

# Information Brochure

Ph.D. Admissions  
for  
Academic Session 2012-13



**Motilal Nehru National Institute of Technology Allahabad**  
**Allahabad-211004 (India)**

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- ☞ **The candidates are advised to read information brochure carefully and visit our website [www.academics.mnnit.ac.in/admission](http://www.academics.mnnit.ac.in/admission) regularly for updates.**
- ☞ **For On-campus physical reporting on 14.7.2012 a candidate has to register with a fee of**
  - ₹ 8,600/- for Ph.D. (Full-time: Institute Research Scholar)
  - ₹ 6,638/- for Ph.D. (Self Finance)
- ☞ **In case of any legal dispute the jurisdiction will be limited to Allahabad courts only (Lower, District and High Court) and will not be subject to the jurisdiction of any other courts outside Allahabad.**

## 1. PROGRAMMES OFFERED

The Institute admits more than 800 students to undergraduate programmes and 500 students to postgraduate programmes every year. Students from other countries such as Sri Lanka, Nepal, Bangladesh, Mauritius, Bahrain, Malaysia, Iran, Yemen, Iraq, Bhutan, Syria, Palestine, Mongolia, Ireland, Indonesia and Thailand also join MNNIT for these programmes.

The Institute offers following Ph.D. programmes in various departments:

### 1.1. Ph. D. programmes

All the departments offer full time and part time doctoral programmes under following categories. The course code is also given in the table below:

Description	Course Code	Description	Course Code
<b>Full-time research students:</b>		<b>Part –time research students</b>	
Institute research scholar (stipendiary)	11	Faculty/Staff and Project staff of MNNIT Allahabad	21
Sponsored candidates	12	Sponsored candidates	22
Self financed (Indian/Foreign/ Study Leave) candidates	13	Self financed candidates	23
Indian Council for Cultural Relations (ICCR) and other agencies awardees (foreign nationals).	14	Candidates registered under collaborative research programme between MNNIT and other University, R&D organization in India or abroad.	24

#### 1.1.1 Full-time research students

##### i. Institute research scholar (stipendiary) (Course Code - 11):

Full-time Stipendiary research scholars are eligible for financial assistance in the form of teaching or research assistantships (referred to as Institute Assistantships). The Assistantship shall be awarded to Ph.D. students on a semester-to-semester basis for a period of up to six semesters and is extendable by two semesters on the recommendation of DPGC and SPGC. Such students are expected to devote at least eight hours per week towards job(s) assigned to them by the department, which may include class work, evaluation of answer books or any other job as assigned by the Department/Institute. The renewal of assistantship is dependent on the satisfactory student's academic performance and discharge of duties as assigned to him/her by the department.

A student on teaching/research assistantship is also reimbursed a contingency expense as per the approved terms and procedures to be notified from time to time by the Institute. The reimbursement is done twice annually during the period of assistantship.

**Wherever the eligibility qualification is Master's degree in Science or Commerce or Economics or English or any subject of Humanities or Life Sciences or Management, qualifying NET is must for getting Institute Fellowship as per letter F.No. 25-2/2010-TS.II, dated 30.09.2010 and subsequent modifications which may be issued by MHRD from time to time.**

##### ii. Sponsored candidates (Course Code - 12):

QIP and Sponsored full time students usually receive financial support from Govt./Semi Govt. schemes/Organisations such as CSIR, AICTE, UGC, DAE, DST, DBT, NBHM, etc. and recognized R&D organization for doing research work in the Institute. Candidates in service are to be released from the organisation for full time research work at the Institute and must furnish a sponsorship certificate from the employer. They shall not receive any financial support from the Institute in any form.

##### iii. Self financed (Indian/Foreign/Study Leave) candidates (Course Code - 13):

a. **Indian:** Such category of students are admitted along with the regular research students through the common admission procedure. They do not get financial support in any form from the Institute. These candidates shall be available full time in the Institute and may be using the facilities in the department as and when allowed.

b. **Foreign:** These students are admitted through Embassy of their countries after getting approval from the Ministry of External Affairs, the Ministry of Home Affairs and the Ministry of Human Resource and Development, Government of India.

c. **Study leave:** This category refers to the students who are not sponsored but released from Government Departments or educational Institutions on study leave or extraordinary leave for a period not less than the minimum specified period for doing research work at the Institute. However, a No Objection Certificate from employer should be produced at the time of joining.

Self financed Candidates do not get any stipend, however all other conditions related with admission & academic performance requirements will remain same as that for a stipendiary candidate. Such candidates are not eligible for hostel accommodation in the campus.

- iv. Indian Council for Cultural Relations (ICCR) and other agencies (foreign nationals) (Course Code - 14):**  
These students are sponsored by their Governments and awarded scholarship by Govt. of India, ICCR and other such agencies/organization. They should apply for admission through Indian Embassy in their country.

**1.1.2 Part-time research student**

Candidates working in the R & D institutions or in other recognized institution/organization, who wish to apply under part-time category, are required to route their applications through their organization clearly stating that: -

- (i) Their organization/institute is equipped with the necessary research and library facilities.
- (ii) The candidate is in employment with the sponsoring organization for the last 2 years (counted upto time of admission / registration).

The employer must undertake to relieve the candidate, to stay on the campus to enable the candidate to complete the “course work”, “Comprehensive” and “State of Art” seminar.

All the candidates admitted under this Category must fulfill one semester residential requirement at the Institute preferably for course work.

**i. Institute Faculty/Staff and Project staff of MNNIT Allahabad (Course Code - 21):**

This category refers to the students who are employees of the Institute and are admitted to the Ph.D. programme.

**Project staff** are those candidates who are working on the various projects undertaken by the Institute and are admitted to the Ph.D. Programme.

**ii. Sponsored candidates (Course Code - 22):**

- a. Any candidate admitted under this category will be at par with Full-time Sponsored candidates for the payment of fees.
- b. These candidates must fulfill one semester of residential requirement at the Institute. These candidates will have one supervisor from the Institute (Internal) and the other from their parent organization (External). While the requirement of Institute supervisor is a must, the external supervisor is optional depending on the availability.

Those candidates who are from such organizations/institutes where adequate laboratory facilities are not available (as assessed by the supervisor at MNNIT Allahabad), are required to spend a minimum of 60 days at MNNIT Allahabad, for completing research/laboratory work during the entire programme. These 60 days are additional to the residential requirement of one semester.

**iii. Self-financed candidates (Course Code - 23):**

Candidates admitted under this category will be at par with Full-time Self-financed candidate for the payment of fees. However, for foreign candidates except the change in the tuition fee other components of the fee structure will be applicable. The candidates of this category will be governed by the **Clause 1.3.2. ii. (b) for Sponsored candidates.**

**iv. Candidates registered under collaborative research programme between MNNIT and other University, R & D organization in India or abroad (Course Code - 24):**

Candidates working in approved Indian/ Foreign educational institutes or recognized R&D organizations, which are equipped with the necessary research and library facilities, may be considered for admission to the Ph.D. programme in engineering and management. The educational institutes located in India must be approved by AICTE. The students of this category will be governed by the **Clause 1.3.2. ii. (b) for Sponsored candidates.**

**2. Eligibility for Admission**

- (i) **The eligibility conditions given below are the absolute minimum. Departments may prescribe any other requirements over and above the absolute minimum, subject to the approval of the SPGC.**

- (ii) The “specified minimum” marks/CPI (Cumulative Performance Index), referred to in subsequent sections, implies a minimum of 60% aggregate marks or equivalent CPI for Ph.D. at qualifying examination. For SC/ST candidates eligibility in specified minimum marks is relaxed to 55% or equivalent.

- (iii) **Ph.D. in Engineering**

The applicant must have Master’s Degree in Engineering/Technology with a minimum of 60% marks or equivalent CPI. For SC/ST candidates eligibility in specified minimum marks is relaxed to 55% or equivalent.

**OR**

Applicant with Bachelor’s Degree in Engineering with minimum 75% or equivalent CPI (70% marks or equivalent for SC/ST candidates) will only be considered for admission.

**OR**

Applicant with Master’s degree in Applied Sciences or any appropriate discipline with First Class with NET/UGC/CSIR/GATE or any other equivalent qualifying score shall be considered for admission. However in case of exceptionally qualified candidate the requirement of NET/UGC/CSIR etc may be waived off, but such candidates will not be entitled to get fellowship.

(iv) **Ph.D. in Management**

Applicants must have Master's Degree in Management/Technology/Engineering/Economics/Commerce/Science/Computer Applications/Social Science with a minimum of 60% marks or equivalent.

**OR**

A qualified Chartered Accountant having minimum three years of professional experience as practicing Chartered Accountant with a minimum of 60% marks at both graduation, as well as CA examination.

**OR**

Applicants with Bachelor's degree in Engineering with a minimum of 75% marks or equivalent CPI (70% or equivalent for SC/ST candidates) shall only be considered for admission.

In case of SC/ST candidates, eligibility in specified minimum marks will be relaxed by 5% over the minimum prescribed percentage in the eligibility criteria.

(v) **Ph.D. in Physics, Chemistry, Mathematics, Humanities and Social Sciences (HSS)**

Applicants must have a Master's degree in the relevant subject with a minimum of 60% Marks or equivalent. For SC/ST candidates eligibility in specified minimum marks is relaxed to 55%.

**OR**

Applicants with Bachelor's degree in Engineering or in an allied field of HSS with marks not below 75% or equivalent (70% marks or equivalent for SC/ST candidates).

(vi) **Ph.D. in GIS Cell**

M. Tech. or equivalent in GIS & Remote Sensing/Civil Engineering/Comp. Sc.& Engineering/Information Technology/Agricultural Engineering/Mining Engineering or M.Sc. degree in GIS & Remote Sensing/Applied Geology/Geophysics/Geography/Environmental Science/Computer Science or degree in Master of Computer Application. For SC/ST candidates eligibility in specified minimum marks is relaxed to 55%.

**Wherever the eligibility qualification is Master's degree in Science or Commerce or Economics or English or any subject of Humanities or Life Sciences or Management, qualifying NET is must for getting Institute Fellowship as per letter F.No. 25-2/2010-TS.II, dated 30.09.2010 and subsequent modifications which may be issued by MHRD from time to time.**

**3. Department wise eligibility requirement and area of research for admission to Ph.D. programmes**

S. No.	Department/Cell/Centre	Eligibility qualification	Area of research
A.	Applied Mechanics	M.Tech. or Equivalent degree in Mechanical Engg., Civil Engg., Metallurgical Engg., Material Science, Applied Mechanics, Fluid Engg., Aeronautical Engg., Chemical Engg., Marine Engg., Naval Engg., Production Engg., Biomedical Engg., /M.Sc. or equivalent degree in Physics/Mathematics (in the area relevant to the department as mentioned in last column-Areas of Research)	Solid Mechanics, Computational Mechanics, Composite and smart structures, stability and dynamics of structures, Advanced Engineering Materials, Robotics and Mechanisms, Fluid Mechanics and machines, Multiphase Flow, Computational fluid dynamics, Biomechanics and MEMS.
	Biotechnology (Under Applied Mechanics)	M.Tech. (Biotechnology), Bioinformatics and Biochemical Engg. Or M.Sc. in Biotechnology or MSc. In Applied Biological Science such as Microbiology, Biochemistry, Genetics, Molecular Biology, Pharmacy and Biophysics.	Molecular Biology, Microbiology, Environmental Biotechnology, Agricultural Biotechnology, immunology and Bioprocess development.
B.	Civil Engineering	M.Tech. or Equivalent degree in Aeronautical Engineering Architectural Engineering, Civil, Chemical Engineering, M.Sc. Environmental Science or Equivalent	Structural Engineering, Geotechnical Engineering, Environmental Engineering, Transportation Engineering, GIS, Environmental Geo-technology, Remote Sensing, Water Resources Engineering
C.	Computer Science & Engineering	M.Tech. or equivalent degree in Computer Science & Engineering, Software Engineering, Information Technology, Electrical Engineering Electronics Engineering Electronics and Communication Engineering.	Data Base, Software Engineering, Mobile Computing, Parallel Computing, Computer Architecture, Computer Networking, Theoretical Computing, Computer Algorithm, Data mining, Knowledge Based System, Real Time System, Distributed Computing.
D	Electrical Engineering	M.Tech. or Equivalent degree in Electrical Engineering, Electronics and Communication Engineering, and Electronics Engineering	Control Systems and Mathematical Modeling, Nonlinear Systems, Model Reduction, Fuzzy Logic, Neural Networks, AI in Power System, Wireless Sensor Networks, Power Electronics, Transmission Systems & FACTS, Distribution System and Custom Power Devices, Distributed Generation & Control, Power Quality, Modern Electrical Drives, Instrumentation Systems, Biomedical Instrumentation, Virtual

S. No.	Department/Cell/Centre	Eligibility qualification	Area of research
			Instrumentation, Power System Protection.
E	Electronics & Communication Engineering	M.Tech. or Equivalent degree in Electrical Engineering, Electronics Engineering, Electronics and Communication Engineering	Data Communication and Networking, Optical Communication, Digital Signal Processing, Image Processing, Mobile and ATM Network, Analog and Digital Circuits.
F	Mechanical Engineering	M.Tech. or Equivalent degree in Mechanical, Aeronautical, Automobile, Chemical, Production, Metallurgical Engineering, Industrial Engineering.	Thermal Science (Heat Transfer, Energy Conversion, Refrigeration and Air Conditioning), Turbo Machines, CAD/CAM/FMS, Fatigue and Fracture Mechanics, Unconventional Manufacturing Processes, Metal Cutting, Metal Forming, Noise and Vibrations, Industrial Engineering, Rapid Prototyping and Reverse Engineering, Knowledge Management.
	Chemical Engineering (Under Mech. Deptt.)	M.Tech. or equivalent degree in Chemical Engineering, Petroleum Studies, Environment, Biotechnology	Separation Processes, Heat Transfer, Mass Transfer, Chemical Reaction Engineering, Modeling and Simulation, CFD, Energy Conversion.
	Centre of Energy Studies (under Mechanical Engineering Department)	M.Tech. or Equivalent degree in Mechanical, Aeronautical, Automobile, Chemical, Production, Metallurgical Engineering	Non-Conventional Energy Resources Management, Thermal System Design
G	Chemistry	M.Sc. in Chemistry/ Applied Chemistry with 60% marks (55% or equivalent for SC/ST candidates). For interdisciplinary field of research Master degree in any discipline of Sc. with 60% marks, M.Tech., B.Tech. 75% marks (70% or equivalent for SC/ST candidates).	Organo-metallic material chemistry, Polymers, Environmental Chemistry, Nano-Technology, Nano-Chemistry, Bio-Inorganic, Photo-Chemistry, Drug delivery, Co-ordination chemistry
H	Humanities and Social Sciences	M.A. English or Psychology/ MBA/MSW with 60 % aggregate marks or equivalent CPI (55% or equivalent for SC/ST candidates).	Commonwealth Literature, Psychology : Organisational Behavior, Social Psychology, Industrial Psychology, Entrepreneurship, British Literature, American Literature, English Language Speaking and Human Resource Management, Rural Economics, Allied Social Sciences, Accounting and Financial Management.
I	Physics	M.Sc. in Physics / M.Tech. in appropriate branch of Engineering or equivalent with 60% aggregate marks or equivalent CPI (55% or equivalent for SC/ST candidates).	Condensed Matter Physics/ Solid State Physics, Solid State Gas Sensors, Carrier Transport in Thin Films, Interface States Studies in Semiconductor Devices, Characterization of Materials, Nonlinear Dynamics, Spectroscopy of Nano-Materials and CNTs, Quantum Chemistry & Bio-Physics, Magnetic Materials, Solar Photovoltaics.
J	School of Management Studies	Master Degree in Management/ Technology/ Engineering/Economics / Commerce/ Science/ Computer Applications/Social Science with minimum of 60% marks or equivalent (55% or equivalent for SC/ST candidates) or Bachelors degree in Engineering with a minimum of 75% marks or equivalent CPI (70% or equivalent for SC/ST candidates). Note: The Department will not be offering admissions under Part-time research category.	Marketing Human Resource, Finance, Systems Management, Strategic Management, Operations Management, International Business.
K	GIS Cell	M. Tech. or equivalent in GIS & Remote Sensing/Civil Engineering/ Comp. Sc.& Engineering/ Information Technology/ Agricultural Engineering/ Mining Engineering or M.Sc. degree in GIS & Remote Sensing/ Applied Geology/ Geophysics/ Geography/ Environmental Science/ Computer Science or degree in Master of Computer Application.	Geoinformatics (Core and Applications)

Wherever the eligibility qualification is Master's degree in Science or Commerce or Economics or English or any subject of Humanities or Life Sciences or Management, qualifying NET is must for getting Institute Fellowship as per letter F.No. 25-2/2010-TS.II, dated 30.09.2010 and subsequent modifications which may be issued by MHRD from time to time.

#### Important Note:

- Only deserving candidates with B.Tech./MCA or equivalent degree with 75% aggregate marks or equivalent (70% or equivalent for SC/ST candidates), may be considered for admission to Ph.D. programmes as mentioned above.
- Number of seats in each department will depend upon the availability of Supervisor in that department.
- Preference will be given to SC/ST candidates otherwise found eligible.

#### 4. Fee structure

##### (a) Institute Fee

Particulars	1st Semester	All Intermediate Semester		Last Semester
		Even	Odd	
Ph.D. Regular	₹ 8,600/-	₹ 4,725/-	₹ 4,825/-	₹ 6,925/-
Ph.D. Self Finance	₹ 6,625/-	₹ 2,750/-	₹ 2,850/-	₹ 4,750/-

##### (b) Mess charges

Hostel Mess charges for the Ph.D. first semester is ₹ 10,000.00 and required to be deposited **at the time of registration** in the form of demand Draft in favour of “**Chief Warden MNNIT, Allahabad**” payable at **Allahabad**. However the mess charges may change and the same will be informed to the students.

#### 5. Application Procedure

Eligible candidates are required to download the application form from our Institute website [www.mnnit.ac.in](http://www.mnnit.ac.in). Dully filled-in and signed application form along with a demand draft of ₹ 1000/- (₹ 500/- for SC/ST) in favour of **Director, MNNIT** payable at **Allahabad** must reach **The Admission Cell, Office of the Dean (Academic), Motilal Nehru National Institute of Technology Allahabad, Allahabad – 211004** latest by May 25, 2012 up to 5.30 PM.

To download the Application Form click here - > [\[DOC\]](#) [\[PDF\]](#)

**Note:** A candidate willing to apply for more than one programme in different department has to apply separately with a demand draft of ₹1000/- (₹500/- for SC/ST) for each programme.

#### 6. Admission Criteria

Admission will be based on written examination and interview. Name of shortlisted candidates will be displayed on the Institute website on 05.6.2012 with the details of written examination / interview to be conducted by Admission Cell/Examination Cell in association with respective departments. Tentative schedule of the written examination / interview for different departments are given in section 7.

##### Important Notes:

- Separate application forms** must be filled for courses offered by different departments along with the prescribed fee. However, separate fee is not to be paid for separate courses offered by the same department.
- No separate letter will be sent by the institute for attending the test/interview/Counseling.
- Candidates are advised to visit the Institute website [www.mnnit.ac.in](http://www.mnnit.ac.in) for regular update.
- The name of the short listed candidates shall also be displayed on the Notice Board of the Departments. The written examination and/or counseling will commence from 10.00 A.M.
- No candidate shall be considered for written examination / interview without the result of the qualifying examination. If selected, such candidates will be allowed to join the programme provisionally, only if he/she submits a certificate on the dated of written examination / interview from the Principal/Registrar of his/her College/Institute stating that the candidate has completed all the requirements for obtaining the qualifying degree on the date of the issue of the certificate. However, mark sheet of qualifying examination with requisite marks or equivalent CGPA must be submitted to the office of Dean (Academic) on or before the first week of September 2012, failing which will lead to cancellation of admission.

#### 7. Tentative Counseling schedule Ph.D. Programme

Date	Department/Cell/Centre
05.06.2012	Display of short listed candidates on MNNIT Website
21.06.2012	Written Examination and Interview for Ph.D. in the departments of Mechanical Engineering, Civil Engineering, Computer Science & Engineering, Physics, Electrical Engineering, Humanities and Social Sciences.
22.06.2012	Written Examination and Interview for Ph.D. in the departments of Applied Mechanics, Mathematics, Centre of Energy Studies, Electronics and Communication Engineering, Chemistry, School of Management Studies and in GIS Cell
29.06.2012	Declaration of final result for Ph.D. on Institute website
25.07.2012	Commencement of classes

The name of the short listed candidates shall also be displayed on the Notice Board of the Departments. The test and/or counseling will commence from 10.00 A.M.

## 8. Documents required

- (i) The candidates are required to bring following documents **at the time of written examination/interview:**
- High School Certificate in original.
  - Mark sheets of qualifying examination in original.
  - Character Certificate issued by the Head of the institution last attended.
  - Certificate of sponsorship (if applicable).
  - No. Objection certificate from employer (if applicable).
  - OBC/SC/ST/PH certificate, if applicable.
  - Certificate of OBMC (for a sub-quota of 4.5% for minorities within the 27% reservation for OBCs)
- (ii) The candidates are required to bring following documents **at the time of registration i.e. on 14.7.2012:**
- Passport size Photographs (5 Nos.).
  - One set of attested copies of all the above documents listed in section 8 (i) above.
  - Admission letter

- Note:**
- The institute reserves the right to refuse admission to any candidate without assigning any reason. All disputes are subject to Allahabad High Court only.
  - The number of seats may vary without prior notice.

## 9. Important dates

Download of Application Form	17.04.2012
Last date for receipt of the printed and signed application form	25.5.2012 up to 5.30PM
Display of short listed candidates	05.06.2012
Written examination and interview for Ph.D.	21.6.2012 to 22.6.2012
Declaration of result for Ph.D.	29.06.2012
Registration of Ph.D. candidates	14.07.2012
Commencement of classes	25.07.2012

## 10. Admission Fee for selected candidates

(a) **Ph.D.**

Selected candidates for Ph.D. programmes, whose names will be displayed on Institute website on 29.06.2012 will be required to deposit a non-refundable admission fee as a Demand Draft **in favour of "Director MNNIT Allahabad" payable at Allahabad before 13.7.2011**, of amount given below:

- ₹ 8,600.00 for stipendiary / full-time and
- ₹ 6,625.00 for Self Finance/Off-campus in favour of Director MNNIT Allahabad payable at Allahabad.

Admission fee is not refundable in any case whatsoever. The balance fee, if any, is to be deposited at the time of registration.

## 11. Address to send the application form

**The filled up and signed application form along-with demand draft should be dispatched/submitted at the following Address so as to reach on or before 25.5.2012 up to 05.30 PM:**

Admission Cell  
Office of the Dean (Academic)  
Motilal Nehru National Institute of Technology Allahabad  
Allahabad-211004  
Phone: Office: (0532) 227-1109, 227-1110; Fax: (0532) 2445101  
Email ID: admissions@mnnit.ac.in