



# राष्ट्रीय प्रौद्योगिकी संस्थान आंध्र प्रदेश NATIONAL INSTITUTE OF TECHNOLOGY ANDHRA PRADESH

Near National Highway No. 16, Kadakatla, Tadepalligudem – 534101  
West Godavari District, Andhra Pradesh, India.

Adv. No- NITAP/AA-3/Admissions/2021-22/001

Date- 25-05-2021

## ADMISSION TO THE PH.D. (FULL-TIME)/ PH.D. (PART-TIME) AND M.S. (BY RESEARCH) PROGRAMMES – JULY 2021

### 1. THE INSTITUTE

National Institute of Technology Andhra Pradesh, Tadepalligudem, is an Institute of National Importance, established in the A.Y. 2015. It is a fully-funded Institute under the Ministry of Education, Government of India. Currently, the Institute offers B.Tech. programme in eight engineering branches, Bio-Technology, Chemical Engineering, Civil Engineering, Computer Science and Engineering, Electrical Engineering, Electronics & Communication Engineering, Mechanical Engineering, and Metallurgical & Materials Engineering, and M.Tech. programme in six specializations. The Institute also offers Ph.D. (both under Full-time and Part-time modes) programme in the above-mentioned engineering branches, Sciences, Humanities and Management, viz., Mathematics, Physics, Chemistry, English and Management, and M.S.(by Research) programme in the above-mentioned eight engineering branches.

### 2. ABOUT THE RESEARCH PROGRAMMES

The Institute offers Ph.D. (both full-time and part-time) in all the existing departments mentioned above and M.S. (by Research) programmes in all the engineering branches. Details of Research areas for admission to the Ph.D. programmes are given in Annexure 'A'.

The following is the list of admission modes for Ph.D. and M.S. programmes.

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

Half-Time Research Assistantship (HTRA) is available to the full-time scholars who are admitted to Ph.D. programmes in different departments, subject to the availability as stipulated by the Ministry of Education (MoE). The award and renewal of the assistantship/scholarship are as per the guidelines issued by MoE, from time to time. The recipients of HTRA are required to assist the department in academic works. The assistantship/scholarship will not be available for sponsored candidates or to the scholars getting financial support from any private agency or other agencies under state or central governments. Candidates having their fellowships from funding agencies such as DST, CSIR, UGC, NBHM, etc. can also apply for Ph.D. (Full-time) in any department relevant to the research grant.

#### b) Ph.D. (Part-Time)

These positions are open for the candidates who are working on a Regular basis in reputed research organizations/Academic Institutions/Industries with a minimum experience of two years. The applicants are not entitled to receive institute stipend.

Ph.D.(Part-Time) positions are also open for the faculty members currently working at NIT Andhra Pradesh on an ad-hoc basis.

#### c) M.S. (by Research) - offered only in externally sponsored mode.

### 3. ELIGIBILITY CRITERIA

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

Candidates applying for Ph.D. (Full-Time) programme in Engineering branches should satisfy all the criteria listed below.

- Candidates with a Master's degree in Engineering/Technology or a Master's degree by Research in Engineering/Technology in appropriate branches\*.
- Candidates belong to UR/EWS/OBC-NCL category must have secured 60% (or above) aggregate marks (CGPA of 6.5) either at UG or PG level examination. For SC/ST/PwD candidates, 55% aggregate (or above) marks or equivalent CGPA of 6.0 is essential either at UG or PG level.
- Candidates should have qualified GATE or NET in the relevant disciplines.

**\*Note: "The candidates with B.Tech. and M.Tech. degrees in the relevant branches of Bio-Technology and Chemical Engineering are eligible to apply for Ph.D. (Full-Time/Part-Time) programmes in the Department of Bio-Technology and Department of Chemical Engineering respectively."**

#### b. Eligibility Criteria for Ph.D. Programme in Engineering (Part-Time)

Candidates applying for Ph.D. (Part-Time) programme in Engineering branches should satisfy all 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 in appropriate branches\*.
- Candidates belong to UR/EWS/OBC-NCL category must have secured 60% (or above) aggregate marks (CGPA of 6.5) either at UG or PG level examination. For SC/ST/PwD candidates, 55% aggregate (or above) marks or equivalent CGPA of 6.0 is essential either at UG or PG level.

#### c. Eligibility Criteria for Ph.D. Programme in Sciences and English (Full-Time)

Candidates applying for Ph.D. (Full-Time) programme in Sciences & English should satisfy all the criteria listed below.

- Candidates with a Master's degree in Sciences/English in relevant branch of Science/English.
- Candidates belong to UR/EWS/OBC-NCL category must have secured 60% (or above) aggregate marks (CGPA of 6.5) either at UG or PG level examination. For SC/ST/PwD candidates, 55% aggregate (or above) marks or equivalent CGPA of 6.0 is essential either at UG or PG level.
- Candidates should have qualified GATE or UGC/CSIR-NET in relevant discipline.

#### d. Eligibility Criteria for Ph.D. Programme in Sciences and English (Part-Time)

Candidates applying for Ph.D. (Part-Time) programme in Sciences and English should satisfy all the criteria listed below.

- Candidates with a Master's degree in Sciences/English in relevant branch of Science/English.
- Candidates belong to UR/EWS/OBC-NCL category must have secured 60% (or above) aggregate marks (CGPA of 6.5) either at UG or PG level examination. For SC/ST/PwD candidates, 55% aggregate (or above) marks or equivalent CGPA of 6.0 is essential either at UG or PG level.
- Candidates should have qualified GATE or UGC/CSIR-NET in the relevant discipline.
- Candidates should be working on a Regular basis in reputed research organizations/Academic

Institutions/Industries with a minimum experience of two years.

#### e. Eligibility Criteria for Ph.D. Programme in Management (Part-Time)

Candidates applying for Ph.D. (Part-Time) programme in Management should satisfy all the criteria listed below.

- MBA or Master's degree in relevant branch of Management.
- Candidates belong to UR/EWS/OBC-NCL category must have secured 60% (or above) aggregate marks (CGPA of 6.5) either at UG or PG level examination. For SC/ST/PwD candidates, 55% aggregate (or above) marks or equivalent CGPA of 6.0 is essential either at UG or PG level.
- Candidates should be working on a Regular basis in reputed research organizations/Academic Institutions/ Industries with a minimum experience of two years.

#### f. Eligibility Criteria for M.S. (by Research) Programme

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

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

### 4. SELECTION PROCEDURE

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

### 5. FEE STRUCTURE#:

Programmes	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.30,000/-	Rs.7,800/-	Rs.7,800/-	-
Ph.D. (Part-Time)	8 Semesters (4 academic years)	Rs.30,000/- per semester	Rs.30,000/-	Rs.7,800/-	Rs.7,800/-	Rs.7,800/-
M.S. (by Research)	4 Semesters (2 academic years)	Rs.50,000/- per semester	Rs.30,000/-	Rs.7,800/-	-	-

# The fee structure may change from time-to-time as per the institute's policy. Hostel fee structure is available on the Institute website.

### GENERAL INSTRUCTIONS

- The candidates are advised to visit the Institute website [www.nitandhra.ac.in](http://www.nitandhra.ac.in) to fill and submit the online application form.
- The applicant should forward the soft copy of the application form, fee payment receipt and all the testimonials (merged into one file) through email to [phdadmissions@nitandhra.ac.in](mailto:phdadmissions@nitandhra.ac.in), clearly mentioning course, branch and application number of the applicant in the subject of the email. The applicant should also keep the soft copy of the submitted application for future reference.
- The candidates must pay the required application fee of **Rs.1000/- (Rs.500/- for SC/ST/PwD categories)** for each programme/department/school/discipline only through SBI e-pay and the payment procedure is given in Annexure 'B'. Application fee once paid is non-refundable.
- The last date for submitting the online applications is **10<sup>th</sup> June, 2021**.

- e. Candidates should check the website ([www.nitandhra.ac.in](http://www.nitandhra.ac.in)) frequently for all future communications such as date of written test/interview, short-listed candidates etc. No separate communication will be sent in this regard.
- f. A separate application form must be submitted for each programme/department/school/discipline.
- g. Reservation of seats: Reservations are applicable to SC/ST/OBC/Economically Weaker Section (EWS)/Candidate with Physical Disability (PwD) as per the rules and regulation of the Govt. of India.
- h. No TA/DA will be provided for attending Written Exam and/or Interview for Ph.D./M.S. programmes.
- i. Candidates joining Ph.D. programme in July' 2021 session must produce their original mark/ grade sheets, Transfer-cum-Migration certificate, NOC and all relevant certificates at the time of admission.
- j. The admission may be cancelled at any time if found the certificates are inappropriate.
- k. In case of cancellation of seat within a semester of their joining, students are required to refund the total received stipend amount to the Institute.
- l. All the programmes are governed by institute's rules and regulations prescribed from time to time.

For Any queries, the applicants can drop a mail to: [phdadmissions@nitandhra.ac.in](mailto:phdadmissions@nitandhra.ac.in)

**Department-wise Research areas**

<b>Department of Bio-Technology</b>	<b>Department of Chemical Engineering</b>
<ul style="list-style-type: none"> <li>• Biotechnology/ Industrial Biotechnology</li> <li>• Food and Biochemical Engineering/ Bioprocess Engineering/ Bioprocess Technology</li> <li>• Biopharmaceutical Technology/ Bioinformatics</li> <li>• Nano-science and Engineering</li> <li>• Industrial Biotechnology</li> <li>• Enzyme &amp; Fermentation Technology</li> <li>• Downstream processing</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of engineering.</p>	<ul style="list-style-type: none"> <li>• Phase Change materials</li> <li>• Synthesis and Applications of Nanoparticles</li> <li>• Interfacial Science</li> <li>• Environmental Engineering</li> <li>• Inorganic Membranes</li> <li>• Fruit Juice Clarification</li> <li>• Wastewater Treatment</li> <li>• Bio-Separations</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of engineering.</p>
<b>Dept. of Civil Engineering</b>	<b>Dept. of Computer Science &amp; Engineering</b>
<ul style="list-style-type: none"> <li>• Ground Improvement Techniques</li> <li>• Soil Dynamics and Geotechnical Earthquake Engineering</li> <li>• Foundation Systems for High- Rise Structures</li> <li>• Remote Sensing &amp; GIS</li> <li>• GIS-based hydrological modelling</li> <li>• Soft computing techniques</li> <li>• Watershed modelling</li> <li>• Solid Waste Management</li> <li>• Environmental Geo-technics</li> <li>• Constitutive Modelling of Materials</li> <li>• Smart Materials and smart composites</li> <li>• Concrete Materials Characterization</li> <li>• Structural Health Monitoring</li> <li>• Impact of climate change on hydrological extremes</li> <li>• Surface Hydrology</li> <li>• Integrated watershed management</li> <li>• Fracture mechanics- Crack propagation analysis</li> <li>• Unsaturated Geomaterials</li> <li>• Thermal properties of soils</li> <li>• Sensors for soil crack monitoring</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of engineering.</p>	<ul style="list-style-type: none"> <li>• Machine Learning for language, vision and control</li> <li>• Text/ Web Mining</li> <li>• Parallel and Distributed Algorithms</li> <li>• Randomized and Approximation Algorithms</li> <li>• Educational Data Mining</li> <li>• Deep Learning for Vision and NLP</li> <li>• Query Optimization for Big Data Computing</li> <li>• Privacy Preserving Data Mining</li> <li>• Big Data Analytics</li> <li>• Soft Computing</li> <li>• Cryptography &amp; Information Security</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of engineering.</p>

<b>Department of Electrical Engineering</b>	<b>Department of Electronics &amp; Communication Engineering</b>
<ul style="list-style-type: none"> <li>• Power Electronics (DC - DC converters / High Power Factor converters / Multilevel Inverters)</li> <li>• Electric Drives (IM, PMSM, SRM, SynRM)</li> <li>• Design of Electric Machines</li> <li>• Renewable Energy and Microgrids (Off-grid / grid connected)</li> <li>• Hybrid and Electric Vehicles</li> <li>• Electric Vehicle Charging Infrastructure</li> <li>• Smart Grids Technologies and Integration</li> <li>• Artificial Intelligence &amp; Machine Learning applications in Energy Systems / Power Systems</li> <li>• Modern Power Systems (Operation / Stability / Control / Optimization / Security)</li> <li>• DSP / FPGA based Real -Time Embedded Systems</li> <li>• Assistive Technologies</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of engineering.</p>	<ul style="list-style-type: none"> <li>• VLSI Signal Processing</li> <li>• Microwave/Millimeter wave Filters</li> <li>• High Power Microwave Devices</li> <li>• Vacuum Electron Devices.</li> <li>• UAVs for wireless networks</li> <li>• Distributed sensor networks</li> <li>• Data fusion in IoT</li> <li>• Resource Allocation in Wireless Networks,</li> <li>• Information Theory, and</li> <li>• Theory of Error Control Codes.</li> <li>• Antennas</li> <li>• Microwave/ Millimeter Wave Sensors</li> <li>• Microwave/Millimeter Wave Circuits</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of engineering.</p>
<b>Department of Mechanical Engineering</b>	<b>Dept. of Metallurgical &amp; Materials Engineering</b>
<ul style="list-style-type: none"> <li>• IC Engines</li> <li>• Emissions Control</li> <li>• Refrigeration and Air-Conditioning</li> <li>• Energy Efficient Buildings</li> <li>• Renewable Energy</li> <li>• Alternative fuels</li> <li>• Energy Systems</li> <li>• Alternative Energy Systems</li> <li>• Manufacturing (Forming and Casting)</li> <li>• Advanced and Smart Materials (Ni, Ti, Steels and other materials) for Mechanical, Thermal and Electrical Applications</li> <li>• Development and Properties evaluation of Metal Matrix</li> <li>• Composites</li> <li>• Development and Properties evaluation of Polymer Matrix composites and Carbon - Carbon Composites</li> <li>• Advanced Materials</li> <li>• Additive Manufacturing</li> <li>• Advanced Machining Technologies</li> <li>• Manufacturing processes</li> <li>• Modelling and Simulation of Mechanical Systems</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of engineering.</p>	<ul style="list-style-type: none"> <li>• Welding Metallurgy</li> <li>• Corrosion of Welds</li> <li>• High Temperature Materials</li> <li>• Composite Materials</li> <li>• Powder Metallurgy</li> <li>• ODS Steels</li> <li>• Materials Characterization</li> <li>• Energy (battery) materials</li> <li>• Carbon nanostructures</li> <li>• Biomaterials</li> <li>• Nano Technology</li> <li>• Material Genome Engineering</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of engineering.</p>

<b>Department of Mathematics (School of Sciences)</b>	<b>Department of Physics (School of Sciences)</b>
<ul style="list-style-type: none"> <li>• Wave Mechanics</li> <li>• Elasto-dynamics</li> <li>• Differential Equation</li> <li>• Mathematical Physics</li> <li>• Dynamical Systems</li> <li>• Thermoelasticity</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of Science.</p>	<ul style="list-style-type: none"> <li>• Experimental Condensed Matter</li> <li>• Strongly Correlated Electron Systems</li> <li>• Multifunctional Properties of Magnetic Oxides</li> <li>• Magnetism and Superconducting properties of bulk and thin films.</li> <li>• Multifunctional Properties of Bulk and Thin films of Heusler Compounds</li> <li>• Optical and Photonic Materials</li> <li>• Growth of Single crystals</li> <li>• Luminescent glasses</li> <li>• Nano Phosphor materials for white LED applications</li> <li>• Materials for Energy harvesting Applications</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of Science.</p>
<b>Department of Chemistry (School of Sciences)</b>	
<ul style="list-style-type: none"> <li>• Synthetic methodologies</li> <li>• Peptide and polysaccharide based nanostructured materials</li> <li>• Molecular self-assembly</li> <li>• Corannulene chemistry</li> <li>• Synthesis of novel antimicrobial agents.</li> <li>• Glyconanoparticles</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of Science.</p>	
<b>Department of English (School of Humanities &amp; Management)</b>	<b>Department of Management (School of Humanities &amp; Management)</b>
<ul style="list-style-type: none"> <li>• African American Theatre</li> <li>• First Nations Theatre</li> <li>• Diaspora Studies</li> <li>• Gender Studies</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to this branch of Humanities.</p>	<ul style="list-style-type: none"> <li>• Human Resources</li> <li>• Finance</li> <li>• Operations</li> <li>• Public Relationship</li> <li>• Marketing</li> <li>• All other fields of Management</li> <li>• Data Analytics</li> <li>• Business Analytics</li> </ul> <p>* Any other research topic of the candidate and the guide's interest pertaining to the branches of Management.</p>

**PROCEDURE FOR PAYMENT OF APPLICATION FEES**

- GO TO: <https://www.onlinesbi.com>
- Select "SB Collect"
- Accept Terms & Conditions
- Proceed
- Select State - Andhra Pradesh
- Select type of institute - Educational Institutions
- Go
- Drop down - Select "**NIT AP FEE A/c**"
- Submit
- Select Payment category -
- Fill the details
- Select Payment Category-(Rs. 1000 for GEN/OBC/EWS and Rs.500 for SC/ST/PwD Candidates)
- Proceed

**Save the fee payment receipt and keep it for future references.**