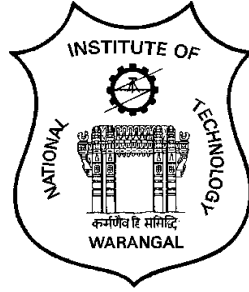


National Institute of Technology Warangal



Ph.D. Admissions December 2018 Session

Brochure

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

Admission into Ph.D. Programs for December 2018 session

The Ph.D. Programs, in Full-time (FT) and Part-time (PT) modes, are offered in the following Departments:

1	Civil Engineering	2	Electrical Engineering	3	Mechanical Engineering
4	Electronics and Communications Engineering	5	Metallurgical and Materials Engineering	6	Chemical Engineering
7	Computer Science and Engineering	8	Biotechnology	9	Mathematics
10	Physics	11	Chemistry	12	Humanities and Social Sciences
13	School of Management		--		--

The candidates selected for admission into Ph.D under Full-Time program are eligible to receive institute fellowship as per MHRD rules. (Vide reference No. <http://mhrd.gov.in/sites/Uploadfiles/RevPhd02032015.pdf>, dt. 02.03.2015). The above institute fellowships are subject to change from time to time, under instructions of the Ministry of Human Resource Development, Government of India.

Category-wise (OBC, SC, ST, PWD) reservations on overall available seats will be followed as per Government of India norms.

The link for Ph.D. rules and regulations 2017-18:

https://www.nitw.ac.in/media/uploads/2017/08/21/phd-rules-2017-18_fomatted.pdf

Tentative Schedule of Ph.D. Admissions for December, 2018 Session:

Announcement of inviting Applications: **8th October 2018**

Last date to receive applications: **28th October 2018**

Announcement of candidates called for Written Test/Interview: **5th November 2018**

Dates of Written Test/Interview: **12th to 16th November 2018**

Announcement of Selected Candidates: **28th November 2018**

Dates for Reporting of selected candidates for Ph.D. admission: **11th and 12th December 2018**

DEPARTMENT SPECIFIC QUALIFICATIONS & SPECIALIZATIONS:

Department of Civil Engineering	B.Tech. or B.E. or Equivalent degree in any branch of Engineering & Technology . M.Tech. or M.E. in relevant specialization.
<u>Research areas</u>	
Structural Dynamics & Earthquake Engineering	Civil Engineering Materials
Construction Technology & Management	Hydrology & Water Resources Engineering
Environmental Engineering	Transportation Engineering
Remote Sensing & Geographic Information System	Geotechnical Engineering

Department of Electrical Engineering	B.Tech. or B.E. or Equivalent degree in Electrical Engineering or Electrical and Electronics Engineering M.Tech. or M.E. in Electrical Engineering or allied specializations in broad research areas mentioned below.	
<u>Research areas</u>		
FACTS/HVDC Control	Power System Deregulation	Renewable Energy Sources
Power Quality	AI Techniques in Power Systems	Motor Drives
Power System State Estimation	Smart Grid Technologies	Switch Mode Power Conversion
Real Time Control of Power Systems	Power System Stability and Security	Control & Instrumentation
Power System Protection	Wide Area Control of Power Systems	

Department of Mechanical Engineering	B.Tech. or B.E. or Equivalent degree in Mechanical Engineering /Production Engineering. /Industrial Engineering /Mechatronics /Automobile Engineering /Aeronautical Engineering / Marine Engineering . M.Tech. or M.E. in Mechanical Engineering allied areas and specializations of within in the broad research areas mentioned below.	
<u>Research areas</u>		
Materials Technology	NDT	Refrigeration and Air Conditioning
Heat Transfer	Mechatronics	Computational Fluid Dynamics

Fluid Mechanics	Automobile Engineering	Metrology/Precision Engineering
Entrepreneurship	Turbo Machines	Composites / Nanomaterials
Robotics	Thermal Engineering	Design / Structural Optimization /Finite Element Analysis
Welding	Additive Manufacturing	Alternative Sources of Energy/Energy Systems
Tribology	I. C. Engines & Alternate Fuels	CAD/CAM/CIM/Geometric Modeling
MEMS/NEMS	Manufacturing Engineering	Industrial Engineering and Management

Department of Electronics and Communication Engineering	B.Tech. or B.E. or Equivalent degree in Electronics and Communication Engineering. M.Tech. or M.E. in Electronics and Communication Engineering or equivalent with Research areas in Communication / VLSI/Instrumentation.	
<u>Research area</u>		
Signal Processing	Wide Band Communications	
Microwave Engineering	VLSI	

Department of Metallurgical and Materials Engineering	B.Tech. or B.E. or Equivalent degree in Metallurgical and Materials Engineering / Mechanical Engineering M.Tech. or M.E. in Metallurgical and Materials Engg. and related fields.	
<u>Research areas</u>		
Physical Metallurgy	Surface Engineering	
Powder Metallurgy	High Temperature Corrosion and Oxidation	
Welding Metallurgy	Fatigue and Fracture Mechanics	
Structure Property Correlation	Environmental degradation of Materials	
Special steels / High temperature materials	Ceramics, Polymers and Composites	
Severe plastic deformation	Biomaterials	
Materials for extreme Environments	Nano Materials	
Smart Materials	Ultra fine grain Materials	
Non-destructive evaluation		

<p>Department of Chemical Engineering</p>	<p>B.Tech. or B.E. or Equivalent degree in Chemical Engineering / Mechanical Engineering / Biotechnology / Petrochemical Engineering / Petroleum Technology / Instrumentation and Control Engineering / EEE / Electrochemical Engineering / Electronics & Instrumentation/ Chemical Technology/ Polymer Technology/ Biochemical Engineering / Energy Engineering / Environmental Engineering and allied disciplines.</p> <p>M.Tech. or M.E. in Chemical Engineering / Mechanical Engineering (Thermal Engineering) / Biotechnology / Petrochemical Engineering / Petroleum Technology / Process Control and Instrumentation / Control Systems / Polymer Technology / Biochemical Engineering / Energy Engineering / Nanotechnology / Environmental Engineering and allied areas.</p>
<p><u>Research areas</u></p>	
Biomass Gasification	Fuel Cells
Plate Heat Exchangers	Membrane processes
Bioreactors	Flow batteries
Reactive Distillation	Chemical process scheduling
Microfluidics	Multiphase flows
Interfacial Science	Chemical reactor analysis and design
Wastewater Treatment	Sustainable and energy efficient technologies
Micro Reactors	Process control
Process Intensification	Non linear analysis
Nano Materials	Computational Fluid Dynamics
Fluidized Bed Operations	Biofuels
Catalysis	Corrosion Engineering
Biochemical Engineering	Transport phenomena

<p>Department of Computer Science and Engineering</p>	<p>B.Tech. or B.E. or Equivalent degree in Computer Science and Engineering M.Tech. or M.E. in Computer Science and Engineering or equivalent.</p> <p>Note: Some additional fellowships sponsored by M/s.TCS and IDRBT are also available.</p>	
<p><u>Research areas</u></p>		
Optimization Techniques	Information Security	Computer networks
Big Data Analytics	Cryptography	Mobile Computing
Database Management Systems	Neural Networks	Service-Oriented Architecture

Parallel Computing	Distributed Systems	Computational Neuroscience
Artificial Intelligence	Computer Vision	Image Processing
Algorithms and Graph Theory	Machine Learning and Soft Computing	Wireless Ad-hoc and Sensor Networks
Cluster and Cloud Computing	Data Mining	Model-Driven Framework-oriented systems
Security and Privacy	Bioinformatics	--
Department of Biotechnology		
	B.Tech. or B.E. or Equivalent degree in Biotechnology/Industrial Biotechnology/ Chemical Engineering/ Biochemical Engineering / Biomedical Engineering M.Tech./MS in Biotechnology/Industrial Biotechnology/ Bioinformatics /Biomedical Engineering.	
	Integrated M.Tech in Biotechnolog / Industrial Biotechnology / Bioinformatics / Biomedical Engineering.	
	M. Sc. in Biotechnology / Biochemistry / Microbiology / Botany / Zoology / Bioinformatics with M.Tech in Biotechnology.	
<u>Research areas</u>		
Bio Nanotechnology	Downstream Processing	
Bioinformatics & Biological Data Analysis	Environmental Biotechnology	
Biomass Conversion & Bio Energy	Gene Therapy	
Bioprocess Engineering	Metabolic Engineering	
Biosensors	Modeling & Simulation of Bioprocesses	
Cancer Biology	Molecular Biochemical Parasitology	
Cell Signaling	Molecular Gene Regulation of Human Diseases	
Plant Biotechnology	Stem Cell Technology	
Systems Biology	--	

Department of Mathematics	B.Sc. and M.Sc. / M.Phil. in Mathematics or equivalent degree.	
<u>Research areas</u>		
Fluid Mechanics/Bio-Mechanics	Operations Research / Optimization	
Computational Fluid Dynamics	Numerical Analysis	

Department of Physics	M.Sc. /M.Sc. (Tech) in Physics / Photonics / Electronics / Instrumentation / Atmospheric Science / Radio Physics / Materials Science/Nanotechnology or M.Tech. in relevant area.
<u>Research areas</u>	
Fiber Optic Sensing / Photonics/Optical Design	Nanomaterials / Thin films
Electronic Instrumentation / Biomedical Signal Processing/Sensors and Transducers	Nuclear Instrumentation
Tropospheric Radio Propagation	Swift Ion Beam Irradiation
Materials Science / Condensed matter Physics/Quantum Interference	Glass and glass Ceramics for Photonic Applications
Polymer Composites	Organic Electronic Devices
Liquid Crystals/Microfluidics/Emulsions	Solar cells/Fuel cells
Nanophosphors	Biomaterials

Department of Chemistry	B.Sc. and M.Sc. / M.Phil. in Chemistry or equivalent degree.
<u>Research areas</u>	
Coordination Chemistry	Nanocatalysts for Fuel Cells
Electrochemistry	Bio-Organic Chemistry
Catalysis	Nanomaterials
Spectrophotometry	Organic Synthesis
Chromatography	Medicinal Chemistry
Environmental Pollution	Supramolecular Chemistry
Synthetic Organic Chemistry	Carbohydrate Chemistry
Stereo Selective Synthesis	Molecular Modeling
Electrochemical Biosensors	

Department of Humanities & Social Sciences	Post Graduate Degree in English with NET Qualification and having studied BA/B.Sc./B.Com.
<u>Research areas</u>	
British Literature	English Language Teaching

School of Management	Any graduate having Full Time M.B.A degree
<u>Research areas</u>	
Marketing	Human Resources
Finance	Economics
Information Technology	Operation Management

FEE STRUCTURE FOR FULL-TIME / PART-TIME
DECEMBER 2018 SESSION ONLY

INSTITUTE FEE:

Sl. No.	Details	Amount (Rs.)
1.	<u>At the time of admission (One time payment)</u>	
	a) Admission Fee	1000.00
	b) ID Card	100.00
	c) Alumni Association Fee	2000.00
	d) Security deposit/Lab./Library (Refundable)	4000.00
	e) Institute Development Contribution	10000.00
	f) Co-operative Stores	750.00
2.	Tuition Fee (Per Semester)	7500.00
3.	Computer and E-mail	1000.00
4.	Spring Spree	500.00
5.	<u>Other Fee:</u>	
	(a) Medical Fee	700.00
	(b) Students Club	300.00
	(c) Games Fee	400.00
	(d) Magazine Fee	100.00
	(e) Students Library Fund	1200.00
	(f) Students Aid Fund	100.00
	(g) Students Welfare Fund	100.00
	(h) Film Club Charges	100.00
	(i) Technical Association Fee	100.00
	(j) Inter University Tournament	100.00
Total:		30050.00

HOSTEL FEE:

Sl. No.	Item	Fee in (Rs.)
1.	Hostel Seat Rent (Per Year)	5000 (Boys) & 4000 (Girls)
2.	Electricity & Water Charges (per year)	4,500.00
3.	Hostel Caution Deposit (at the time of admission)	10,000.00
4.	Hostel Maintenance Charges (per year)	5,500.00
5.	Mess Advance (per semester)	12,000.00
6.	Online fee in favor of Chief Warden, NIT Hostels	37,000/- (Boys) & 36,000/- (Girls)

Note:

1. The selected candidates are required to submit the fee online.
2. The Original certificates will be returned only after completion of the course. The candidate is advised to keep sufficient number of Photocopies of the original certificates.
3. Accommodation to girls is subject to availability.

INSTRUCTIONS TO APPLY:**Ph.D. PROGRAM ON FULL-TIME BASIS:**

- (i) Application form is to be submitted online which is available at <http://admissions.nitw.ac.in>. All the necessary documents are to be uploaded online. The proof of payment of registration fee (Rs.1000/- for OP/OBC and Rs.500/- for SC /ST /PWD candidates) must accompany the application form. The link to pay registration fee through SBI i-collect is : www.onlinesbi.com/sbicollect/icollecthome.htm. Other payments like mobile payments (IMPS), NEFT, RTGS and direct transfer will not be accepted. If paid by any chance, it will not be refunded.
- (ii) The candidates who are employed and wish to do Ph.D. under full - time must enclose NO OBJECTION certificate from the employer.
- (iii) **Check list of documents to be uploaded along with the application.**
 - Copy of SSC in support of Date of Birth
 - Copy of Intermediate/(10+2) Certificate
 - Copies of Provisional certificate / Degree Certificates and Marks Memos of the qualifying Examinations
 - Attested copy of the caste certificate (in case of SC/ST candidates)
 - For OBC candidates, OBC certificate issued after 1st April 2018 as per the format given in the Annexure-II only is acceptable.
 - No Objection Certificate from the employer, if employed.
 - Relieving certificate from the employer (at the time of admission)
 - Photograph on application form
 - Copy of the Grade/Rank Card of GATE or NET or CAT or GMAT (as applicable)
 - Fee payment receipt with transaction Number
 - Any other documents (List of publications (if any)).

Ph.D. PROGRAM ON PART-TIME BASIS:

(i) Application form is to be submitted online which is available at <http://admissions.nitw.ac.in>. All the necessary documents are to be uploaded online. The proof of payment of registration fee (Rs.1000/- for OP/OBC and Rs.500/- for SC/ST/PWD candidates) must accompany the application form. The link to pay registration fee through SBI i-collect is : www.onlinesbi.com/sbicollect/icollecthome.htm. Other payments like mobile payments (IMPS), NEFT, RTGS and Direct transfer will not be accepted. If paid by any chance, it will not be refunded.

(ii) Check list of documents to be uploaded along with the application.

- Copy of SSC in support of Date of Birth
- Copy of Intermediate/(10+2) Certificate
- Copies of Provisional certificate / Degree Certificates and Marks Memos of the qualifying Examinations
- Attested copy of the caste certificate (in case of SC/ST candidates)
- For OBC candidates, OBC certificate issued after 1st April 2018 as per the format given in the Annexure-II only is acceptable.
- No Objection Certificate from the employer.
- Photograph on application form
- Fee payment receipt with transaction Number.
- Bio-data and written consent of Guide in the organization where the candidate is working. (Annexures III and IV)
- Any other documents (List of publications (if any))

Note: The candidates selected for admission into Ph.D. program under Part time basis are not eligible to receive institute fellowship.

ANNEXURE-II

Proforma for Other Backward Class (OBC Certificate)

(CERTIFICATE TO BE PRODUCED BY CANDIDATES FROM OTHER BACKWARD CLASSES APPLYING FOR ADMISSION TO CENTRAL EDUCATIONAL INSTITUTIONS (CEIs), UNDER GOVERNMENT OF INDIA)

This is to certify that Shri/Smt./Kum. _____ Son/Daughter of Shri/Smt. _____ of Village/Town _____ district/Division _____ in the _____ State belongs to the _____ Community which is recognized as a backward class under:

- i) Resolution No. 12011/68/93- BCC(C) dated 10/09/93 published in the Gazette of India Extraordinary Part I Section I No.186 dated 13/09/93.
- ii) Resolution No. 12011/9/94-BCC dated 19/10/94 published in the Gazette of India Extraordinary Part I Section I No. 163 dated 20/10/94.
- iii) Resolution No. 12011/7/95-BCC dated 24/05/95 published in the Gazette of India Extraordinary Part I Section I No. 88 dated 25/05/95.
- iv) Resolution No. 12011/96/94-BCC dated 09/03/96.
- v) Resolution No. 12011/44/96-BCC dated 6/12/96 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 11/12/96.
- vi) Resolution No. 12011/13/97-BCC dated 03/12/97.
- vii) Resolution No. 12011/99/94-BCC dated 11/12/97.
- viii) Resolution No. 12011/68/98-BCC dated 27/10/99.
- ix) Resolution No. 12011/88/98-BCC dated 6/12/99 published in the Gazette of India Extraordinary Part I Section I No. 270 dated 06/12/99.
- x) Resolution No. 12011/36/99-BCC dated 04/04/2000 published in the Gazette of India Extraordinary Part I Section I No. 71 dated 04/04/2000.
- xi) Resolution No. 12011/44/99-BCC dated 21/09/2000 published in the Gazette of India Extraordinary Part I Section I No.210 dated 21/09/2000.
- xii) Resolution No. 12015/9/2000-BCC dated 06/09/2001.
- xiii) Resolution No. 12011/1/2001-BCC dated 19/06/2003.
- xiv) Resolution No. 12011/4/2002-BCC dated 13/01/2004.
- xv) Resolution No. 12011/9/2004-BCC dated 16/01/2006 published in the Gazette of India Extraordinary Part I Section I No.210 dated 16/01/2006.

Shri/Smt./Kum. _____ and/or his family ordinarily reside(s) in the _____ District/Division of _____ State. This is also to certify that he/she does not belong to the Persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the Government of India, Department of Personnel & Training O.M. No. 36012/22/93-Estt.(SCT) dated 08/09/93 which is modified vide OM No. 36033/3/2004 Estt. (Res.) dated 09/03/2004 or the latest notification of the Government of India.

Dated:

**District Magistrate/Competent Authority:
Seal**

NOTE:

- (a) The term "Ordinarily" used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.
- (b) The authorities competent to issue Caste Certificates are indicated below:
- i) District Magistrate / Additional Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner / Deputy Collector / 1st Class Stipendiary Magistrate / Sub-Divisional Magistrate / Taluka Magistrate / Executive Magistrate / Extra Assistant Commissioner (not below the rank of 1st Class Stipendiary Magistrate)
 - ii) Chief Presidency Magistrate / Additional Chief Presidency Magistrate / Presidency Magistrate.
 - iii) Revenue Officer not below the rank of Tahsildar' and
 - iv) Sub- Divisional Officer of the area where the candidate and / or his family resides.
- (c) The annual income /status of the parents of the applicant should be based on financial year ending March 31, 2018.

Declaration /undertaking - for OBC Candidates only

I, _____ Son/Daughter of Shri _____
resident of village/town/city _____ district _____ State
hereby declare that I belong to the _____ community which is
recognized as a backward class by the Government of India for the purpose of reservation in
services admission in Central Government Institutions as per orders contained in
Department of Personnel and Training Office Memorandum No. 36012/22/93 – Estt. (SCT),
dated 8/9/1993. It is also declared that I do not belong to persons/sections (Creamy Layer)
mentioned in Column 3 of the Schedule to the above referred Office Memorandum, dated
8/9/1993, which is modified vide Department of Personnel and Training Office Memorandum
No. 36033/3/2004 Estt. (Res.) dated 9/3/2004 or the latest notification of the Government of
India.

I also declare that the condition of status/annual income for creamy layer of my
parents/guardian is within prescribed limits as on financial year ending on March 31, 2018.

Place:
Date:

Signature of the Candidate

Applications without declaration/undertaking not signed by Candidates will be rejected

FOR PART-TIME CANDIDATES

SPONSORSHIP-CUM-CLEARANCE CERTIFICATE FROM EMPLOYER PRESENT
(For sponsored applicants only)

This is to certify that Mr./Ms. _____
Designation _____, an applicant for admission into Ph.D.
program of the National Institute of Technology, Warangal, for the _____
(month and year), has been in continuous employment in our organization named
_____ (give complete address), for the
last _____ years and that he/she has been sponsored by us for undergoing the
program. Certified further that his/her services with the organization will be retained during
the period carrying out the studies/ research work at the National Institute of Technology,
Warangal, and on completion there of he/she will continue in service in our organization.

Station:

(Signature of the Competent Authority with seal)

Date

Name in full _____

Designation : _____

(seal)

NOTE: Application will not be considered without the above sponsorship certificate duly
printed on the letterhead of the organization.

DECLARATION

To

The Director,
National Institute of Technology,
WARANGAL 506 004.

Dear Sir,

I, Dr. _____ hereby express my willingness to act as a supervisor to Mr. / Ms. _____, who is interested in doing Ph.D. at the National Institute of Technology, Warangal, under part-time program. I am herewith enclosing my bio-data. I also state that adequate facilities are available with us, for doing Ph.D. work at our organization.

Signature:.....

Name:

Date:

Seal:

Encl: Bio data.