombay, which is documented in 3 international journal publications. After Ph.D., she has also pursued one-year postdoctoral research at the Department of Aerospace Engineering, IIT Bombay before joining the Department of Mechanical Engineering as an Adhoc faculty at VJTI, Mumbai. Her research area lies in heat transfer in aerospace applications and stealth technology.

Lab Sessions

Vehicles Research and Development Establishment (VRDE), Ahmadnagar

It was a 4-day visit where we were taught theory in the morning session followed by hands-on experience. The topics dealt with were as follows:

1. Mounted Gun Systems
2. Agni Launch Vehicle
3. Unmanned Ground Vehicles
4. Wheeled Armoured Platform
5. Infantry Fighting Vehicle (CRBN)
6. Chemical, Biological, Radioactive, Nuclear Reconnaissance Vehicle (CBRNRV)
7. EMC / EMI (Electromagnetic Compatibility / Electromagnetic Interference)
8. National Centre for Automotive Testing (NCAT)

Combat Vehicles Research and Development Establishment, Avadi, Chennai

The practical was divided into 3 sessions as follows:

1. Fire Control Systems
2. Protection Systems
3. Gun Control System

CVRDE conducted online and VRDE conducted offline sessions. The online sessions gave an overview and theoretical knowledge of the topics. The offline session was definitely a great experience.

Institute for System Studies and Analyses (ISSA), Delhi (DRDO)

ISSA, Delhi conducted the practical sessions for the subject Warfare Simulations and Strategies. It was a 4-day session where we were divided into groups, and each group was given a problem statement to work on. The problem statements were based on attrition, movement, sensors, and weapons.

Advanced Systems Laboratory (ASL), Hyderabad

1. **Dhvani – Hypersonic Glider**: Project Dhvani, a hypersonic glider, was a captivating subject of study.
2. **Project Veda – The Future of Satellite Launch Vehicles**: Project Veda introduced us to an exciting new satellite launch vehicle. The insights we gained into this ambitious endeavour were truly enlightening.
3. **Solid Propulsion – Powering Missiles Efficiently**: We explored the advantages of solid propulsion technology, which plays a crucial role in missile systems. The explanations about its usage and benefits were eye-opening.
4. **Advanced Composite Centre (ACC) – Crafting Rockets with Precision**: At ACC, we witnessed the art of creating rocket components using advanced composites like carbon fiber.
5. **Composite Product Development Centre (CPDC) – Where Rockets Take Shape**: CPDC showcased the production process of rocket stages.
6. **Agni Exhibition – Scaling Down Greatness**: The Agni exhibition featured scale-down models of Agni missiles and their intricate parts.

Research Centre Imarat (RCI), Hyderabad

An incredible journey to the Research Centre Imarat (RCI) Dr. APJ Abdul Kalam Missile Complex.

Let's dive into the highlights of this mind-blowing experience:

1. **Research Centre Imarat (RCI) – Unveiling Missile Electronics**: Our exploration continued at RCI, where we delved into the electronic heart of missiles. Learning about the vital electronic components and their functioning was both captivating and enlightening.
2. **Exploring the Pinaka Missile**: Our journey led us to the awe-inspiring Pinaka missile. The opportunity to see this powerful weapon up close left a lasting impression.

3. **Thrust Vector Control – Mastering Missile Maneuverability**: The in-depth insights into thrust vector control were nothing short of fascinating. Understanding how this technology enhances missile maneuverability was a true learning experience.
4. **Rocket Motor Housing – Engineering Excellence**: The visit to the rocket motor housing area left us in awe of the engineering mastery behind missile construction. Witnessing the intricate details of rocket motor design was a rare opportunity.

This visit was an unforgettable experience that opened our eyes to the exceptional strides being made in missile technology. I'm immensely grateful for the opportunity to learn from the experts and witness these technological marvels firsthand.

Defence Electronics Applications Laboratory (DEAL), Dehradun

It was a 3-day session where we were taught theory in the morning session followed by hands-on experience. The topics dealt with were as follows:

1. Antenna
2. Power amplifiers
3. Modem

Electronics and Radar Development Establishment (LRDE), Bangalore

The practicals were divided into 5 sessions as follows:

1. RF and Antenna Measurements
2. Active Device Characterization
3. SWAP Optimized Radar System
4. Mechanical / Thermal Design aspects in Radar
5. Electromagnetic Compatibility (EMC) of Radar Systems

LRDE conducted online as well as offline sessions. The online sessions gave an overview and theoretical knowledge of the topics. The offline session was definitely a great experience where we were asked to perform experiments and were shown demonstrations of various types of radar.

Students

Batch1 (2021-2023)

Thandassery Abhirami Ramanan
Specialization: Communication Systems and Sensors
Internship at: Naval Physical and Oceanographic Laboratory (NPOL), Kochi (DRDO)

Kanitkar Omkar Deepak
Specialization: Aerospace Technology
Internship at: Gas Turbine Research Establishment (GTRE), Bengaluru (DRDO)

Sandra Radhakrishnan
Specialization: Communication Systems and Sensors
Internship at: Microwave Tube Research and Development Centre (MTRDC), Bengaluru (DRDO)

Mohit Ravindra Thakur
Specialization: Communication Systems and Sensors
Internship at: Microwave Tube Research and Development Centre (MTRDC), Bengaluru (DRDO)

Masaye Sushil Parshuram
Specialization: Aerospace Technology
Internship at: Gas Turbine Research Establishment (GTRE), Bengaluru (DRDO)

Sumedh Suresh Sonawane
Specialization: Aerospace Technology
Internship at: Research and Development Establishment (Engrs.), Pune (DRDO)

Samavesh Chandulal Agarwal
Specialization: Communication Systems and Sensors
Internship at: Institute for System Studies and Analyses (ISSA), Delhi (DRDO)

Sumit Sahebrao Baderao
Specialization: Aerospace Technology
Internship at: Research and Development Establishment (Engrs.), Pune (DRDO)

Chaitanya Vilas Atkar
Specialization: Aerospace Technology
Internship at: Advanced Centre for Energetic Materials (ACEM), Nashik (DRDO)

Shubham Onkar Verma
Specialization: Aerospace Technology
Internship at: Research and Development Establishment (Engrs.), Pune (DRDO)

Atharva Vivek Shingnapurkar
Specialization: Aerospace Technology
Internship at: Research and Development Establishment (Engrs.), Pune (DRDO)

Sahil Ravindra Vekhande
Specialization: Aerospace Technology
Internship at: Defence Metallurgical Research Laboratory (DMRL), Hyderabad (DRDO)

Meiraj Ahmed Shaikh
Specialization: Aerospace Technology
Internship at: Research and Development Establishment (Engrs.), Pune (DRDO)

Gopal Krishnan Nagarajan
Specialization: Aerospace Technology
Internship at: Vehicles Research and Development Establishment (VRDE), Ahmednagar (DRDO)

Suraj Rajnath Yadav
Specialization: Communication Systems and Sensors
Internship at: Institute for System Studies and Analyses (ISSA), Delhi (DRDO)

Batch 2 (2022-2024)

Vasave Sunil Anil
Specialization: Communication Systems and Sensors
Internship at: L&T Defence, Powai

Kale Pranav Himanshu
Specialization: Aerospace Technology
Internship at: L&T Defence, Powai

Omkar Balaso Sutar
Specialization: Aerospace Technology
Internship at: Bharat Forge Defence, Pune

Patkure Gouri Anand
Specialization: Aerospace Technology
Internship at: Research and Development Establishment (Engrs.), Pune (DRDO)

Pandagle Aayush Shivaji
Specialization: Aerospace Technology
Internship at: Research and Development Establishment (Engrs.), Pune (DRDO)

Sawant Sonali Anand
Specialization: Aerospace Technology
Internship at: L&T Defence, Powai

Atharva Basarkar
Specialization: Aerospace Technology
Internship at: L&T Defence, Powai

Ubale Pooja Ramesh
Specialization: Communication Systems and Sensors
Internship at: L&T Defence, Powai

Badole Kashish Krishna
Specialization: Aerospace Technology
Internship at: Research and Development Establishment (Engrs.), Pune (DRDO)

Joshi Jasmeet Sandeep
Specialization: Aerospace Technology
Internship at: L&T Defence, Powai

Nagalakshmi Ravi
Specialization: Communication Systems and Sensors
Internship at: R&D Establishment (Engrs.), Pune (DRDO)

Kawale Kalyan Nagunath
Specialization: Communication Systems and Sensors
Internship at: Research and Development Establishment (Engrs.), Pune (DRDO)

Batch 3 (2023-2025)

Abhishek Bhosale
Specialization: Aerospace Technology
Internship : Bharatforge, Pune
Placement : Bharatforge, Pune

Rishiraj Jain
Specialization: Aerospace Technology
Internship : Inhouse Project

Aman Pandey
Specialization: Aerospace Technology
Internship : Bharatforge, Pune

Atish Pawar
Specialization: Aerospace Technology
Internship : R&D DRDO, Pune

Mohit Maske
Specialization: Aerospace Technology
Internship: R&D DRDO, Pune

Saurabh Pawar
Specialization: Aerospace Technology
Internship: Bharatforge, Pune

Shubham Phathak
Specialization: Aerospace Technology
Internship: Inhouse Project

Shivani Pardesi
Specialization: Aerospace Technology
Internship : R&D DRDO, Pune

Chetan Patwardan
Specialization: Aerospace Technology
Internship : Bharatforge, Pune

Arshad Sheikh
Specialization: Aerospace Technology
Internship : Bharatforge, Pune

Yogesh Kadam
Specialization: Aerospace Technology
Internship : Inhouse Project

Utkarsha Desai
Specialization: Aerospace Technology
Internship :Bharatforge, Pune

Ashlesha Dongre
Specialization: Aerospace Technology
Internship : Bharatforge, Pune

Batch 4 (2024-2026)

Yash Anant Dabhilkar
Specialization: Aerospace Technology
Internship : Larsen & Toubro Precision Engineering Systems (Design & Development Centre)

Deshmukh Neha Vijay
Specialization: Aerospace Technology
Internship : Paras Space & Defence Technologies

Bhushan Sachin Gabhole
Specialization: Aerospace Technology
Internship : DRDO Lab Research & Development Establishment (Engrs.)

Kamble Bhavesh Ganesh
Specialization: Aerospace Technology
Internship : Larsen & Toubro Precision Engineering Systems (Design & Development Centre)

Kutarmare Yashwant Suresh
Specialization: Aerospace Technology
Internship : DRDO Lab Research & Development Establishment (Engrs.)

Meshram Chaturshа Gopal
Specialization: Aerospace Technology
Internship : Tata Advance Systems Limited

Pal Vikas Vijaybahadur
Specialization: Aerospace Technology
Internship : Larsen & Toubro Precision Engineering Systems (Technical Department & Training)

Patil Ankit Suraj
Specialization: Aerospace Technology
Internship : Paras Space & Defence Technologies

Siyash Yashwant Tiwari
Specialization: Aerospace Technology
Internship : DRDO Lab Research & Development Establishment (Engrs.)

Student Achievements

📌 **Placements: Batch 1**

1. Thandassery Abhirami Ramanan :Yadavrao Tasgaonkar Institute of Engineering and Technology (YTIET)
2. Kanitkar Omkar Deepak: Dassault Systemes Solutions Lab
3. Sandra Radhakrishnan: Pillai College of Engineering
4. Mohit Ravindra Thakur: Konkan Railway, Corporation Limited
5. Masaye Sushil Parshuram: Vedam Design and Technological Consultants Pvt. Ltd
6. Sumedh Suresh Sonawane: NIBE Ltd. Pune
7. Samavesh Chandulal Agarwal: Software developer, Pune
8. Sumit Sahebrao Baderao: JRF, Gas Turbine Research Establishment (DRDO)
9. Chaitanya Vilas Aktar: NIBE Ltd., Pune
10. Shubham Onkar Verma: NIBE Ltd.
11. Atharva Vivek Shingnapurkar: Spark Engineers, Mumbai
12. Sahil Ravindra Vekhande: L&T Technology Services (LTTS), Vadodara, Gujrat
13. Meiraj Ahmed Shaikh: Ordnance Factory, Ambernath
14. Suraj Rajnath Yadav: Unnayan Defence Technologies

📌 **Placements: Batch 2**

1. Vasave Sunil Anil: L&T Precision Engineering and Systems
2. Kale Pranav Himanshu: TechnipFMC, Hyderabad
3. Omkar Balaso Sutar: NIBE Limited, Pune
4. Pandagle Aayush Shivaji: JRF, NIT Silchar
5. Sawant Sonali Anand: Paras Anti-Drone Technologies Pvt. Ltd., Mumbai
6. Atharva Basarkar: R&D Gurutvaa Systems, Pune
7. Ubale Pooja Ramesh: Paras Anti-Drone Technologies Pvt. Ltd., Mumbai
8. Badole Kashish Krishna*:* R&D (E), DRDO, Ph.D. DIAT Pune(Ongoing)
9. Nagalakshmi Ravi: JRF, NIT Silchar
10. Kawale Kalyan Nagunath: NIBE Ltd.

📌 **Placements: Batch 3**

1. Abhishek Bhosale: Bharatforge, Pune
2. Rishiraj Jain*:* Bharatforge, Pune
3. Aman Pandey: Datum Advanced Composite Private Ltd. , Kanpur
4. Utkarsha Desai: Esperiqs Private Limited, Mumbai
5. Ashlesha Dongre: Bharatforge, Pune

🚀 **Start up: Shatrujeet Defence** is a start-up by M.Tech. Defence Technology student **Saurabh Pawar**, which is in its prototype building and testing stage. Its solution has been shortlisted by **iDEX (Innovation for Defence Excellence)**, Ministry of Defence and **VJTI TBI** for COHORT 5 startup challenges. (**Pre-incubated**)

Student Reviews

The M.Tech program in Defense Technology (Aerospace) at VJTI stood out from other conventional M.Tech courses due to its unique structure. In the first year, it was conducted online, with topics taught remotely by industry experts, often retired DRDO scientists, and experienced VJTI faculty. This setup ensured high-quality learning, given that the subjects were delivered by seasoned professionals in the field. In the second year, students engaged in a year-long project within various DRDO labs across India, working closely with DRDO scientists. This hands-on experience was unparalleled, considering the restricted access to DRDO facilities. Personally, I had the privilege of working at the DMRL, Hyderabad under the guidance of Dr. Jalaj Kumar, who was a humble and exceptional mentor. I gained valuable skills in experimental vibration analysis and simulation during this time. Professor V.M. Phalle was my internal guide throughout the Defense Technology course, providing continuous support and addressing our queries. Thanks to his guidance, I was able to showcase my year-long project at International Conference on Tribology held at NIT Srinagar in October 2023 . The conference, spanning three days, featured industry experts from around the world, including Dr. Yagi from Kyushu University in Japan. Notably, our college presented 11 research papers, and my presentation received the Best Presentation Award. Overall, the M.Tech in Defense Technology was an enriching experience, and I owe much of its success to Professor Phalle for his efficient management of the course.

— Sahil Vekhande (Best Paper Award)

In my M.Tech Defense Technology program specialization Communication, Systems and Sensors, I gained invaluable insights into cutting-edge defense technologies. The second-year internship at DRDO-ISSA provided hands-on experience in the defense sector, offering real-world challenges. The guidance from both my college and internship mentor was outstanding, with experienced faculty always available for support. The abundance of resources in the college facilitated a rich learning environment. Overall, it was a rewarding journey that equipped me with practical skills for the defense industry."

— Suraj Yadav (CSS topper)

Defence is a growing sector, and its indigenisation is one of the most important factors in today's time. M.Tech in Defence Technology is a step in right direction in realizing that goal. During my course of M.Tech DT in aerospace technology I Gained the experience as to what drives the aerospace domain. The subjects taught by professional cleared many concepts. The final year project course I attended in R&D (Eng.) DRDO offered me the opportunity to work on unique problems. It also offered me the technical and professional knowledge that is required. The technical support provided by my project guide proved of utmost importance. In overall it was an enriching experience that taught me the details of defence sector.

— Atharva Shingnapurkar (Aerospace Topper)

Career Opportunities

M.Tech in Defence Technology program have a wide range of career options:

- **Defence Research & Development Organizations (DRDO, ADE, etc.):** Contribute to research and development of cutting-edge defence technologies.
- **Public Sector Undertakings (PSUs):** Join organizations like Bharat Electronics Limited (BEL) or Hindustan Aeronautics Limited (HAL) involved in manufacturing defence equipment.
- **Indian Armed Forces:** Pursue a career in the technical branches of the Indian Army, Navy, or Air Force.
- **Private Defence Companies:** Several private companies are involved in defence equipment manufacturing and offer exciting opportunities for engineer
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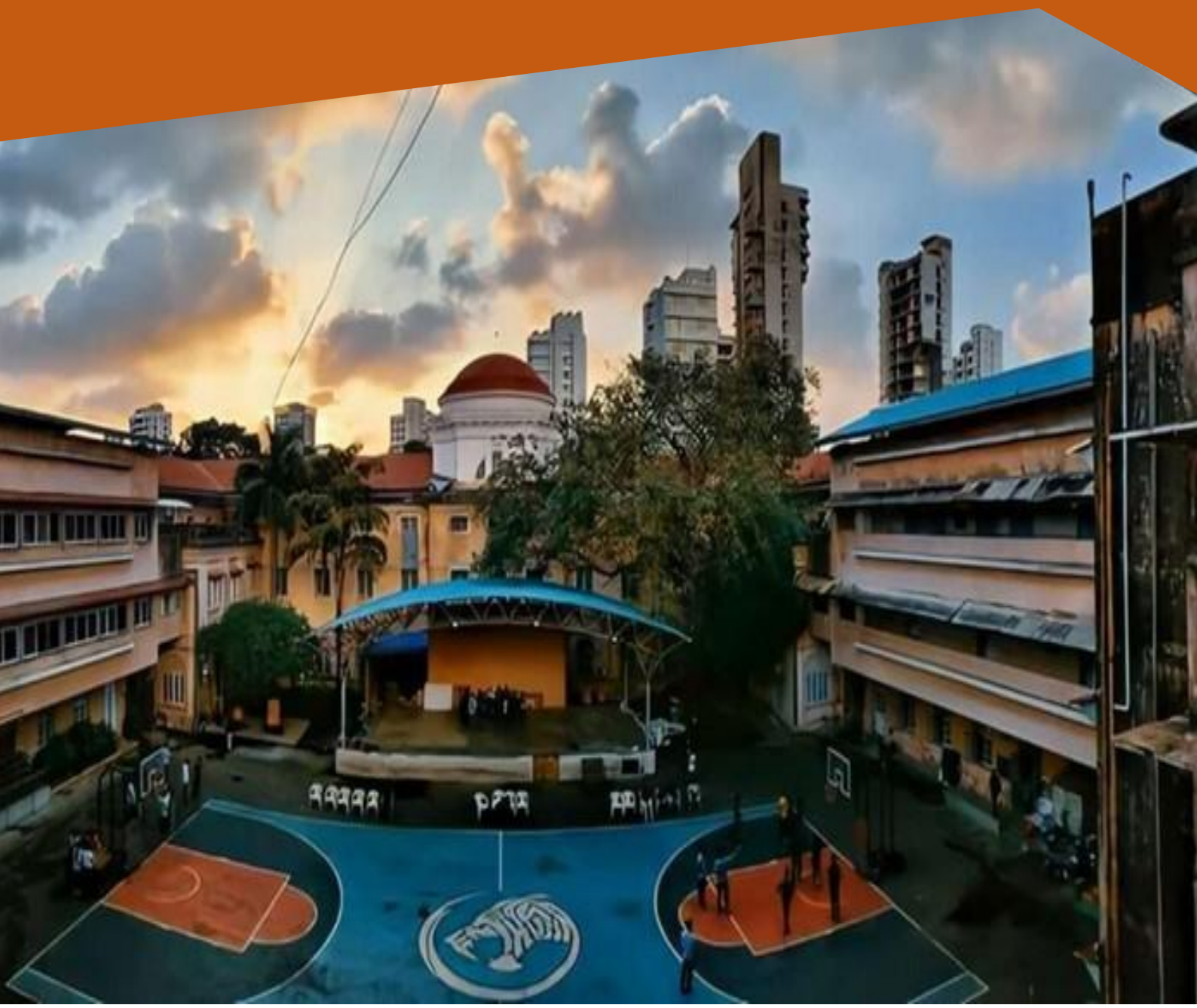

Department of Defence Technology

Veermata Jijabai Technological Institute, Mumbai