Defence Institute of Advanced Technology

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

Ph.D. Programmes- Jan- 2018 Batch

Applications are invited for admission to Ph.D. Programmes, as per description below.

Introduction:

Defence Institute of Advanced Technology (DIAT) is Technological Institute of National repute for higher learning. The Institute imparts education and training in Advanced Technologies used for Tri-services, DRDO, DPSUs etc. DIAT found its roots in 1952, as a training institute has grown over the years into a premier teaching and research institute for DRDO and the Armed Forces.

The main focus of the institute is to evolve as an Innovative Unique Research University to develop indigenous contemporary defence related technologies and also to provide technological solutions to the Services. DIAT is committed to generate high quality and talented human resource in broad areas of Defence Technologies to cater the needs of DRDO, Armed Forces and other Defence establishments.

DIAT offers admission to PhD (full-time) in the frontier areas of Aerospace Engineering, Mechanical Engineering, Electronics Engineering, Computer Science & Engineering, Applied Physics, Applied Mathematics, Materials engineering and Applied Chemistry. Limited few Institute Fellowships are available.

Department-wise areas of Research (Under DIAT Scholarship Category)

Sr. No	Department	Subject Area	Approx. No. of Vacancies* in each Dept (With Institutional Fellowship)
1	Electronics Engg.	Antenna, Microwave, Radar, Radar Signal Processing, RF System Design, Digital Filter Implementation in FPGA and EMI/EMC Signal Processing, RF/Microwave / Radar / Antenna / RF & Microwave propagation, Radar System Design, Simulation, Radar Signal Processing, Floating Point digital system design, Detection and Estimation, SAR image processing, Photonics Radar and Micro-Doppler effects.	03
2	Mechanical Engg.	Mechanical behaviour, Tribology, Macro/Micro/Nano & Indentation, Composite Materials, Micro Machining, Coating, Functionally Graded Structure, Damages in FRP Composites, Fracture Mechanics, CFD, Fluid Mechanics.	02
		Total Vacancies	**05**

*** The number of vacancies is only indicative and DIAT reserves the right in this matter.**

In addition to the above, Candidates with CSIR, DST, UGC or any other National fellowship / scholarship available to them are also eligible to apply for Ph. D admission in any subject area of the concerned deptt as per description below,

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	Photonics, 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:

a) Qualification

- 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

- A candidate who has passed the qualifying examination with the requisite percentage of marks as prescribed above and who fulfill the following requirement may be considered for admission to the Ph.D. program:-

  a) Qualified in a national level test such as, CSIR/UGC NET (Fellowship), Graduate Aptitude Test for Engineering (GATE), Rajiv Gandhi National fellowship, subject wise and category wise GATE/NET (Fellowship) cut off will be decided by DIAT.

b) Age limit

Not above 28 years as on 30 Nov, 2017.
Relaxations as per GOI rules apply to SC / ST / OBC / PH applicants.

Note:-

- The Institute shall implement the reservation policy in Ph.D. admission in accordance with relevant act of Parliament being in-force from the time.
- A physically Handicapped SC/ST/OBC candidate shall not get double benefit of being an SC/ST/OBC as also a PWD candidate.

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.

Financial Assistance:

a) The selected Ph.D. candidates (Under DIAT Scholarship category) against this admission notice, admitted as full-time Ph.D. students will be provided financial assistance as per Institute rules, in force from time to time. The Ph.D. students (who are provided Institute fellowship) will be required to assist in research and teaching activities for a maximum of 10 hours per week in addition to their own duties.

b) In addition to the Ph.D. scholarship, such candidates would also be entitled for contingency grant (presently Rs. 15,000/- per year) in accordance with the decisions of the Institute.

c) Candidates with CSIR, DST, UGC or any other National fellowship / scholarship available to them are also eligible to apply for Ph.D admission.

Boarding / Lodging:

Accommodation and mess facilities are available in the POINTS Hostel on payment basis. However, due to very limited rooms in POINTS Hostel, it may or may not be possible to provide POINTS Hostel accommodation to all the students. The present monthly charge towards boarding and lodging is ₹ 7000/- (subject to revision). A security deposit of ₹ 20,000/- would need to be paid to Hostel Office.

How to Apply:

Application form is available at Institutes website http://www.diat.ac.in **.** Application fee of ₹.500/- for General / OBC category (₹ 250/- for SC/ST candidates) per programme is required to be paid either online (through SBI collect) or by Demand Draft drawn in favour of Vice Chancellor, DIAT, Pune, payable at Pune. The filled application form in the prescribed proforma has to be forwarded in a sealed envelope, super scribed "Application for Admission to PhD Programme in the Department of _____" to the Joint Registrar (Academics), Defence Institute of Advanced Technology, Pune 411025 along with the DD / online generated receipt and self certified copies of mark lists, certificates and other testimonials. These documents should reach DIAT latest by **31 Dec 2017 (Through Speed Post only)**. Postal delay will not be entertained. **Candidates seeking admission to more than one Department need to apply separately**.

General Informaton:

- Since the applications may be short listed, mere possessing of the prescribed qualifications would not entitle a person to be called for test/interview. The Institute may restrict the number of candidates to be called for test / interview to a reasonable limit, on the basis of qualifications / marks higher than that of the minimum prescribed in the advertisement.
- For short listing of candidates, the department screening committee may decide subject-wise and category-wise GATE/NET Cut off.
- Application once made will not be allowed to be withdrawn and fees once paid will not be refunded on any count nor can it be held in reserve for any other admission process
- Canvassing in any form will be a disqualification. Postal delay shall not be entertained.
- No correspondence will be entertained in respect of advertisement, interview, selection etc. The list of Shortlisted candidate will be displayed on http://www.diat.ac.in website along with other information viz. date of Interview / Written Test / Result. The candidates are requested to check the DIAT (DU) Website http://www.diat.ac.in for related information from time to time.

Course Fee and Other Charges:

Selected candidates for the Ph.D programmes are required to pay Semester Fee @ ₹.25,000/- per semester (for Gen & OBC) and @ ₹ 15,000/- (for SC & ST) payable immediately on joining and a caution deposit (refundable at the end of the Programme less dues if any) of ₹ 10,000/-, commencing from January 2018.

Important Dates:

- Last Date of receipt of Hard copy of application **31 Dec 2017**
- Tentative Date of Interview / Written Test 2nd / 3rd week of Jan 2018
- Tentative date of commencement of the programme Jan 2018

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