



# Defence Institute of Advanced Technology

(Deemed to be University Under Section 3 of UGC Act 1956),

Girinagar, Pune

Ph.D. Programmes-

Category - MoD Sponsored (DRDO & Services)

Sr. No	Department	Subject Area
1	Applied Chemistry	Nanochemistry of High Energy Materials, Chemistry of N-molecule, Quantum dots, Organo chalcogen, Nano Ink and Nano fluid for energy application, Ionic Liquids, Green Chemistry, Membranes, Energetic Materials, Combustion Science for Defence Application, Organic Synthesis, Nano & High Energetic Materials and Plasticizer for Propellant Technology, Organic-Inorganic Hybrid Nanomaterials, Self-assembly, Mesoporous Materials, functional organic Nanocrystals and Properties, Opto-electronic Devices.
2	Applied Mathematics	Modelling and Simulation, Numerical Analysis / Methods (Computational and Theoretical Aspects of Finite Element and Domain Decomposition Methods), Image Processing, Theoretical / Computational Fluid Dynamics (Mechanics), Cryptography.
3	Applied Physics	Fourier Optical Signal Processing Holography, Optical Sensors & Systems, Micro fluidic devices & Sensors, Solar Cells, Nanocarbon, Metamaterials, EMI Shields, Nanocomposites, Pulsed pressure effects. Nanomaterials for sensors, Drug Delivery & shielding applications, Probe Microscopy, EMI, Sensors, Optical Sensors and Systems, Photonics.
4	Computer Science & Engg.	CPS, Data Analytics, IOT, Object Oriented Analysis and Design, Trusted Computing, Cryptography, Multimedia Security, Digital Forensics, Data Mining, Machine learning.
5	Electronics Engg.	Antenna, Microwave, Radar, Radar Signal Processing, RF System Design, Digital Filter Implementation in FPGA and EMI/EMC
6	Materials Engg.	Magnetic Materials Ferrites, Shape memory alloys, Dielectric Materials, Energy Strange materials, Biomaterials, Small Angle X-Ray Scattering studies of polymer blends and nano composites for energy harvesting, Polymer nanocomposite for energy harvesting, Thermo Mechanical Processing of Metallic Materials Texture, 3-D Printing of metals & Alloys, friction stir welding/processing.
7	Mechanical Engg.	Mechanical behaviour, Tribology, Macro/micro/Nano Indentation, Composite Materials, Micro Machining, Coating, CFD, Fluid Mechanics, Functionally Graded Structure, Damages in FRP Composites, Fracture Mechanics.
8	Aerospace Engg.	Flight Guidance and Control

## **Eligibility for External Part - Time Research Scholar:**

- A candidate, seeking admission to the Ph.D. program, shall be required to have passed the qualifying examination securing at least 55% marks or equivalent CGPA/DGPA. A relaxation of 5 % of marks may be allowed for those belonging to SC/ST/OBC (non creamy-layer) / PWD - (Divyang) categories. The qualifying degrees are:-
  - a) Master of Engineering/Master of Technology (or equivalent) for Ph.D. in Engineering/Science.
  - b) Master in Science (M.Sc. or equivalent) for Ph.D. in Science
  - c) A candidate who is sponsored as a part-time candidate by a government department / public sector undertaking / R & D, with at least five years of relevant experience, who shall work for his/her PhD in his/her parent organization fulfilling the residency period requirement as per Rules & Regulations for the Award of the Degree of Doctor of Philosophy - 2016. The candidate is required to submit a sponsorship and work experience certificate from the parent organization.

## **Last Date of Application:**

### **For January Session:**

Duly filled-in application in the prescribed proforma may be forwarded to the Registrar, DIAT (DU), Pune so as to reach on or before **10 Nov 2017**.

### **For July Session:**

Duly filled-in application in the prescribed proforma may be forwarded to the Registrar, DIAT (DU), Pune so as to reach on or before **20<sup>th</sup> April 2018**

**Candidates from DRDO/Defence Services may be admitted to PhD program at the beginning of any semester.**

## **Selection:**

Admission to Ph.D. will be based on the performance in the entrance exam (written test) conducted by the department concerned followed by a personal interview.

## **Course Fee & Other Charges:**

**MoD Sponsored (DRDO & Services) Students:** The Institute being an Autonomous Body, fully funded by DRDO, there is no fee for the candidates, sponsored by the Ministry of Defence (DRDO & Services).

**Self - Sponsored Service Students:** Selected candidates for the Ph.D programmes under Self-Sponsored Category are required to pay Semester Fee @ Rs.15,000/- per semester (for Gen & OBC) and @ Rs. 10,000/- (for SC & ST) payable immediately on joining and a caution deposit (refundable at the end of the Programme less dues if any) of Rs.10,000/-.

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