

About Electronics & ICT Academy at PDPM IIITDM Jabalpur

Department of Electronics and Information Technology, Government of India has instituted seven Electronics and ICT Academies with one academy at PDPM IIITDM Jabalpur with the primary objective of preparing manpower for two important missions - 'Digital India' and 'Make in India'. The Academy aims at scalable training programmes in niche areas of Electronics and ICT for the development of required knowledge base, skills and tools to unleash the talent of Indian population. In addition to the faculty development programmes on fundamental and advanced topics, the Academy conducts customized training programmes for corporate sector and research promotion workshops in emerging areas. The Academy is envisioned to become a central hub of activities on training, research, consultancy work and entrepreneurship programmes.

About PDPM IIITDM Jabalpur

PDPM IIITDM Jabalpur was established in 2005 with a focus on education and research in IT enabled Design and Manufacturing. Since its inception, PDPM IIITDM Jabalpur has been playing a vital role in producing quality human resources for contribution in India's mission of inclusive and sustainable growth. The Institute offers undergraduate, post graduate and PhD programmes in Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, Design and PhD programmes in Mathematics and Physics. Under IIIT act, the Institute has been declared as an Institute of National Importance in January 2015. The Institute campus is being developed on 250 acres of land close to Dumna Airport, Jabalpur. The Institute is 10 kms from the main railway station and 5.5 kms from Dumna airport, Jabalpur.

Faculty Development Programme Finite Element Method and Applications

Who can attend : Programme is open to faculty, from all the colleges and universities in the states of M.P., Chhattisgarh, and Maharashtra. Industry personnel working in the concerned/allied discipline may also apply. **Limited seats are available for research scholars.**

How to apply :

Online: The participants may log on to the website ict.iiitdmj.ac.in and fill up the application form clearly mentioning the name of the course.

In case of any problem, you can send your application form to academyiiitdmj@gmail.com. Application format may be downloaded from the website (Also given in this brochure).

Print out of the filled in application form duly endorsed by the forwarding authority and a demand draft of applicable amount (as given below) in favour of 'Electronics and ICT Academy, IIITDMJ' payable at Jabalpur may be sent to the address given on the front page. No Travelling Allowance will be paid by the Academy.

Important Dates :

Last Date of Online Registration: April 11, 2017

Spot Registration also available if seats are available.

Course Dates: May 11-16, 2017

Registration Fee : Academic : Rs. 1000/- .

SC/ ST Category faculty from MP, CG and MH: Rs. 500/-

Industry : Rs. 5000/-

(includes course material + lunch + tea)

Accommodation charges (if needed):

Rs. 1000/- (includes tea+ breakfast + dinner)

Contact us

Electronics and ICT Academy
PDPM Indian Institute of Information Technology,
Design and Manufacturing, Jabalpur,
Dumna Airport Road, Jabalpur 482005

Email: academyiiitdmj@gmail.com

Website: ict.iiitdmj.ac.in

Finite Element Method and Applications

May 11-16, 2017

Faculty Development Programme Under
Electronics and ICT Academy

An Initiative of
Ministry of Electronics and Information Technology,
Government of India



Seamless Learning Opportunities



PDPM
Indian Institute of Information
Technology,
Design and Manufacturing, Jabalpur,
Dumna Airport Road,
Jabalpur 482005



Finite Element Method and Applications

May 11-16, 2017

Introduction and objectives of the course :

This course provides exposure to the fundamentals and applications of Finite Element Methods using a simulation and analysis package of industry standard.

Aim of the course is to enable the participants understand how the method works in obtaining approximate solutions to boundary value problems. Starting with the basic principles of FEM, the course will cover finite element construction, convergence, and different types of finite elements suitable for a variety of applications.

Some specific applications will also be covered to help participants gain hands-on experience of working on FEM software package ANSYS.

Resource Persons

Prof. S.K. Maiti
Professor, IIT Bombay

Prof. U.S. Dixit,
Professor, IIT Guwahati

Prof. Aparajita Ojha
Professor, PDPM IITDM Jabalpur

Prof. Vijay Kumar Gupta
Professor, PDPM IITDM Jabalpur

Dr. Gautam Dutta
Associate Professor, PDPM IITDM Jabalpur

Dr. Sachin Kumar
Assistant Professor, PDPM IITDM Jabalpur

Course content

Introduction to FEM: Need of finite element method, direct method, steps involved in FEM, field and boundary conditions

Finite Element Formulation : Weighted residual method, variational principle, principle of minimum potential energy.

Finite Element in 2D: 2D elements, completeness of polynomials, CST and LST elements, Lagrange and 'serendipity' family of elements, Quadrilateral elements.

Isoparametric Elements: Natural coordinate system and isoparametric elements, Concepts and examples of Numerical Integration.

Plate Bending and Shell Elements: Kirchhoff and Mindlin Elements, Membrane and shear locking, Concept of fully reduced and selective reduced integration.

Convergence: Convergence criteria, Discretization error and convergence rate, Non-conforming elements and the patch test.

Dynamic Considerations: Eigen values and eigenvectors evaluation, Generalized Jacobi method; Tridiagonalization and other methods.

Recent Advances in FEM

Hands on lab sessions on industry standard FEA software Package ANSYS.

Course Coordinators

Prof. Vijay Kumar Gupta
Email: vkgupta@iitdmj.ac.in

Prof. Aparajita Ojha
Email: aojha@iitdmj.ac.in

Website: ict.iitdmj.ac.in

Application Form

Name of the Course / Programme: **Finite Element Method and Applications**

Name of the Applicant (first, last):

.....

Gender:

Designation:

Name and Address of the Organization/Institute/College:

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.....

City/town:..... Email:

Alternate email (if any):

Phone Number:

Mobile Number:

Do you need accommodation? (Yes/No):

Note: Accommodation and meal facility will be available only from the evening of May 10 to the morning of May 17, 2017.

DD Number: Date:

Issuing Bank: payable at:

Signature of the Applicant

I hereby agree to relieve Mr./ Ms./ Dr.....
..... in case she/he is selected
to attend the programme.

Signature and Seal of the Forwarding Authority

Name

Designation