

SHORT TERM COURSES
FOR ENGINEERING COLLEGE TEACHERS

*INSTRUCTIONS
TO
COURSE COORDINATORS*

SPONSORED BY
ALL INDIA COUNCIL FOR TECHNICAL EDUCATION



QUALITY IMPROVEMENT PROGRAMME

INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

ELIGIBILITY OF PARTICIPANTS

1. All teachers of degree level technical /engineering Colleges /Institutions/ Universities approved by the AICTE are eligible to attend the Short Term Course.
2. The coordinators of Short Term Course are requested to admit few teachers from the north-eastern Polytechnics provided they meet the eligibility criteria.
3. Preferences should be given to teachers from neighbouring States. However, if expenditure on T.A. could be limited to the amount provided in the budget norms, teachers from any part of the country could be admitted.
4. Participants (teachers or non-teachers) from other government and private organisations are eligible provided they meet their TA and DA and pay a course fee maximum of Rs 2,500/- for government organizations and Rs. 5,000/- for private organizations.

NUMBER OF PARTICIPANTS

Coordinators are requested to admit a minimum of 30 participants for the programme. For this maximum selection can be given to about 40 participants so that even with some dropouts, at least 30 participants attend the programme. The last 10 candidates should be intimated that their selection is provisional and their confirmation will be subject to availability of seats. To ensure the participation suitable caution money (refundable to participants who attend the course) may be taken in the form of demand draft in favour of QIP IIT Guwahati. The caution money must be deposited to the QIP office for its reimbursement. In case numbers of participants are less than 20 after the last date of submission of application, the course coordinator may opt for change of the course date suitably and readvertisement may be made. The change of date must be notify to the QIP office.

PROCEDURE FOR SELECTION OF PARTICIPANTS

1. You may prepare an information brochure (see Annexure - X) on the programme containing desired information and salient features of the programme inviting applications from all the institutions in the eastern & north eastern states and a few selected from remaining States of India. The list of addresses can be down loaded

from : www.aicte.ernet.in or may be requested from QIP Office.

2. Select-sufficient number of participants based on area of special interest/seniority position/ geographical distribution etc., and inform them sufficiently in advance (by Fax/e-mail / uploading names of selected candidates in the course website).

BUDGET FOR THE PROGRAMME

1. The total budget sanctioned for one week programme is Rs. 2,55,000.00 for 30 participants. (See *Budget Norms* for further details). **This must not be exceeded to under any circumstances.**
2. You may admit up to 10 participants from professionals/ industry/ fields etc. by charging a suitable course fee on NO LOSS - NO PROFIT basis. The course fee may be of the maximum of Rs. 2,500/- for Govt. organizations & Rs. 5,000 for private organizations. Registration fee received must be deposited to Institute Account through QIP office.
3. In case, the participants are more than 30 no additional funds will be made available from QIP office. However if the number of participants is less than 30, the budget will be reduced accordingly under the sub-heads Boarding & Lodging etc. The excess expenditure, if any, may be met from registration fees by proper justification.
4. Savings under any sub-head may be diverted to meet expenses under other sub-heads within the overall sanctioned amount of Rs. 2,55,000.00 for the programme.
5. If private firms are involved in giving lectures in the STC, they must be charged at a minimum rate of Rs. 2000/- per hour. Total duration of lectures of private firms should not exceed more than five hours in any case. However, a prior approval of competent authority is required for such cases.
6. Since QIP courses are conducted from the limited fund obtained from AICTE in every financial year, coordinators are requested to conduct the course with our own resource persons as far as practicable.

BOARDING AND LODGING

A sum of Rs. 500/- per head per day has been provided for boarding and lodging for the outside participants. However, the local participants may be paid @ Rs. 250/- per head per day if they don't avail boarding / lodging facilities. The course coordinators are requested to arrange and ensure reasonably satisfactory boarding and lodging facilities to the participants in the Institute Hostel. For booking of the hostel rooms, Students Affairs office

may be contacted. The list of participants and experts may be sent to senior medical officer for necessary action & emergency.

TA / DA FOR PARTICIPANTS

1. T.A. is limited to III AC for the participants and Economic Air Fare (as per present Govt. rule) for the resource persons. Local travel expenses from the railway station to institution and back are **not allowed** for participants. During the journey period DA will be paid Rs 120 per day with maximum of Rs 500/-.
2. Only those who attend the programme in full are eligible for TA/DA from QIP.
3. The coordinators are requested to get verified TA bill (format is enclosed as Annexure IX) from accounts section before releasing any money to participants & resource persons. Advances may be taken for payment of the same in the enclosed format (see Annexure II).

VOUCHERS

Each Credit transaction should be supported by a bill bearing a pay order signed by the course coordinator and payees receipt (**bearing revenue stamp for all receipts for Rs. 500/- and above**) attached to it.

CONDUCT OF THE COURSE

1. The STC should preferably commence on **MONDAY** and conclude on **FRIDAY** of the following week with five working days in a week. You are requested to provide a time slot of 90 minutes in any afternoon session to introduce the concept of Pedagogy & Teaching Skills, Library usage, etc. necessarily.
2. The QIP coordinator may be requested to pay visit for the inauguration &/or valedictory functions and during the programme in order to monitor the progress of STC. He will have discussions with the course co-ordinator, resource persons and the participants. This is in accordance with the recommendations of the AICTE.
3. Director/Dy. Director/ QIP Coordinator may be called for inaugural & valedictory functions as Chief Guest. Concern department HOD must be invited and requested to give a briefing of the department activities, facilities etc. Intimation to QIP Coordinator must be given regarding the scheduling of these functions. Outside experts if present during these functions, he/she may be made Guest of Honour in the function. Course Coordinator should well plan and effectively coordinate these functions for smooth conduct of the same.
4. A list of participants must be sent to QIP office immediately after the commencement of the programme.

5. Various faculty development schemes of AICTE (ANNEXURE VI) must be distributed to all the participants.
6. Participants should be requested to attend the programme in Full.
7. Attendance of participants should be maintained and submitted alongwith the accounts.
8. A certificate (preferably in glossy papers) may be issued to the participants in the name of the AICTE, QIP and IIT-G (A proforma is enclosed herewith (see Annexure VIII) and the soft copy of the same may be requested from QIP office).
9. The resource persons should be engaged from the nearby premier institutions/organizations in order to keep the expenditures on T.A. within the stipulated limit.
10. Two copies of the Lecture Notes/Course Material (hard copy and CDs) must be sent to the QIP office.
11. Utmost care should be taken in the development of course material (which must be given at the time registration of the course), selection of participants and resource persons in order to make the programme a most successful one.
12. The Coordinator's Report and the Participants Evaluation Forms must be sent to QIP office.
13. No expenditure should be incurred on costly briefcases/folders, photographs, garlands, entertainment, etc., from the funds released by the QIP. This is requested in accordance with the Audit requirement.
14. The Ancillary Staff may be paid honorarium and on the basis of the nature of work actually rendered by the person concerned only.
15. Stationery items/Consumables etc. may be purchased by following the normal purchase procedure of the Institute. For items costing more than Rs. 1000/- three spot quotations must be taken.
16. Establishment section may be contacted for booking of necessary transport for participants/experts especially during lunch period.
17. Academic section may be contacted for booking of class room/gallery.
18. QIP section has overhead and LCD projectors which may be issued for the course, if required.

MAINTENANCE AND CLOSING OF ACCOUNTS

1. Course coordinator should send the Statement of Accounts (Annexure IV) and all the vouchers duly signed by the Coordinator to QIP office for our verification. The unspent balance should be deposited to the QIP head of account in the accounts section & receipt details must be furnished in the statement of Summary of Accounts.
2. All the bills must be duly signed by the coordinator, a revenue stamp should be put in case bill is of more than Rs. 500; three spot quotations should be furnished for purchase of any items of more than Rs. 1000/-.
3. Our Auditors have taken serious view for the delay in returning the balance amount, if any, of the Short-term of Course. This has even resulted in with-holding of our grant by the AICTE for considerable period of time.
4. The statement of account, list of participants, attendance sheet (duly initialled), participants evaluation forms (Annexure V), co-ordinator's report (Annexure I) must be sent to the QIP office within 30 days from the date of completion of the STC to facilitate early payment of the final installment.
5. Coordinators are, therefore, requested to ensure that the balance amount, if any, is deposited in QIP head of account within one month of receiving the last installment of funds to accounts section.
6. The funds will be released in three installments. First installment of Rs. 45,000/- funds will be released 3-4 months before and the second installment of Rs. 1,40,000/- will be released two weeks before the commencement of the programme. However, due to non availability of grant in aid from AICTE in proper time, the advance amount may be reduced depending on the number of participants selected. The third (final) installment will be released after the programme is over and the Statement of Accounts, Coordinator's Report on the programme, two copies of lecture notes, Participants Feedback are received from the Co-ordinator.

The course should be properly planned and organised with utmost importance given to the development of the course material, selection of participants and resource persons, effective management of the programme, conduct of laboratory classes/ demonstrations/visits, etc. and maintenance of accounts.

If any additional information or assistance is needed from this office, please feel free to ask the same (Phone 3025).

LIST OF ENCLOSURES

- | | |
|---|-----------------|
| • Course Coordinator's Report Format | ANNEXURE - I |
| • Prescribed Proforma for Advances (I & II) | ANNEXURE - II |
| • Summary of Account | ANNEXURE - III |
| • Institute Faculty/Staff Honorarium | ANNEXURE - IV |
| • Participants Feedback Form | ANNEXURE - V |
| • Faculty Development Schemes | ANNEXURE - VI |
| • Budget Norms | ANNEXURE - VII |
| • A Sample Copy of the Certificate | ANNEXURE - VIII |
| • TA / DA Bill Claim Form | ANNEXURE - IX |
| • Course Information Brochure | ANNEXURE - X |

Note: Any receipt (as registration fee/caution money) shall be deposited into Institute Account separately through QIP office. For settlement of temporary advance drawn for QIP , STC the above receipt should not be included. For refund of caution money to the participants , Coordinator may request separate advance and settle this independently.

P.S.: Course Coordinators suggestions in improvement of this information booklet is most welcome.

QIP SHORT-TERM TRAINING PROGRAMMES
COORDINATOR'S REPORT ON SHORT-TERM TRAINING PROGRAMMES

1. Name of Head of the Organisation : IIT Guwahati
2. Title of the course
3. Coordinator(s)
 - i) Name, Designation, address, Telephone/Fax numbers :
 - ii) Area of Specialisation :
4. Duration and Dates of conduct of the course :
5. Nature of the Programme (tick one) : Advanced/Sequential/Industry-based/Educational Methodology / Others
6. Level of Programme (Engineering College/Polytechnic) :
7. List of Participants with designation and full address :
8. List of Faculty with designation of Institution (host) involved for the programme :
9. List of Guest Faculty invited (with their designation & address) :
10. Data on participants : Teachers/Others
 - a) No. of applications received :
 - b) No. of applicants offered admission :
 - c) Basis of selection : Area of special interest/Seniority position/Geographical distribution
 - d) No. of present on first day :
 - e) No. of present on last day :
 - f) No. of arrived late :
 - g) No. of left early :

h) Names and addresses of dropouts if any :

i) Name and addresses of 3 out- : 1.
Standing participants, if any : 2.
: 3.

j) Articles issued to participants :

k) Any specific difficulty or short-coming :
complained of in general by participants

11. Time allotted for academic programme :
(indicate total hours of work)

Lectures by Faculty

Guest lectures

Seminars

Group discussions

Assignments & tutorials (Projects) Laboratory work

Laboratory work

Field Trips

Library work

12. Whether books, lecture notes and other materials provided to the participants well in time?'

13. Regarding the quality of the course conducted how do you rate the following?

	Poor	Excellent
a) Use of teaching methods by course :		
b) Presentation made by most of the faculty :		
c) Interactivity between expert Faculty and participants :		
d) Development of subject matter by most of the faculty :		
e) Use of appropriate teaching aids Handouts prepared by faculty for study by participants :		

14. What are the major benefits of this programme to :

- a) Participants
- b) Host institution and its faculty
- c) Institution sponsoring the participants

15. Indicate any other noteworthy features of this programme :

16. What was your observation regarding overall motivation of the participants in this course?

- a) Excellent
- b) Very good
- c) Good
- d) Satisfactory

17. Cost of the Programme (excluding honorarium to course Coordinator/Institute faculty/ancillary staff)

- a) Boarding and Lodging :
- b) Books and Stationery :
- c) Travel including field trips :
- d) Guest Faculty honorarium :

TOTAL Rs. _____

18. Overall cost per participant :

ANNEXURE - II

Application for temporary advance for Q.I.P Short Term Course (1st and 2nd installment)

1. Name of the Course:

2. Date:

3. Course Coordinator(s):

4. Department:

5. Advance Required:

[For 1st installment maximum Rs. 45,000/-
For 2nd installment maximum Rs.1,40,000/-,
The additional expenditure if any and incurred
as per rule will be reimbursed after the end of the
course on submission of account along with bill/
vouchers during settlement of the temporary
advance]

6. Justification:

7. Has any advance drawn earlier? If yes write the amount:

Note: For 2nd installment of advance, please enclose the list of selected candidates as per Annexure-II(a)

Signature of Coordinator

For office Use

AR(F&A)

Through Dean (Academic)

Please release an amount of
Rs..... (Rupees.....)for the above short term
course as temporary advance(1st/2nd installment) to from QIP head
of account.

Dean(Academic)

Coordinator QIP

Annexure IV

**Honorarium to be paid to the Coordinator/Institute faculty member & staff for the QIP -STC
(Use separate sheet if needed)**

Title of the Course :

Date :

Coordinator's Name :

Department :

i) Honorarium to Coordinator :

Sl.No.	Name	Designation	Dept/Centre	Amount to be paid

ii) Honorarium to Faculty Member/Scientific Officer for conducting theory/Lab/Tutorial Classes

Sl. No	Name	Designation	Dept/Centre	No. of hours	Rate	Amount to be paid

iii) Honorarium to Ancillary Staff

Sl. No.	Name	Designation	Dept/Centre	Amount to be paid

Signature of QIP Coordinator

Signature of Course Coordinator

QIP - STC _____

FEEDBACK FORM

Identification Data (Optional)

Name

Organisation

Please rate the following on a scale of 0-10 in accordance with instructions given against each :

*Course Structure and Organisation (Very Poor – 0, Excellent – 10)

Comments

*Course Contents & Selection of Topics (Useless and Mundane – 0
Balanced and Innovative – 10)

Comments

* Lab Demonstrations (Routine – 0, Interesting and useful – 10)

Comments

* Administration and Logistics (including Boarding, Lodging, Food, Tea etc)

Comments

Please tick the appropriate response for the following questions.

Have you found the course useful ?

(a) Yes (b) No (c) Can't say (d) I already knew all this

Will you recommend this course to your colleagues ?

(a) Yes, certainly (b) Yes, may be (c) No (d) No, never (e) Can't say

Shall you be using the knowledge gained during this course in your teaching or for personal professional advancement ?

(a) Yes (b) No (c) Will try (d) There is no new learning

Your overall assessment of the course :

(a) Waste of time (b) Visit to exotic location (c) Career compulsion
(d) Useful (e) No comments

* Level of treatment (Too Preliminary – 0, Advanced – 10)

Comments

* Overall quality of Lecture Notes (Poor – 0, Excellent – 10)

Comments

* Overall quality of Theory Lectures (Dull and Boring – 0, excellent – 10)

Comments (Please indicate the best and worst lecture in your opinion)

FINAL REMARKS AND SUGGESTIONS FOR IMPROVEMENT

ANNEXURE - VI

VARIOUS FACULTY DEVELOPMENT SCHEMES OF AICTE

FACULTY DEVELOPMENT BUREAU (FD BUREAU)

The Faculty Development activities of AICTE operated by FD Bureau are geared to ensure the quality, relevance, excellence and equity in Technical Education through the technical teachers. The objectives envisaged are to support programmes aimed at promoting quality of teachers; to promote programmes that facilitate career and faculty development; to recognize and support meritorious teachers; to provide opportunities and upgradation of knowledge and skills of technical teachers and working professionals; to encourage research and development; and to formulate schemes for facilitating participation of women in Technical Education.

Following schemes are operated by the FD Bureau of AICTE :-

1. **Travel Grant** enables meritorious teachers to interact at International level Conference / Seminar / Symposium etc. Teachers from AICTE approved Technical Institutions / Universities are eligible for this grant.
2. **Seminar Grant** Provides forum for interaction of academicians and working professionals and opportunity for sharing of innovations and inventions. AICTE approved Technical Institutions / Universities are eligible for this grant. Professional bodies, registered societies, national agencies are also eligible provided that the seminar is organized in collaboration with AICTE approved Technical Institutions / Universities.
3. **Career Award for Young Teachers** identifies young talented teachers for promoting their professional growth by enabling them to devote maximum time in research and study with minimum teaching responsibility.
4. **Emeritus Fellowship** utilizes services of highly qualified and experienced superannuated Professors of Technical Institutions / Universities in stimulating and achieving excellence in Technical Education.
5. **Staff Development Programmes** are intended to provide opportunities through AICTE approved Staff Colleges / Institutions for inducting training to teachers employed in AICTE approved institutions in Engineering & Technology, Pharmacy, Management and Architecture to facilitate up gradation of knowledge and skill.
6. **Visiting Professorship** is aimed at supplementing and providing expertise to teaching / research in those areas in which host institutions do not have the expertise. Eminent scholars holding the post of Professor shall be considered for appointment as Visiting Professors.
7. **The Scheme of Professional Societies / Bodies** intends to provide limited non-recurring financial assistance to selected technical professional bodies / societies to enable them to meet the expenses towards promotion and development of technical education in their respective professions through various means provided in their objectives.
8. **Early Faculty Induction Programme** aims at attracting bright and young under-graduate students in Engineering and Technology / Pharmacy / Architecture etc. to take teaching as their career. B.E. / B.Tech. / B.Pharmacy / B.Architecture students are selected at the National level and are given opportunity to pursue higher education (Post Graduate and Doctorate Programmes) in one of the leading technical institutions in India. After completion of their post-graduation, their placements are ensured as teachers in an approved technical institution, thus providing them avenues to serve in an institution of their choice.

9. **Quality Improvement Programme** is being implemented with the objective of upgrading the expertise, qualification and capabilities of the faculty members of degree level technical institutions. The major activities under the QIP include :-
- a) **Masters and Doctoral Programmes** : Under this scheme, faculty member of AICTE approved institutions are given opportunity to upgrade their qualifications. Certain selected institutions offer Masters and Ph.D Programmes to the faculty members and they are paid scholarships and contingency grant by the Council. Recently, the facility of pursuing Masters Degree programmes has been extended to approved polytechnic teachers also.
 - b) **Short Term Programmes** : In order to upgrade the knowledge and skills of the teachers working in the different institutions in the country, AICTE provides Financial Assistance for organizing short-term training programmes in the emerging areas of Engineering Technology/ Pharmacy / Management etc.
 - c) **Curriculum Development** : The major QIP Centres are provided assistance to organize workshops for Curriculum Development. This leads to Model Curricula, which are used as a base documents by many institutions.
10. **AICTE-INAE Distinguished Visiting Professorship** AICTE and Indian National Academy of Engineers (INAE) have jointly initiated this scheme. Under this, highly experienced technical professionals from Industry visit technical institutes for short durations to give technical lectures for the benefit of students and faculty members. They also help in improving curriculum design and in formulation and guidance on the projects for students.

FOR FURTHER DETAILS AND APPLICATION FORMS,
PLEASE CONTACT :

The Adviser (Faculty Development)
All India Council for Technical Education
Indira Gandhi Sports Complex
I.P. Estate
New Delhi - 110 002
AICTE EPABX Numbers : 3392506, 63,64,65,68,71,73,74,75
AICTE Fax Number : 3392554
<http://www.aicte.ernet.in/aicte/fac.htm>

IIT Guwahati QIP Coordinator's email : qip@iitg.ernet.in
http://www.iitg.ernet.in/scifac/qip/public_html/index.html

ANNEXURE -VII

Revised Norms for recurring expenditure on Short-Term Training Programme under QIP
(for 30 participants)

Sl.No.	Item	One Week	Two Weeks	Three Weeks	Four Weeks
1. @	Boarding & Lodging charges @ Rs. 500 per participant	78,750	157,500	236,250	315,000
2. *	TA & Field Trips (including TA to experts)	101,250	101,250	101,250	101,250
3. +	Honorarium to course Co-ordinator (on pro rata basis)	12,000	14,000	16,000	18,000
4. ++	Honorarium to guest/local faculty for lectures and for laboratory Teaching/Tutorials Panel Discussions/Seminars etc.	25,000	50,000	1,00,000	2,00,000
5. \$	Ancillary Staff	5,000	7,000	8,000	9,000
6.	Publications	17,000	19,000	21,000	23,000
7. &	Contingency, Consumables & office expenditure	16,000	17,000	18,000	19,000
	Total :	2,55,000	365,750	500,500	685,250
	Celling rounded off for each course	2,55,000	365,750	500,500	685,250

- @ Local participants may be paid boarding and lodging @Rs. 250/- per head per day.
- TA for participants, Co-ordinators, experts and field trips have been clubbed together. However, the TA expenditure for Co-ordinator and experts should not exceed Rs.25,000 /-and the expenditure on Field trips should be restricted to Rs. 20,,000.
- + Co-ordinator's honorarium may be shared if there is more than one Co-ordinator.
- ++ Honorarium to the guest and local faculty may be paid as follows:

Resource Person	:	Upto Rs. 750/- hour
Lab. Teaching/Tutorials, etc	:	Upto Rs. 400/- hour /person

If the Institute/State Government Norms for programmes of this level conducted at the Institute are more than those proposed above for local faculty, the Institute/State Government norms may be followed provided that the rate should not exceed Rs. 800/- hour for local faculty and Rs. 400/- hour/person for laboratory classes/tutorials, etc.

- \$ The Ancillary Staff may be paid honorarium at your Institute rates and on the basis of the nature of work rendered by the persons concerned.
 - & Stationery items/Consumables etc. may be purchased by following the normal purchase procedure of your institute. The photocopies/binding charges etc. may also be paid as per your institute rates.
- The participants may be selected in the ratio of 60:40. That is 18 participants from outside the North Eastern States and 12 participants from North Eastern States.



INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI
CENTRE FOR EDUCATIONAL TECHNOLOGY
QUALITY IMPROVEMENT PROGRAMME

AICTE SPONSORED SHORT-TERM COURSE

This is to certify that

.....
attended and actively participated in the short-term course on

“.....”

held at IIT Guwahati, Organised by the

Department of

during –, 2013.

Signature

Course Coordinators
Department of.....

QIP Coordinator
Centre for Educational Technology

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 "Finite Element Analysis & Signal Processing in Rotor Bearing Systems" at IIT Guwahati during December 19-23, 2005, if selected.

Date. Signature of sponsoring Authority
Designation
Official Seal:

For applicants from Industries and Government Department:

DD No Date:
Bank:
Amount:

Signature of the Applicant

The duly sponsored application form
should be mailed to:
(Name of the Course Coordinator)

QIP Short Term Courses

Department of Mechanical Engineering
Indian Institute of Technology, Guwahati
North Guwahati, Guwahati-781 039, Assam
Ph. No. 0361-2582667(O),258667 / 2691090(R)
Fax No.: 0361-2690-2690762
E-mail.:

ELIGIBILITY

The course is open to teacher, of mainly to Engineering College, and a few polytechnics approved by AICTE. *No course fee* is charged for participants sponsored by AICTE approved Institution. However, Rs.1000/- caution-money has to be sent by the provisionally selected participants, which will be returned only when participant joined the course.

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 payment is to be made by demand draft drawn on any National Bank in favour of **QIP IIT Guwahati, payable at Guwahati.**

BOARDING AND LODGING

Boarding and lodging facilities will be provided for the selected candidates from AICTE approved institutions in the student's hostels of the institute. However, lodging can be arranged in the Institute Guest House on payment of rent (subject to availability) as per the rate given below.

Single occupancy: Rs. 150/- per day
Double occupancy Rs. 200/- per day

IMPORTANT DATES

The last date for the receipt of duly sponsored applications: 30.09.2005

Intimation of selection, 15.10.2005

N.H. Interested candidates may send advance copy of the application duly counter signed by the Head of the Department / Controlling Office, (for spomand candidate) to avoid procedural delay.

SAMPLE COPY

ANNEXURE -X

Indian Institute of Technology Guwahati

**Centre for Educational Technology
Offers**

**QIP SHORT TERM COURSE
ON**

**Finite Element Analysis & Signal
Processing in Rotor-Bearing Systems**

December 19th -23rd, 2005



Conducted By

**Department of Mechanical Engineering
Indian Institute of Technology Guwahati
Guwahati- 781 039**

http://www.iitg.ernet.in/engfac/rtiwari/resume/rt.stc.rotor_dynamics_2005.ht

BACKGROUND

Teachers and professional engineers need to be introduced the fundamentals of Finite Elements Analysis & Signal Processing in rotor-Bearing systems of modern high-speed machinery and increase in the power /weight ratio, the determination of the rotor dynamics characteristics through reliable finite element modelling has gained prime importance. The advancement in modern instrumentation computational capabilities and numerical methods has helped in the analysis and vibration signal processing of these complex system.

In this course teachers/scientist /engineers are given a complete understanding of Rotor Bearing systems and allied areas from very basic variations in advanced modelling analysis and signal processing techniques. This course helps the participants in understanding the rotor dynamic problems in practical situations. They will be to implement the ideas of modelling and situation and techniques for dynamics analysis and signal processing in practical situation and for research purpose.

COURSE CONTENTS

- Introduction to linear and non-linear dynamic systems, finite elements methods and vibration signal processing
- Analysis in bearing system: Critical speeds, unbalance response, gyroscopic effects and instability.
- Bearings: Technology of bearing-Fluid film and rolling element bearing
- Signal processing in rotor-bearing systems. Balancing of rotors, bearing dynamic parameter estimation.
- Hands on laboratory classes on dynamic balancing of rotors, bearing dynamic parameter estimation etc.
- Hands on laboratory classes on the MATLAB software package.

FACULTY

Faculty member of IIT Guwahati and guest faculty members from other premier Institution/ Organization will deliver lecture.

COURSE MATERIAL

Each registered participant will be provided with a set of comprehensive lecture notes.

ABOUT IIT GUWAHATI

IIT Guwahati campus is spread over a sprawling 785 hectares plot of land on the north bank of the river Brahmaputra around 75 km from the heart of the city. With the majestic Brahmaputra on one side, and with hills and vast open spaces on others, the campus provides an ideal setting for training. Guwahati city (situated at $91^{\circ} 44$ E longitude & $26^{\circ} 10$ N latitude) is gateway to beautiful NE region of the country and linked with a major cities by rail, road and air. Guwahati has a temperature climate with temperature varying between 7°C to 37°C . Summer span is usually from May to September. Buses (from Institution of Engineers Building, near Pan bazar over-bridge), auto-rickshaws and taxis are available from Guwahati City to the IIT Guwahati Campus.

FINANCIAL ASSISTANCE

Limited number of Participants from AICTE recognized engineering institutes will be eligible for to and fro railway fare via shortest route in sleeper class and free lodging and boarding in the hostel during course period. Candidate attending the course in full only will be eligible for TA and DA.

For all other participants no, TA/DA will be paid by IIT Guwahati.



Indian Institute of Technology
Centre for Educational Technology
QIP SHORT TERM COURSE
ON

Finite Element Analysis & Signal Processing in Rotor-Bearing Systems

December 19th -23rd, 2005

Application Form

1. Name (block letters):
2. Designation & pay scale
3. Organisation
4. Address for communication

Pin code: _____ Ph. No.: _____
Fax No. E-mail: _____

5. Highest Academic Qualification,
6. Specialisation
7. Experience:
(a) Teaching: _____ (b) Industrial: _____
8. Amount of TA required _____ as _____ per entitlement mentioned in this brochure (only for AICTE approved college teachers):

9. Choice of Accommodation:
Hostel/Guest House

Please register me for the course on "Finite Element Analysis & Signal Processing in Rotor Bearing Systems" to be held at IIT Guwahati.

Place: _____
Date: _____ Signature of the applicant