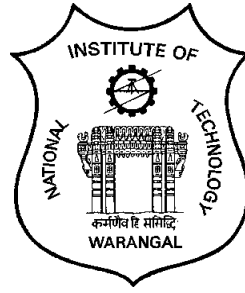


**NATIONAL INSTITUTE OF TECHNOLOGY
WARANGAL**



**Ph.D. ADMISSIONS
JULY 2022 SESSION**

BROCHURE

NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL

Admission to Ph.D. Programs for July, 2022 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 Communication 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 to Ph.D. under Full-Time program are eligible to receive Institute fellowship as per Ministry of Education rules (Vide reference No. http://www.education.gov.in/sites/upload_files/mhrd/files/15-2-2019-TC.pdf). The Institute fellowships are subject to change from time to time as per the instructions from the Ministry of Education, Government of India.

Category-wise (GEN-EWS, OBC-NCL, SC, ST, PwD) reservations on overall available seats will be followed as per Government of India norms. Applications are invited through online from the highly motivated candidates.

Application form is to be submitted online at: <https://admissions.nitw.ac.in/>

Tentative Schedule for Ph.D. Admissions of July, 2022 Session:

Announcement of inviting Applications:	April 25, 2022
Last date to receive applications online:	May 22, 2022
Announcement of shortlisted candidates for written test/interview:	June 8, 2022
Dates of written test/Interview (In offline mode):	June 20 to 25, 2022
Announcement of selected candidates:	June 30, 2022
Reporting by the selected candidates for admission: (Can be Offline / Online)	July 18 to 22, 2022

**NATIONAL INSTITUTE OF TECHNOLOGY, WARANGAL
ELIGIBILITY, RULES AND REGULATIONS FOR ADMISSION TO
Ph.D. PROGRAM**

1. ADMISSIONS

1.1 Student Categories: There are thirteen types of student categories in the Ph.D. Degree Program.

Full-time:

- a. Full-time student on Institute fellowship.
- b. Full-time Government/ Semi-Government Fellowship awardees/ QIP/ FIP(UGC) / CSIR/ UGC/ DOE/ DST/ DBT/ NBHM, etc.
- c. Full-time project fellows/ JRF/ SRF appointed in R&D projects being carried out at NITW.
- d. Full-time Sponsored student from Industry/ R&D organizations.
- e. Indian Council for Cultural Relations (ICCR) fellowship awardees (Foreign students).
- f. Full-time External (CSIR/ JRF/ SRF Fellows) working in National Research Laboratories/ R&D Organization having necessary facilities.
- g. Full-time Self-financing Programme (Sponsored by Industry).
- h. Full-time Self-finance (Rule of reservation is not applicable. Master's degree is compulsory whereas GATE/ UGC/ CSIR/ INSPIRE/ NET/ CAT is not mandatory).

Part-time:

- i. Permanent faculty and other permanent staff of NIT, Warangal.
- j. Permanent faculty of Private Academic Institutions with NIRF ranking below 200 at least once in last five years.
- k. Permanent faculty from Educational Institutions fully funded by Government or Maintained by Public-Private Partnership (PPP) Mode.
- l. Permanent Employees from Private Industries with R&D facilities having three years of experience in an industry of five years standing with membership in CII/ ASSOCCHEM or any other similar membership.
- m. Permanent employees working in Government R&D laboratories/ Government Organizations/ Government Industry/ PSUs/ State Undertakings.

NOTE:

- i) A student of category (a) will receive the Institute scholarship for duration of three years, which may be extendable by one more year, based on the recommendations of Doctoral Scrutiny Committee.
- ii) Student of Category (d) shall be sponsored and financed by the sponsoring organization.
- iii) Student of category (f) shall produce a no objection certificate from the Organization where he/she has got a fellowship and also acceptance from a possible supervisor along with bio-data from the Organization. There will not be any financial commitment from NITW for students under category (f).

- iv) Student of category (g) shall produce a No Objection and Sponsorship Certificate from the Organization where he/ she is working.
- v) A part-time student of category (i) shall produce a sponsorship-cum-clearance certificate from the Director, NITW.
- vi) A part-time student of category (j) shall produce a No Objection certificate from the present Institute which should be AICTE recognized along with the NIRF ranking proof in the last five years.
- vii) A part-time student of category (k, l, and m) shall produce a No Objection Certificate from the present employer.
- viii) Change of status from one category to another category or from full-time to part-time (except full-time self-finance) will be subjected to approval of the senate based on recommendations of DSC and DAC-PG&R. Students should have submitted the synopsis for getting permission to convert from full-time to part-time.
- ix) No student can receive scholarship/fellowship from more than one source, either Government or Private.

1.1.1 As per AICTE/ UGC norms, students of category (a) must have passed GATE/ UGC / CSIR exam/ DAE-JEST. In case of students with M.Sc./ M.Sc.(Tech)/ MBA/ MA qualification, GATE/ UGC-CSIR-NET/ INSPIRE qualification is necessary.

1.1.2 In case of students of category (d), (e), (f), (g) and (h), GATE/ UGC-CSIR-NET, qualification is relaxed. However, they (except category (e)) will be selected through an Institute entrance test and/ or an interview, as per the discretion of the Department.

1.1.3 Written test is exempted to a permanent faculty staff member of NITW who wish to register for Ph.D. in the Department where he/ she is working. If the permanent faculty / Staff member wishes to work for his/ her Ph.D. in some other Department, then the written test and/ or interview are/ is necessary.

1.1.4 Admission under the category (l and m) is open to:

- i) Permanent Employees from Private Industries with R&D facilities having three years of experience in an industry of five years standing with M.E./ M.Tech as per eligibility.
- ii) Permanent employees working in Government R&D laboratories/ Government organizations/ Government industry/ PSUs/ State Undertakings with M.E./ M.Tech as per eligibility.
- iii) Permanent Employees from Private Industries with R&D facilities, Government R&D laboratories/ Government Organizations/ Government Industry/ PSUs/ State Undertakings with B.Tech who have put in at least 10 years of experience and having at least four research publications in journals of repute. The selection of candidates under this category is based on only interview.

1.1.5 Candidates of all categories must appear for interview.

1.2 ELIGIBILITY:

First class with 60% aggregate or 6.5 CGPA at both UG and PG for GEN/ OBC- NCL/ GEN-EWS category and minimum 55% aggregate marks or 6.0 CGPA for candidates under SC/ ST/ PwD category.

Engineering Departments:

Master's/ M.S. (by Research) degree in Engineering/Technology in the appropriate branch of study. All candidates must have qualified in GATE (not a compulsion for part-time scholars).

OR

Bachelor's in Engineering/ Technology with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.

Science Departments:

Master's degree in the relevant discipline of Science (Mathematics/ Physics/ Chemistry)/ B.Tech or equivalent degree/ M.Tech or equivalent degree. All candidates must have qualified in GATE/ UGC/ CSIR/ INSPIRE/ NET (not a compulsion for part-time scholars).

Humanities:

Master's degree in the relevant discipline of English. All candidates must have qualified in GATE/ UGC/ NET (not a compulsion for part-time scholars).

School of Management:

Master's degree in Business Administration. All candidates must have qualified in CAT/ GATE/ UGC-NET (not a compulsion for part-time scholars).

DETAILS OF THE INSTITUTE FEE

For Full-time and Part-time Candidates:

S. No.	Details of the fee	Amount (in Rs.)
1	Tuition Fee per semester	7,500/-
2	*Other Fee	32,000/-
Total		39,500/-

For Full-time Self-finance Candidates:

Tuition Fee of Rs. 50,000/- per semester + Contingency of Rs. 10,000/- per semester + *Other fee of Rs. 32,000/-.

***OTHER FEE DETAILS (for Rs. 32,000/-)**

1) Onetime payment at the time of Admissions: Rs. 24,500/-

[Admission fee: Rs. 2500/-, Identity Card: Rs. 250/-, Alumni Association Fee: Rs. 2000/, (Students' Cooperative Stores: 750/- may or may not be there), Career Development Fee: Rs. 2000/-, Convocation Fee: Rs. 2000/-, Institute Development Fund: Rs. 15000/-).

2) Other Fee payable per year (Rs. 7,500/-)

(Maintenance of Computer/ E-mail: Rs. 1000/-, Student Activity & Welfare Fund: Rs. 2000/-,

Games Fee & Inter University Tournaments: Rs.1000/-, Medical & Health Services: Rs. 1000/-, Student Library Fund: Rs. 1500/-, Institute Fests: Rs. 1000/-).
For Ph.D. Programmes the additional fee as under will be charged during Semester V.

- i. Thesis processing fee: Rs. 5,000/-
- ii. Thesis evaluation fee: Rs.25,000/-

Note: The selected candidates are required to submit the fee online.

INSTRUCTIONS TO APPLY:

Ph.D. PROGRAM ON FULL-TIME BASIS (With Institute Fellowship & Self-Finance):

Application form is to be submitted online which is available at <https://admissions.nitw.ac.in/>
All the necessary documents are to be uploaded online. The proof of payment of registration fee (Rs. 1600/- for GEN/ GEN-EWS/ OBC-NCL and Rs.800/- for SC/ ST/ PwD candidates) must accompany the application form.

The link to pay registration fee is given below:

Ph.D. registration Fee – GEN/ GEN-EWS/ OBC-NCL – July 2022

https://www.payumoney.com/webfronts/#/index/PhD-ApplicationFee-GEN-GEN_EWS-OBC_NCL-JULY2022-INR-1600 (copy above link and paste in the browser)

Ph.D. registration Fee – SC/ ST/ PwD – July 2022

<https://www.payumoney.com/webfronts/#/index/PhD-ApplicationFee-SC-ST-PWD-JULY2022-INR-800> (copy above link and paste in the browser)

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. Do not use mobile applications to make the payment.

- (i) The candidates who are employed and wish to do Ph.D. under full-time must enclose NO OBJECTION certificate from the employer.

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

- Copy of SSC/ Class X certificate in support of Date of Birth.
- Copy of Intermediate/ (10+2)/ Class XII 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 GEN-EWS candidates, EWS certificate issued on or after April 01, 2022 as per the format given in the Annexure-I only is acceptable.
- For OBC-NCL candidates, OBC-NCL certificate issued on or after April 01, 2022 as per the format given in the Annexure-II only is acceptable along with undertaking.
- No Objection Certificate from the employer, if employed (Annexure III).
- Relieving certificate from the employer (at the time of admission).
- Photograph on application form.
- Copy of the Grade/ Rank Card of GATE or UGC-NET or CAT or GMAT or CSIR (as applicable).
- Fee payment receipt with transaction number.
- Statement of Proposal (Research Proposal).
- Any other documents (List of publications, if any).

Ph.D. PROGRAM ON PART-TIME BASIS:

Application form is to be submitted online which is available at <https://admissions.nitw.ac.in/>
All the necessary documents are to be uploaded online. The proof of payment of registration fee (Rs. 1600/- for GEN/ GEN-EWS/ OBC-NCL and Rs. 800/- for SC/ ST/ PwD candidates) must accompany the application form.

The link to pay registration fee is given below:

Ph.D. registration Fee – GEN/ GEN-EWS/ OBC-NCL – July 2022

https://www.payumoney.com/webfronts/#/index/PhD-ApplicationFee-GEN-GEN_EWS-OBC_NCL-JULY2022-INR-1600 (copy above link and paste in the browser)

Ph.D. registration Fee – SC/ ST/ PwD – July 2022

<https://www.payumoney.com/webfronts/#/index/PhD-ApplicationFee-SC-ST-PWD-JULY2022-INR-800> (copy above link and paste in the browser)

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. Do not use mobile applications to make the payment.

Checklist of documents to be uploaded along with the application:

- Copy of SSC/ Class X certificate in support of Date of Birth.
- Copy of Intermediate/ (10+2)/ Class XII 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 GEN-EWS candidates, EWS certificate issued on or after April 01, 2022 as per the format given in the Annexure-I only is acceptable.
- For OBC-NCL candidates, OBC certificate issued on or after April 01, 2022 as per the format given in the Annexure-II only is acceptable along with undertaking.
- No Objection Certificate from the employer (Annexure-III).
- Photograph on application form.
- Fee payment receipt with transaction number.
- Statement of Proposal (Research Proposal).
- Any other documents (List of publications, if any).

Note: The candidates selected for admission to Ph.D. program under part-time basis are not eligible to receive Institute fellowship.

DEPARTMENT SPECIFIC QUALIFICATIONS & SPECIALIZATIONS:

Department of Civil Engineering	B.Tech/ B.E. or Equivalent degree in any branch of Engineering & Technology and M.Tech/ M.E. in relevant specialization OR B.Tech/ B.E. or Equivalent degree in Engineering/ Technology with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.
<u>Research Areas</u>	
Engineering Structures	Water Resources Engineering
Geotechnical Engineering	Construction Technology & Management
Environmental Engineering	Remote Sensing & Geographic Information System
Transportation Engineering	Waste Management

Department of Electrical Engineering	B.Tech/ B.E. or Equivalent degree in Electrical Engineering or Electrical and Electronics Engineering and M.Tech/ M.E. in Electrical Engineering or allied Specializations in broad research areas mentioned below. OR B.Tech/ B.E. or Equivalent degree in Electrical Engineering or Electrical and Electronics Engineering with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.	
<u>Research Areas</u>		
FACTS/ HVDC Control	Smart Grid Technologies	Multi-Level Inverters
Power Quality	Power System Stability and Security	Energy Storages Systems
Power System State Estimation	Wide Area Control of Power Systems	Pulsed Power Technology
Real Time Control of Power Systems	Renewable Energy Sources	Condition Monitoring of Power Equipment
Power System Protection	Motor Drives	Multifunctional Grid Tied Inverter Configurations & Control Strategies
Power System Deregulation	Switch Mode Power Conversion	Electricity Market Modeling, Risk Optimization Ancillary Service Market
AI Techniques in Power Systems	Control & Instrumentation	Grid Integration of Large Scale Distributed Energy Resources

Department of Mechanical Engineering	B.Tech/ B.E. or Equivalent degree in Mechanical Engineering/ Production Engineering/ Industrial Engineering/ Mechatronics/ Automobile Engineering/ Aeronautical Engineering/ Marine Engineering and M.Tech/ M.E. in Mechanical Engineering allied areas and specializations within the broad research areas mentioned below.	
	OR	
	B.Tech/ B.E. or Equivalent degree in Mechanical Engineering/ Production Engineering/ Industrial Engineering/ Mechatronics/ Automobile Engineering/ Aeronautical Engineering/ Marine Engineering with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.	
<u>Research Areas</u>		
Materials Technology	Automobile Engineering	Tribology
Mechatronics	Thermal Engineering	Manufacturing Engineering
Fluid Mechanics	Additive Manufacturing	Industrial Engineering and Management & Entrepreneurship
Machine Design	Energy Studies	Modeling of IC Engines
Renewable Fuels	Micro-combustors	Friction Stir Welding/ Processing

Department of Electronics and Communication Engineering	B.Tech/ B.E. or Equivalent degree in Electronics and Communication Engineering and M.Tech/ M.E. in Electronics and Communication Engineering or equivalent with Research areas in Communication/ VLSI/ Instrumentation.	
	OR	
	B.Tech/B.E. or Equivalent degree in B.Tech/ B.E. or Equivalent degree in Electronics and Communication Engineering with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.	
<u>Research Areas</u>		
Radar Signal Processing	VLSI Architectures, MOS Devices, On-chip circuits	Speech Processing
RFIC, MMIC for 5G, MW Active and Passive circuits	Nano Electronics & Devices	Embedded Systems
Antennas, Antenna Arrays	Visible Light Communications	Bio-medical Engineering
MIMO Antennas & Beam forming, Smart Antennas	Optical Signal Processing	Process Control Design
5G, MIMO, MMIMO	Cognitive Radio	Image & Video Processing

Department of Metallurgical and Materials Engineering	B.Tech/B.E. or Equivalent degree in Metallurgical & Materials Engineering/ Mechanical Engineering and M.Tech/ M.E. in Metallurgical and Materials Engineering and related fields. OR M.Sc. in Physics/ Chemistry/ Materials Science / Electronics/ Nanoscience and Nanotechnology with M.Tech. in Materials Science/ Metallurgy/ Nanoscience and Nanotechnology/ Ceramic Engineering/ Surface Engineering. OR B.Tech. or B.E. or Equivalent degree in Metallurgical & Materials Engineering/ Mechanical Engineering with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.	
	<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		
3D Printing		

Department of Computer Science and Engineering	B.Tech/ B.E. or Equivalent degree in Computer Science and Engineering and M.Tech/ M.E. in Computer Science and Engineering or equivalent. OR B.Tech/ B.E or Equivalent degree in Computer Science and Engineering with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.	
	Note: Some additional fellowships sponsored by M/s. TCS and IDRBT are also available.	
<u>Research Areas</u>		
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 Chemical Engineering	B.Tech/ 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 and M.Tech. or M.E. in Chemical Engineering/ Mechanical Engineering/ Biotechnology/ Petrochemical Engineering/ Petroleum Technology/ Process Control and Instrumentation/ Control Systems/ Polymer Technology/ Biochemical Engineering /Energy Engineering/ Nanotechnology/ Environmental Engineering and allied areas.
	OR
	B.Tech/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 with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.
<u>Research Areas</u>	
Biomass Gasification	Fuel Cells
Plate Heat Exchangers	Membrane processes
Bioreactors	Flow batteries
Reactive Distillation	Chemical process scheduling
Micro fluidics	Multiphase flows
Interfacial Science	Chemical reactor analysis and design
Waste water Treatment	Sustainable and energy efficient technologies
Micro Reactors	Process control
Process Intensification	Nonlinear analysis
Nano Materials	Computational Fluid Dynamics
Fluidized Bed Operations	Biofuels
Catalysis	Corrosion Engineering

Biochemical Engineering	Transport phenomena
Polymer Nano-composites	CO ₂ sequestration
Electro-spinning, Lithography	Bio-composite
Molecular Simulations	

Department of Biotechnology	B.E./B.Tech. in Biotechnology/ Industrial Biotechnology/ Biochemical Engineering/ Bioinformatics/ Biomedical Engineering/ Biotech. Engineering/ Bioengineering/ Chemical and Bio-Engineering/ Genetic Engineering/ Food Technology and Biochemical Engineering/ Biological Sciences and Bioengineering/ Biosciences and Bioengineering/ Biotechnology and Biochemical Engineering/ Biochemical and Biotechnology Engineering/ Biomedical Instrumentation and M.E./ M. Tech./ M.S. (by Research)/ M.S.* (from abroad Two-year program only) in Biotechnology/ Industrial Biotechnology/ Biochemical Engineering/ Bioinformatics/ Biomedical Engineering/ Biotech. Engineering/ Bioengineering/ Chemical and Bio-Engineering/ Genetic Engineering/ Food Technology and Biochemical Engineering/ Biological Sciences and Bioengineering/ Biosciences and Bioengineering/ Biotechnology and Biochemical Engineering/ Biochemical and Biotechnology Engineering/ Biomedical Instrumentation.
	OR
	B.E./B.Tech. in Biotechnology/ Industrial Biotechnology/ Biochemical Engineering/ Bioinformatics/ Biomedical Engineering/ Biotech. Engineering/ Bioengineering/ Chemical and Bio-Engineering/ Genetic Engineering/ Food Technology and Biochemical Engineering/ Biological Sciences and Bioengineering/ Biosciences and Bioengineering/ Biotechnology and Biochemical Engineering/ Biochemical and Biotechnology Engineering/ Biomedical Instrumentation with valid GATE score and at least CGPA of 8.0/10 or 75% of marks under GEN/ OBC-NCL/ GEN-EWS category and at least CGPA of 7.5/10 or 70% for candidates under SC/ ST/ PwD category.
	Dual Degree i.e. B.E./ B.Tech. & M.E./ M.Tech./ M.S. (by Research) in (same as mentioned above).
	Integrated M.E./ M.Tech. in (same as mentioned above).
	M.Sc. in Biotechnology/Biochemistry/ Microbiology/ Botany/ Zoology/ Bioinformatics/ Life Sciences AND M.Tech. in Biotechnology.
M.Sc./ Integrated M.Sc. in Biotechnology/ Biochemistry / Microbiology/ Botany/ Zoology/ Bioinformatics/ Life Sciences with valid score in GATE/ DBT-JRF/ ICMR/ UGC/ CSIR/ DST-INSPIRE.	
<u>Research Areas</u>	
Algal Biotechnology & Microbial Fuel Cell	Gene Therapy
Big Data & Data Science	Machine Learning
Bioelectrochemical System & Biological Wastewater Treatment	Microbial Gene regulation & Epigenetics

Bioenergy, Biorefinery & Therapeutic Proteins/ Enzymes	Modeling & Simulation of Bioprocesses
Bioinformatics	Molecular & Biochemical Parasitology
Biomass, Biomaterials & Metabolic Engineering	Nanobiotechnology & Medical Biosensors
Bioseparations Technology	Network Systems Biology of Large-Scale Data & Cancer Signaling Pathways
Cancer Biology & Cell Signaling	Plant Biotechnology & Plant Tissue Culture
Computational Biophysics	Stem Cell Engineering
Drug Design & Discovery	Structural Biology
Environmental Biotechnology	Systems Biology
Functional Genomics & Metabolic Disorders	--

Department of Mathematics	B.Sc. and M.Sc./ M.Phil. in Mathematics or equivalent degree
<u>Research Areas</u>	
Fluid Dynamics	Computational Fluid Dynamics
Operations Research	Optimization
Fuzzy Sets and Systems	Biomechanics
Mathematical Biology	

Department of Physics	B.Sc. with Physics and M.Sc./ M.Sc. (Tech) in Physics/ M.Tech with specialization in Photonics/ Electronics/ Instrumentation/ Materials Science/ Nanotechnology/ Solid State Physics or any equivalent specialization.
<u>Research Areas</u>	
Fiber Optic Sensing/ Photonics/ Optical Design	Nuclear Instrumentation
Electronic Instrumentation/ Biomedical Signal Processing/ Sensors and Transducers	Swift Ion Beam Irradiation
Materials Science/ Condensed matter Physics/ Quantum Interference	Glass and glass Ceramics for Photonic Applications
Theoretical Condensed Matter Physics	Low Dimensional Systems (Quantum Dots), Spintronics and Density Functional Theory
Polymer Composites	Organic Electronic Devices
Liquid Crystals/ Microfluidics/ Emulsions	Solarcells/ Fuel cells
Nanophosphors	Biomaterials
Nanomaterials/ Thin films	

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 GATE/ UGC/ NET Qualification and having studied B.A./ B.Sc./ B.Com. or any other Bachelor's Degree.
<u>Research Areas</u>	
British Literature	English Language Teaching

School of Management	Any graduate having Full-time M.B.A. degree with UGC NET qualification.
<u>Research Areas</u>	
Marketing	Human Resources
Finance	Economics
Information Technology	Operations Management
General Management and Allied Areas	Interdisciplinary Research

Proforma for Economically Weaker Section (EWS) Certificate

Government of _____

(Name & address of the authority issuing the certificate)

INCOME & ASSET CERTIFICATE TO BE PRODUCED BY ECONOMICALLY WEAKER SECTIONS

Certificate No. _____

Date: _

VALID FOR THE YEAR 2022-2023

1. This is to certify that Shri/Smt./Kumari _____ son/daughter/wife of _____ Permanent resident of _____, Village/Street _____, Post Office _____, District _____ in the State/Union Territory _____ Pin Code _____ whose photograph is attested below belongs to Economically Weaker Sections, since the gross annual income* of his "family"*** is below Rs. 8 lakh (Rupees Eight Lakh only) for the financial year 2021-2022. His/her family does not own or possess any of the following assets***:

- I. 5 acres of agricultural land and above;
- II. Residential flat of 1000 sq. ft. and above;
- III. Residential plot of 100 sq. yards and above in notified municipalities;
- IV. Residential plot of 200 sq. yards and above in areas other than the notified municipalities.

2. Shri/Smt./Kumari _____ belongs to the _____ caste which is not recognized as a Scheduled Caste, Scheduled Tribe and Other Backward Classes (Central List).

Signature with seal of office _____

Name _____

Designation _____

Recent passport size attested photograph of the applicant

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, 2022.

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, 2022.

Place:
Date:

Signature of the Candidate

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

No Objection Certificate for Part-time Ph.D.

(Should be on the letter head of the employee's organization)

Ref. No.

Date:

To
The Director,
National Institute of Technology,
Warangal-506 004,
Telangana

Sub.: No objection certificate for pursuing Ph.D. (part-time) at NIT Warangal

Dear Sir,

We have no objection if Mr./Mrs./Ms. _____
_____ an employee of our
Organization/Institute, if admitted to the Ph.D. program in the Department of
_____ at NIT Warangal as
a part-time student.

It is certified that he/she has completed _____ years of service in our
Organization/ Institute as a regular employee.

We shall give him/her leave of absence at our Organization/Institute to complete the course
work during his/her Ph.D. program at NIT Warangal.

Signature and Seal
Head of the Organization/Institute