NATIONAL INSTITUTE OF TECHNOLOGY ANDHRA PRADESH
Tadepalligudem-534102, Andhra Pradesh

Guidelines for Ph. D (Full time)/ Ph. D (Part Time)/ M.S. (by Research) for the Academic Year 2019-2020

1. General Instructions

a. The candidates are advised to download the application form from the Institute website www.nitandhra.ac.in.

b. The filled-in applications must be sent to Dean (Academic Affairs), NIT Andhra Pradesh, SVEC Campus, Peda Tadepalli, Tadepalligudem-534102, Andhra Pradesh by speed post/registered post.

c. The last date for receiving the filled-in applications is **15th May 2019 by 5:00 P.M.**

d. Candidates should verify the checklist and enclose all the documents related to previous educational qualifications and experience as required.

e. The candidates must enclose a Demand Draft of Rs 500/- (Rs 250/- for SC/ST/PwD) drawn in favour of 'The Director, NIT Andhra Pradesh' payable at Tadepalligudem, along with the filled-in application.

f. Candidates should check the website www.nitandhra.ac.in regularly for all future communications such as date of written test/interview, short-listed candidates etc.

g. A separate application form along with the requisite demand draft must be sent for each programme/department/school/ discipline.

h. All the programmes are governed by institute's rules and regulations prescribed from time to time.

2. Admission Categories:

- The following is the list of admission modes for Ph.D. Programme.

  a) Ph.D. Full-Time – Stipendiary Category

  Half Time Research Assistantship (HTRA) is available to full time scholars who are admitted to Ph.D. programmes in different departments subject to the availability as stipulated by Ministry of Human Resources Development. The award and renewal of the assistantship/scholarship is as per the guidelines reissued by MHRD, from time to time. The recipients of HTRA are required to

assist the department in academic works to a minimum of 8 hours per week. The assistantship / scholarship will not be available for sponsored candidates or to scholars getting financial support from any private agency or other agencies under state or central governments.

Candidates having their own fellowships from funding agencies such as DST, CSIR, UGC, NBHM, etc. can apply for Ph.D. (full time) in any department relevant to the research grant.

b) Ph.D. (Full Time) - Project category

The applicants working under sponsored project at NIT Andhra Pradesh should submit their application online, irrespective of the vacancy position. However, the selection procedure shall remain the same.

c) Part-Time (Externally sponsored)

The applicants are not entitled for institute stiphend.

- M.S (by Research) - offered only in Externally sponsored mode
- Ph.D. Programme is offered by the Departments/Schools and M.S (by Research) is offered by in the Departments listed below.

Name of the Department/ School	Discipline/ Areas of research offered *
Department of Bio-Technology	• Biotechnology / Industrial Biotechnology • Food and Biochemical Engineering / Bioprocess Engineering/ Bioprocess Technology • Biopharmaceutical Technology / Bioinformatics • Nanoscience and Engineering • Industrial Biotechnology • Enzyme & Fermentation Technology • Downstream stream processing
Department of Chemical Engineering	• Phase Change materials • Synthesis and Applications of Nanoparticles • Interfacial Science • Environmental Engineering • Inorganic Membranes • Fruit Juice Clarification • Wastewater Treatment • Bio-Separations
Department of Civil Engineering	• Ground Improvement Techniques • Soil Dynamics and Geotechnical Earthquake Engineering • Energy Geotechnics and Environmental Geotechnics • Foundation Systems for High-Rise Structures • Remote Sensing & GIS • GIS based hydrological modelling • Soft computing techniques • Watershed modelling • Water & Wastewater Treatment – Toxicity Studies • Emerging Contaminants - Fate & Transport • Life Cycle Assessment & Risk Assessment • Bio-Char based Contaminant Removal and Environmental Geotechnics
Department of Computer Science & Engineering	• Machine Learning for language, vision and control • Text/Web Mining • Parallel and Distributed Algorithms • Randomized and Approximation Algorithms • Educational Data Mining • Deep Learning for Vision and NLP • Query Optimization for Big Data Computing

	• Privacy Preserving Data Mining • Big Data Analytics • Soft Computing • Cryptography & Information Security
Department of Electrical Engineering	• Power Electronics and Drives • Multilevel converter/ inverters topologies • DC-DC converter topologies • On/ Off-line Grid connected renewable/ hybrid energy systems • Power quality • Hybrid Electric Vehicles • Application of optimization techniques to power electronic systems • Other relevant areas of power electronics
Department of Electronics & Communication Engineering	• Next Generation Wired and Wireless Communication Technologies • 1D, 2D and 3D Signal Processing • Analog and Digital VLSI • Antennas and RF Technologies
Department of Mechanical Engineering	• IC Engines • Emissions Control • Refrigeration and Air-Conditioning • Energy Efficient Buildings • Renewable Energy • Alternative fuels • Energy Systems • Alternative Energy Systems • Manufacturing (Forming and Casting) • Advanced and Smart Materials (Ni, Ti, Steels and other materials) for Mechanical, Thermal and Electrical Applications • Development and Properties evaluation of Metal Matrix Composites • Development and Properties evaluation of Polymer Matrix composites and Carbon - Carbon Composites • Advanced Materials • Additive Manufacturing • Advanced Machining Technologies • Manufacturing processes

Department of Metallurgical & Materials Engineering	• Welding Metallurgy • Corrosion of Welds • High Temperature Materials • Composite Materials • Powder Metallurgy • High Temperature Materials • ODS Steels • Materials Characterization	
School of Sciences	**Mathematics**	• Wave Mechanics, • Elasto-dynamics • Differential Equation
	Physics	• Experimental Condensed Matter • Strongly Correlated Electron Systems • Multifunctional Properties of Magnetic Oxides
School of Humanities	**English**	• African American Theatre • First Nations Theatre • Diaspora Studies • Gender Studies

* A few other relevant areas not limited to the above list may also be considered

3. Eligibility Criteria

a. Eligibility Criteria for Ph.D. Programme in Engineering (Full Time)

Candidates with a Master's degree in Engineering/Technology or a Master's degree by Research in Engineering/Technology in relevant branch with 60% (or above) aggregate marks (CGPA ≥ 6.5/10) in both UG and PG, for admission under UR/EWS/OBC-NCL category, and 55% aggregate (or above) marks or equivalent CGPA of ≥ 6.0 for SC/ST/PwD candidates in both UG and PG. They should have qualified GATE or NET in the relevant disciplines.

b. Eligibility Criteria for Ph.D. Programme in Sciences and Humanities (Full Time)

Master's degree in Sciences/Humanities in both UG and PG in relevant branch of Science/Humanities with 60% (or above) aggregate marks (CGPA ≥ 6.5/10) in both UG and PG, for admission under UR/EWS/OBC-NCL category, and 55% aggregate (or above) marks or equivalent CGPA of ≥ 6.0 for SC/ST/PwD candidates in both UG and PG. Candidates should have qualified GATE or UGC/CSIR-NET in relevant discipline.

c. <u>Eligibility Criteria for Ph.D. Programme in Engineering (Part Time)</u>

Candidates applying for Ph.D. Programme in Engineering (Part Time) should satisfy both the criteria listed below.

- Candidates should be working on a Regular basis in reputed research organizations/Academic Institutions/Industries with a minimum experience of two years.
- Candidates with a Master's degree in Engineering/Technology or a Master's degree by Research in Engineering/Technology with 60% (or above) aggregate marks (CGPA ≥ 6.5/10) in both UG and PG, for admission under UR/EWS/OBC-NCL category, and 55% aggregate (or above) marks or equivalent CGPA of ≥ 6.0 for SC/ST/PwD candidates in both UG and PG.

d. <u>Eligibility Criteria for Ph.D. Programme in Sciences and Humanities (Part Time)</u>

Candidates applying for Ph.D. Programme in Sciences and Humanities (Part Time) should satisfy both the criteria listed below.

- Candidates should be working on a Regular basis in reputed research organizations/Academic Institutions/Industries with a minimum experience of two years.
- Master's degree in Sciences/Humanities in relevant branch of Science/Humanities with 60% (or above) aggregate marks (CGPA ≥ 6.5/10) in both UG and PG, for admission under UR/EWS/OBC-NCL category, and 55% aggregate (or above) marks or equivalent CGPA of ≥ 6.0 for SC/ST/PwD candidates in both UG and PG. Candidates should have qualified GATE or UGC/CSIR-NET in the relevant discipline.

e. Eligibility Criteria for M.S (by Research) Programme

Candidates applying for M.S (by Research) in Engineering/Technology should satisfy both the criteria listed below

- Candidates should be working on a Regular basis in reputed research organizations/Academic Institutions/Industries with a minimum experience of two years.
- Candidates should have Bachelor's degree in Engineering/Technology with good academic record

4. Fee Structure[#]:

Programme	Minimum Duration	Tuition Fee	Other Fee			
			I year	II Year	III Year	IV Year
Ph. D (Regular)	6 Semesters (3 academic years)	Rs.15,000/- per semester	Rs.25,000/-	Rs.5,000/-	Rs.20,000/-	-
Ph. D (Part-Time)	8 Semesters (4 academic years)	Rs.15,000/- per semester	Rs.25,000/-	Rs.10,000/-	Rs.20,000/-	Rs.10,000/-
M.S (by Research)	4 Semesters (2 academic years)	Rs.50,000/- per Semester	Rs.25,000/-	Rs.5,000/-	-	-

The fee structure may be changed from time-to-time as per the institute's policy.

5. Selection Procedure:

S. No.	Name of the Programme	Category	Mode of Selection
1	Ph.D.	Full time/ Part time	Written Test and/or Interview
2	M.S (by Research)	Part time	Written Test and/or Interview

Sd/-
Director
NIT Andhra Pradesh