

COURSE OVERVIEW

Mathematics is the language of science and engineering. The mathematical areas such as Differential geometry, Lie groups, Differential equation, Discrete mathematics, Homotopy theory, Graph theory, which were once considered as abstract, now been applied to all and advanced areas of research such as Robotics, Computer vision, Control theory, Fluid dynamics, Image processing, Nanotechnology, Biotechnology, Finance and Economics etc. Keeping this views in mind the present short term course has been designed to give a mathematical introduction of such areas of current research in Engineering and science, so that the Mathematics and Physics faculties of the Engineering colleges and newly inducted faculties of Engineering departments who love to venture in to new areas of research and learn the mathematical intricacies of all applied phenomena, will benefit a lot.

FOCUSED AREAS

The broad outline of the course is as follows:

1. Differential geometry and Lie groups applied to Robotics
2. New methods for solving differential equation in Fluid dynamics
3. Mathematics of Cryptography and Number theory.

4. Computer vision and Projective geometry
5. Mathematical control theory
6. Mathematics of image processing
7. Financial computing

VENUE

The Course will be organized at the Department of Mathematics, National Institute of Technology (NIT), Rourkela. The NIT, Rourkela was founded as the Regional Engineering College, Rourkela on 15/08/1961. The Institute was declared as National Institute of Technology with Deemed to be University status on 26th June 2002 and Institute of National Importance on 15th August 2007 by act of Parliament. It is a prestigious institute with a reputation for excellence at both undergraduate and postgraduate levels. The Mathematics department offer instructions in general and engineering mathematics to the undergraduate students of all branches and M.Sc. courses. Research programs in the department include cutting edge areas such as Differential Geometry, Homotopy theory, Lie groups, Lie algebras, Number theory, Fluid dyanamics, Numerical methods. En route Howrah – Mumbai main line of South Eastern Railway, Rourkela is well connected by railway service network with the rest of India, and also by inters and intra – state bus services. Rourkela railway station is approximately 6 km from NIT Campus.

PARTICIPANTS

Faculty members from AICTE approved Institutions in Mathematics/Physics/Engineering are eligible to attend.

TA FOR PARTICIPANTS

The participants are entitled to avail III AC Train Fare. The reimbursement of TA will be made as per AICTE guide lines such as production of necessary travel documents.

ACCOMODATION

Accommodation for participants will be arranged in the Guest House, visitor house and nearby hotels. Certificate will be given to the participants after successful completion of the Course.

IMPORTANT DATES

Last date of submission: **20.01.2008**
Intimation of acceptance: **23.01.2008**

REGISTRATION FEE

The course is sponsored by the Ministry of Human Resource Development, New Delhi. There is no registration fee for the faculty members of AICTE (All India Council for Technical Education) approved institutions. However, as a matter of confirmation for participation in the course, a caution money of Rs.300/- in the form of demand draft drawn in favour of “**Continuing Education, Rourkela**” payable at SBI, NIT Branch, Rourkela (code-2109) to be sent to the coordinator along with the application form.

**AICTE-MHRD Short term Course
on
“RECENT, ADVANCED
MATHEMATICAL METHODS IN
ENGINEERING AND SCIENCES”
(Feb 02- 15, 2008)**

Registration Form

- Name:
- Department:
- Affiliation:
- Address:
-
- Phone/Fax:.....
- Email:.....
- Accommodation required : Yes/ No
- Details of Refundable caution money:
Amount Rs.....
- D.D.No.....Dated:
- Signature:
- Date:

Sponsorship Certificate

On the event of selection, Prof/Dr/Mr/Mrs-----
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for participation of the above programme.

THE HEAD OF THE
DEPARTMENT/INSTITUTE

CONTACT ADDRESS (COORDINATOR)

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*AICTE-MHRD
STAFF DEVELOPMENT PROGRAMME*

ON

**RECENT, ADVANCED
MATHEMATICAL METHODS IN
ENGINEERING AND SCIENCES**

(FEB 2-15, 2009)

**DEPARTMENT OF MATHEMATICS
NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA-768 009, ORISSA**