

### Chief Patron

*Prof. Rajeev Sangal*

Director, IIT(BHU), Varanasi

### Patrons

*Prof. P. K. Jain, Dean (R&D), IIT(BHU)*

*Prof. G.V.S. Sastry, Dean (AA), IIT(BHU)*

*Prof. B. K. Srivastava, Chairman, QIP Cell*

### Chairman

*Prof. L.P. Singh*

Head, Department of Mathematical Sciences, IIT (BHU) Varanasi

### Course Coordinators

*Dr. Rajesh K. Pandey & Prof. L. P. Singh*

### Convener

*Prof. S. K. Pandey*

### Organising Secretaries

*Dr. S. K. Upadhyay & Dr. V. K. Singh*

### Organising Committee

Prof.(Mrs.) R. Srivastava

Prof. L. P. Singh

Prof. S. K. Pandey

Prof. T. Som

Dr. (Mrs.) S. Mukhopadhyay

Dr. S. K. Upadhyay

Dr. S. Das

Dr. A. Gupta

Dr. Rajeev

Dr. R. K. Pandey

Dr. V. K. Singh

Dr. A. Banerjee

Dr. V.S. Pandey

### About the City

The holy city of Varanasi is known as the city of temples and learning. It is a place of great historical and cultural importance. This religious capital of India is situated on the bank of the holy river Ganges and is famous for temples of Lord Shiva, Buddha (at Sarnath) and Sankat Mochan etc. Varanasi is the premiere most place of oriental learning also. Simultaneously it is keeping pace with modern advanced knowledge. The city is reputed for silk fabrics, perfumes, artistic brass and copper wares and a variety of handicrafts. This vibrant city with multiple dimensions of knowledge and liberation has a magnetic attraction for people all over the world.

### Route to Varanasi

The city of Varanasi is well connected by road, rail and air with all the important places of India. Regular flights are there from Varanasi to Delhi, Mumbai, Chennai, Bangalore, Kolkata, Khajuraho and Lucknow. The Banaras Hindu University campus is only 10 Km from Varanasi railway station, 20Km from Mughalsarai railway station and 35 Km from the airport.

### About the Department

The Department of Mathematical Sciences, IIT (BHU) earlier known as Mathematics / Applied Mathematics has been functioning since 1968. Its importance lies in the fact that it caters to the needs of the undergraduate as well as post-graduate students of the Institute. In addition, the Department runs its own 5 year Dual Degree (B Tech & M Tech) programme in Mathematics & Computing. Computing is the glamour of the Department. It annexes several dimensions in terms of new and growing areas of research and further facilitates simulation of mathematical models constructed for interdisciplinary areas.



### Teaching Faculty

Faculty members from the Department of Mathematical Sciences and other Departments of IIT (BHU) Varanasi will be teaching the course contents. Subject experts from other premier institutions will be invited for delivering the special lectures with tutorial sessions.

### Course Material

Hard / Soft copies of the lecture notes/presentations will be made available to participants at the end of lecture/presentation.

# QIP Short Term Course On Advanced Numerical and Analytical Methods for Engineers and Scientists (NAMES)

January 12-18, 2017



AICTE sponsored Short Term Course

NAMES 2017

Organised by:

Department of Mathematical Sciences,  
IIT- BHU

### Contact Us

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**QIP Short Term Course on  
Advanced Numerical and Analytical Methods  
for Engineers and Scientists  
(NAMES 2017)**

**January 12-18, 2017**

**Introduction and objectives of the course:**

The objective of the course work is to provide the theoretical fundamentals coupled with analytical and practical knowledge of numerical methods to solve various engineering problems of real life applications.

The course contents are focused to solve the problems of the ODEs & PDEs. The convergence and stability analysis of the methods will also be addressed. The approach for solving these problems will be followed by the lab sessions to understand and develop the skill to solve these problems.

Appropriate and carefully selected problems of practical relevance in engineering domains such as mechanical, civil, chemical etc will be solved and the solution techniques will be demonstrated in the tutorial sessions with an aim to consolidate the understandings to be obtained from the theoretical fundamentals.

Programming languages, like, MATLAB / C /FORTRAN along with EXCEL sheet iterative calculations, will be introduced and hands on training sessions will be conducted so that one can be confident in developing their own customized algorithm and numerically solve the linear/nonlinear, steady/transient governing equations coupled with the boundary and/or initial conditions. Participants will be trained to use and interpret the results obtained from the numerical simulations for meaningful analysis which can finally lead to engineering decision

**Tentative List of Resource Persons:**

Prof. L. P. Singh: Mathematical Sciences, IIT (BHU) Varanasi

Prof. S. K. Pandey: Mathematical Sciences, IIT (BHU) Varanasi

Dr. Goutam Dutta: IIITDM Jabalpur

Prof. B. V. Rathish Kumar: IIT Kanpur

Prof. A. K. Mishra: BHU Varanasi

Prof. D. Bahuguna: IIT Kanpur

Dr. R. K. Pandey: Mathematical Sciences, IIT (BHU) Varanasi

**Who Can Attend?** All existing faculty members working in the field of engineering and applied mathematics are primarily targeted for this short duration course work. No course fee is charged for participants sponsored by **AICTE approved institutions**. Participants from Governments Departments and Industries are eligible, provided they meet their T.A. and D.A. and pay a course fee @ Rs. 2500/- and Rs. 5000/-, respectively. The registration fee to be paid in form of DD in favor of "Registrar IIT (BHU) Varanasi" through any nationalized bank and payable at Varanasi. The fee includes a kit containing the study material, tea and snacks.

**How to Apply?**

**By Email** – Scanned copy of the filled in application form duly endorsed by the forwarding authority to be mailed at [names.iitbhu@gmail.com](mailto:names.iitbhu@gmail.com) by Dec. 15, 2016. Application format is given in this brochure. Accommodation and local hospitality will be provided to the selected candidates from AICTE approved institutions in institute guest house/hostels.

**Important Dates:**

**Last Date of Registration: Dec. 15, 2016**

**Intimation of Selection: Dec. 20, 2016**

**Course Dates: January 12-18, 2017**

**Note:** The selected participants have to send a demand draft for Rs. 1000/- drawn on any nationalized bank in favor of "Registrar IIT (BHU) Varanasi" as a caution deposit for confirmation of their participation. The caution money will be returned back only if the participant joins the course.

**Financial Assistance:**

Limited number of Participants (30) from AICTE approved engineering institutions will be eligible for to and fro railway fare via shortest route in III AC class and free lodging and boarding in the Institute guest house/hostels during course period. Candidates attending the course in full only will be eligible for TA. For all other participants no TA will be paid by IIT (BHU) Varanasi.

**Website: [www.iitbhu.ac.in](http://www.iitbhu.ac.in)**

**Application for Registration**

**Advanced Numerical and Analytical Methods  
for Engineers and Scientists  
(NAMES 2017)  
Jan. 12-18, 2017**

1. Name .....
2. a) Age ..... .. b) Sex: M/F .....
3. Designation & pay scale.....
4. Organisation .....
5. Address for correspondence  
.....  
.....  
E-mail:.....  
Phone/Mobile.....
6. Highest Academic Qualification.....
7. Specialisation .....
8. Experience (in years)  
a) Teaching: .....
- b) Industrial. ....
9. Amount of T.A. required as per entitlement mentioned in the brochure (only for AICTE approved college teachers): .....

Please register me for the course on Advanced Numerical & Analytical Methods for Engineers and Scientists(NAMES) to be held at IIT (BHU) Varanasi.

Date.....

Place ..... Signature of the Applicant

**SPONSORSHIP**

Prof./Dr./Mr./Ms./Mrs./..... is an employee of our institute and his/her application is hereby sponsored. The applicant will be permitted to attend the short-term course "Advanced Numerical and Analytical Methods for Engineers and Scientists" at IIT(BHU) Varanasi during date of NAMES, if selected.

Date: Signature of Sponsoring Authority

Designation:

Official Seal:

Date:

Signature of the Applicant