

**WORKSHOP ON CURRICULUM
DEVELOPMENT ACTIVITIES UNDER**

**Instructions
To
Workshop Coordinators**



Quality Improvement Programme

INDIAN INSTITUTE OF TECHNOLOGY, GUWAHATI

ELIGIBILITY OF PARTICIPANTS

1. All teachers/research scholars(QIP) of degree level technical/engineering Colleges/Institutions/ Universities approved by AICTE/Industry are eligible to attend Workshop.
2. The coordinators of Workshops are requested to admit few teachers from the north-eastern Polytechnics provided they meet the eligibility criteria.
3. Preferences should be given to faculty members/researchers (QIP) from neighboring States. However, if expenditure on T.A. could be limited to the amount provided in the budget norms, candidates from any part of the country could be admitted.
4. Faculty members/Researchers from other government and private organizations 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 40 participants for the workshop. For this maximum selection can be given to about 50 participants so that even with some dropouts, at least 40 participants attend the workshop. The last 10 candidates should be intimated that their selection is provisional and their confirmation will be subject to availability of seats. 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 workshop date suitably and re-advertisement may be made. The change of date must be notified to the academic office.

PROCEDURE FOR SELECTION OF PARTICIPANTS

1. You may prepare an information brochure (see Annexure – IX/W) of the workshop containing desired information and salient features of the workshop inviting applications from all the institutions/industries in the eastern, north eastern states and a few selected from remaining States of India.
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 workshop website).

BUDGET FOR THE PROGRAMME

1. The total budget sanctioned for two days workshop is Rs. 2,55,000.00 for 40 participants and that for 3 days is Rs. 2,85,000/-. (See *Budget Norms(Annexure VII/W)* 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 40 no additional funds will be made available from QIP office. However if the number of participants is less than 40, the budget will be reduced accordingly under the sub-heads Boarding & Lodging/TA etc.
4. Savings under any sub-head may be diverted to meet expenses under other subheads within the overall sanctioned amount of Rs. 2,55,000.00 for the workshop.
5. Since QIP courses/workshops 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 workshop coordinators are requested to arrange and ensure reasonably satisfactory boarding and lodging facilities to the participants in the Institute Hostel or Guest House. 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. The faculty members of AICTE approved colleges/research scholar under QIP scheme are eligible for TA on production of travel tickets/documents.
2. T.A. is limited to III AC by shorted route for the participants and Economy Air Fare (as per present Govt. rule) for the resource persons. For TA, the existing rules of QIP STC will be followed. Local travel expenses from the railway station to institute and back are **not allowed** for participants. During the journey period DA will be paid Rs 120 per day with maximum of Rs 500/-.
3. The coordinators are requested to get the TA bill verified (format is enclosed as Annexure VIII/W) from accounts section before releasing any money to participants & resource persons. Advances may be drawn for payment of the same in the enclosed format (see Annexure II/W).
4. Participants who fully attend the workshop are only eligible for TA/DA. Partial absentees are not entitled to claim TA/DA.

VOUCHERS

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

CONDUCT OF THE WORKSHOP

1. The workshop will be designed for two/three days duration. 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. invariably.
2. The coordinator may be requested to pay visit for the inauguration and/or valedictory functions and during the workshop in order to monitor the progress of Workshop. 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. Concerned departmental 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. Any 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 workshop.
5. Participants should be requested to attend the workshop in Full.
6. Attendance of participants should be maintained and submitted along with the accounts.
7. A certificate (preferably in glossy papers) may be issued to the participants in the name of the AICTE, CD Cell and IIT-G.
8. 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.
9. Two copies of the Lecture Notes/Workshop Material (hard copy and CDs) must be sent to the QIP office.
10. Utmost care should be taken in the development of course material (which must be given at the time of registration of the course), selection of participants and resource persons in order to make the workshop the most useful one.
11. The Coordinator's Report and the Participants Evaluation Forms must be sent to QIP office.
12. No expenditure should be incurred on costly gift items like briefcases/folders, photographs, garlands, entertainment, etc., from the funds released by the QIP. This is in compliance with the Audit requirements.
13. The Ancillary Staff may be paid honorarium and only on the basis of the actual nature of work actually rendered by the person concerned.
14. 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.
15. Establishment section may be contacted for booking of necessary transport for participants/experts especially during lunch period.
16. Academic section may be contacted for booking of class room/gallery.
17. QIP section has overhead and LCD projectors which may be issued for the course, if required.

MAINTENANCE AND CLOSING OF ACCOUNTS

1. Workshop coordinator should send the Statement of Accounts (Annexure III/W) 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 Workshop. 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 initialed), participants evaluation forms (Annexure V/W), coordinator's report (Annexure I/W) 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 2 months before and the second installment of Rs. 1,40,000/- will be released two weeks before the commencement of the workshop. 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 workshop is over and after submission of the Statement of Accounts, Coordinator's Report on the workshop, two copies of lecture notes, Participants Feedback are received from the Co-ordinator. The workshop should be properly planned and organized with utmost importance given to the development of the course material, selection of participants and resource persons, effective management of the workshop, 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

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

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 CD Cell Workshop 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.: Workshop Coordinators suggestions in improvement of this information booklet is most welcome.

**CD CELL WORKSHOP
COORDINATOR'S REPORT ON WORKSHOP**

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 Workshop :
5. Nature of the Programme (tick one) : Advanced/Sequential/Industry-based/Educational Methodology / Others
6. List of Participants with designation and full address :
7. List of Faculty with designation of Institution (host) involved for the programme :
- 8.. List of Guest Faculty invited (with their designation & address) :
9. Data on participants : Teachers/Others
 - a) No. of applications received :
 - b) No. of applicants offered participation :
 - 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.

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

14. Indicate any other noteworthy features of this :
programme

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

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

16. 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. _____

17. Overall cost per participant :

ANNEXURE – II/W

Application for temporary advance for CD Cell Workshop (1st, 2nd, 3rd installment)

1. Name of the Workshop:

2. Date:

3. Course Coordinator(s):

4. Department:

5. Advance Required:
45,000/-

[For 1st installment maximum Rs.

For 2nd installment maximum
Rs.1,40,000/-,

3rd installment will be paid after the end
of the course or actual expenditure]

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/3rd installment) to from QIP
head of account.

Dean(Academic)

Coordinator QIP

ANNEXURE - III/W

SUMMARY OF ACCOUNTS

Voucher Nos.

(put voucher no. against respective heads)

- a) Name of the Workshop : _____
- b) Name of the Coordinator & Dept./Center : _____
- c) No. of Participants : _____
- d) Duration and Date of the Workshop : _____
- e) Boarding & Lodging expense : _____
- f) TA & Field trips : _____
(Including TA to experts)
- g) Honorarium to guest faculty(outside IITG) : _____
for lectures and for laboratory
teaching/tutorial/panel discussions/
Seminars etc.

[* List of faculty members of the institute / ancillary staff and their honorarium for Workshop in Annexure IV /W to be forwarded to QIP office for payment after deduction of TAX by F&A section]

- h) Publication : _____
- i) Contingency, Consumables & Office expenditure : _____

Total Rs.

- j) Grant Received from QIP : _____
(being first & second instalment)

Total Rs.

- k) Less expr. Rs.

DUE Rs.

Balance : Cash Rs.

Certified that the grant has been spent for the purpose for which it has been sanctioned

Accounts/Audit Officer
(with office seal)

Course Coordinator

Annexure IV/W

Honorarium to be paid to the Coordinator/Institute faculty member & staff for the CD Cell Workshop

Title of the Course :

Date :

Coordinator's Name :

Department :

i) Honorarium to Coordinator :

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

1. 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

2. Honorarium to Ancillary Staff

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

Signature of QIP Coordinator

Signature of Course Coordinator

CD Cell Workshop _____

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

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/W

Breakup of the expenditure of CD Cell Workshop

SL. NO	ITEM	AMOUNT (Rs.) FOR 3 DAYS WORKSHOP	AMOUNT (Rs.) FOR 2 DAYS WORKSHOP
1	Boarding and lodging charges (for 45 persons which includes outside experts) @ Rs. 500/- person perday	90,000.00	67,500.00
2	TA for participants and experts	1,50,000.00	1,50,000.00
3	Honorarium to the Guest faculty @ Rs.1000/- per hour	10,000.00	8,000.00
4	Publication	25,000.00	22,000.00
5	Contingency, consumables, office expenditures	10,000.00	7,500.00
Total		2,85,000.00 (Rupees Two lakh Eighty Five Thousand only)	2,55,000.00 (Rupees Two lakh Fifty Five Thousand only)

Railways,aeroplane or steamer fare.....(Col.10)

Rs.

1. Certified that distances for road journeys shown in the bill are correct to the best of My knowledge

Road Mileage i) Rs.....per Km forkms (Col. 11)
ii) Rs.....per Km forKms

Rs.....

2. Certified that I have traveled in a class of accommodation not lower that for which fare were claimed in this bill and to which I am entitled

Bus Fare (Col. 11)

Rs.....

3. Certified that the journeys were performed by the shortest and cheapest route.

Days for which daily allowance is claimed
j) at Rs..... for..... days
ii) at Rs..... for..... days

4. Certified that I did not perform the road Journeys for which mileage allowance has been claimed at the higer rates prescribed in rule 46 of the 8 Rules by taking a single seat in any by public conveyance(excluding a steamer) which plies regularly for hire between fixed points and charges rates. I also certify that the journeys were not performed in any other vehicle without payment of its hire charges or including its running expenses

Total amount

Rs.

Less : Deduction Advance Paid vide mrno.

.....

Date

5. Certified that return concessional Rly/Air ticket was/was not purchased

Net Claim

6. Certified that the journey was actually performed by mail/Express trains as stated in the bill

Dated **Signature of Claimant**

Rs.

7. An advance of Rs.....was drawn by me for this purpose

Paid for Rs.

8. The claim for journeys mentioned in this bill has not been preferred or nor paid from any other source

Checked in Audit (Pre-audited/Post Audited)

Admitted Rs.

9. Certified that Sundays & Holidays were actually and not merely constructively spent in the camp

QIP Coordinator

Disallowed/Added Rs

10. Certified that I was/was not treated as a guest of a Government or an Institution and was/was not allowed free boarding and/or lodging at the expenses of that Government or the Institution visited

Countersigned

11. Certified that I have/have not availed for free transport of this Institute or any one else

Sr. Auditor.

DIRECTOR/DEAN(R&D)/REGISTRAR
Audit Officer

Forwarded herewith T.A. claim for necessary action

To : Accounts Section

Admn - I (a)

Signature of the Claimant

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 workshop "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 Departments:

DD No. _____ Date: _____

Bank: _____
Amount: _____

Signature of the Applicant

The duly sponsored application form should be mailed to:

Dr. Rajiv Tiwari,
Course Coordinators
CD Cell Workshop
Department of Mechanical Engineering
Indian Institute of Technology Guwahati
North Guwahati, Guwahati – 781 039, Assam
Ph. No.: 0361 2582667 (O), 2584667 / 2691090 (R)
Fax No.: 0361 2690762
Email: rtiwari@iitg.ernet.in

ELIGIBILITY

The workshop is open to teachers of mainly to Engineering Colleges and a few polytechnics approved by AICTE. *No course fee* is charged for participants sponsored by AICTE approved institutions. 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 Nationalised 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.B. Interested candidates may send advance copy of the application duly countersigned by the Head of the Department / Controlling Officer (for sponsored candidate) to avoid procedural delay.

IIT Guwahati Offers:

CD CELL WORKSHOP

ON

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

December 19th -23th, 2005



Department of Mechanical Engineering
Indian Institute of Technology Guwahati
North 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 Element Analysis & Signal Processing in Rotor-Bearing Systems. Rotor-bearing systems of modern high-speed rotating machineries constitutes a complex dynamic system. With the advancement in high-speed machinery and increase in the power/weight ratio, the determination of the rotor dynamics characteristics through reliable finite element modeling 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 systems.

In this course teachers/scientists/engineers are given a complete understanding of Rotor-Bearing systems and allied areas from very basic vibrations to advanced modeling, analysis and signal processing techniques. This course helps the participants in understanding the rotordynamic problems in practical situations. They will be to implement the ideas of modeling, simulation and techniques for dynamic analysis and signal processing in practical situations and for research purpose.

COURSE CONTENTS

- Introduction to linear and non-linear dynamic systems, finite element methods and vibration signal processing.
- Analysis in rotor-bearing systems: Critical speeds, unbalance response, gyroscopic effects and instability.
- Bearings: Tribology of bearings – Fluid film and rolling element bearings.
- 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 members of IIT Guwahati and guest faculty members from other premier Institution/Organization will deliver lectures.

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 285 hectares plot of land on the north bank of the river Brahmaputra around 25 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 learning. Guwahati city (situated at 91° 44' E longitude & 26° 10' N latitude) is gateway to beautiful NE region of the country and linked with all major cities by rail, road and air. Guwahati has a temperate 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 Panbazar 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 institutions 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. Candidates 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

CD CELL WORKSHOP ON Finite Element Analysis & Signal Processing in Rotor-Bearing Systems

Dec 19-23, 2005

Application Form

- 1. Name (block letter):**
- 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 (in years):**
(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