

## ABOUT THE INSTITUTE

The Institute was established as Motilal Nehru Regional Engineering College in the year 1961 as a joint enterprise of Government of India and Government of U.P. in accordance with the scheme of establishment of REC and was later upgraded as a National Institute of Technology with the status of Deemed University on June 26, 2002. Now, this Institute is known as Motilal Nehru National Institute of Technology Allahabad.

The foundation stone of the Institute was laid by the first Prime Minister of India, Pt. Jawaharlal Nehru on the May 3, 1961 on a site spreading across 222 acres on the bank of the river Ganga. The main building of the Institute was inaugurated by another illustrious son of India, Prime Minister Sri Lal Bahadur Shastri on April 18, 1965.

The Institute has very good infrastructure with state-of-art facilities in all the departments for teaching and research. Institute offers 9 Nos. UG and 22 Nos. PG programmes besides MBA, MCA, M.Sc.in Mathematics and Scientific Computing, and Masters in Social Work. Doctoral programmes are offered in various disciplines of Technology, Science, Humanities and Management. It is one of the leading NITs across the Country. The students are extensively exposed to cross-cultural environment as candidates from other countries, like, Nepal, Sri Lanka, Bhutan, Bangladesh, Malaysia, Iran, Iraq, Thailand, Yemen, Palestine etc also join this Institute for different disciplines of UG and P.G.programmes.

## ABOUT THE DEPARTMENT

The Department of Civil Engineering offers one Bachelor of Technology and four Master of Technology courses with specialization in Structural, Environmental, Geotechnical Engineering, and Environmental Geo-technology on regular basis. It also offers part-time Master of Technology course with specialization in Structural Engineering, and Computer Aided Design in Civil Engineering depending upon the number of candidates. Further, the department is a recognized QIP Centre for the post-graduate studies. A strong foundation is laid through courses on structural

Engineering, Geotechnical Engineering, Environmental Engineering, Transportation Engineering, Water Resources and Computer Applications. The theoretical courses are supplemented by practical's through well-equipped laboratories.

## ABOUT ALLAHABAD

Allahabad city is situated on the confluence of the three most pious rivers namely Ganga, Yamuna and mythological Saraswati. The city is well connected with Railways, Roadways, and Airways. It is situated on Delhi- Howrah rail link and NH-2. The local transport is available in the form of Taxies, Buses, Auto - Rickshaws and Rickshaws.

## COURSE OBJECTIVE

Computational techniques have become an essential part to solve the engineering problems. Numerical and optimization techniques are important computational tools for conducting research and development in engineering sciences. The proposed short term course presents traditional as well as advanced numerical and optimization methods. It also highlights successful applications in various real areas. The course modules are framed for the participants without a strong background in the field. The prime objective of the short term course is to familiarize the participants with basic as well as state of the art of theory and applications of numerical and optimization techniques.

## HIGHLIGHTS& COURSE CONTENT

Finite difference, Finite volume and Finite element methods for linear and non-linear systems  
ANN, Fuzzy, SVM and Hybrid Intelligent methods  
Basics of Optimization techniques  
Constrained and unconstrained optimization with linear and non-linear programming methods  
Genetic algorithm/Evolutionary techniques/SA/PSO  
Multi-objective optimization  
NSGA –II  
Fuzzy optimization  
- Case studies and demonstrations of applications numerical and optimization techniques for various engineering problems

## Self Financed Short Term Course

### on NUMERICAL AND OPTIMIZATION TECHNIQUE (NOT-2014)

**Oct. 31- Nov. 04, 2014**

#### Patron

Prof. P. Chakrabarti  
Director

#### Chairman

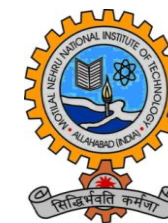
Prof. A.K. Sachan  
Head, Department of Civil Engineering

#### Convener

Prof. S.K.Duggal  
Department of Civil Engineering

#### Course Coordinators

Dr. R. M. Singh  
Dr. N. R. Rawal  
Dr. K. Pallav



Organized by

**Department of Civil Engineering  
Motilal Nehru National Institute of Technology  
Allahabad-211004, India**

## ORGANIZING COMMITTEE

Patron: Prof. P. Chakrabarti  
Director, MNNIT, Allahabad

Chairman: Prof. A. K. Sachan  
Professor & Head, CED

Convener: Prof. S.K.Duggal, CED

Coordinators: Dr. R. M. Singh  
Associate Professor, CED  
Dr. N.R.Rawal  
Assistant Professor, CED  
Dr. K. Pallav  
Assistant Professor, CED

Treasurer: Dr. N.R.Rawal

## IMPORTANT DATES

Last date of receipt of Application: Oct.25, 2014  
Intimation of selection by E-mail/direct contact:  
Oct.26, 2014

## ADDRESS FOR CORRESPONDENCE

**Dr. R. M. Singh**, Coordinator  
Deptt. of Civil Engineering, MNNIT, Allahabad  
Pin-211004 (India) ; Mob. No: +91-9839506133,

**Dr. N.R.Rawal**, Coordinator  
Deptt.of Civil Engineering, MNNIT, Allahabad  
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**Dr. K. Pallav**, Coordinator  
Deptt.of Civil Engineering, MNNIT, Allahabad  
Pin-211004 (India) ;Mob. No: +91-9532330320,

**E-Mail: not2014.mnnit@gmail.com**

## RESOURCE PERSONS

Senior faculty members from MNNIT Allahabad, IITs, NITs and other reputed Institutes will deliver lectures besides the reputed structural consultants.

## COURSE MATERIAL

Course material will be provided to the participants in CD-ROM

## BOARDING AND LODGING

Boarding, lodging and travel expenses shall be borne by the participants. Limited shared accommodations may be available in the Executive Development Centre of the Institute on first come first served basis. Good Hotels are also available in Allahabad. Participants may contact directly or through the Coordinator(s) for the accommodation in these hotels.

## VENUE

The course will be conducted in the Conference Room of the Civil Engineering Department, MNNIT, Allahabad. The inaugural is scheduled at 10:00 AM on Oct. 31, 2014.

## ELIGIBILITY

Faculty members from the AICTE recognized Academic Institutions/Universities and Field Engineers possessing minimum qualification as Bachelor Degree in Engineering are eligible to apply.

## REGISTRATION FEE

Registration Fee under three categories is given as:  
(A) Faculty from Academic Institutes ₹ 4,000.00  
(B) Students ₹. 2,000.00  
(C) Architects/Engineers/Professionals ₹. 5,000.00

Registration fee includes Breakfast, Lunch, Dinner, and Course Kit. Hard copy of filled and signed registration from Duly forwarded by Director/Dean of the Institute/HOD should be sent to the coordinators on or before Oct.25, 2014 along with the fee as per the above mentioned category through Demand Draft in favour of "NOT -2014" payable at Allahabad. Scanned copy of the filled up form may be emailed to convener/coordinator(s) in advance.

## REGISTRATION FORM

### Personal Details:

1. Name (Mr./Ms./Dr.):
2. Designation:
3. Highest qualification:
4. Specialization:
5. Organization:
6. Department:
7. Date of Birth:
8. Registration Fee Category (A/B/C):
9. Address for Communication

Pin: \_\_\_\_\_ Phone: \_\_\_\_\_  
Fax No. \_\_\_\_\_ Email: \_\_\_\_\_

### Payment Details:

Demand Draft No. \_\_\_\_\_ Date \_\_\_\_\_

Drawn on  
Amount (Rs)

DD should be drawn in favour of "NOT-2014" payable at Allahabad.

**Signature of Applicant**

### CERTIFICATE

This is to certify that Mr./Ms./Dr./Prof. \_\_\_\_\_ is a student/employee of our Institute and is permitted to attend the Short Term Course on "Numerical and Optimization Technique (NOT-2014)" to be held at your Institute during Oct. 31- Nov. 04, 2014.

**Signature of Employer**