About the course

Fifth Generation of Mobile Communication or popularly termed as 5G, has been rolled out as an ambitious project of the Government of India with an aim to envisage the coverage and bandwidth unparalleled to all users in the country. Thus, 5G aims to develop and deploy its own standards in terms of physical layer implementation and various software related issues. This course takes a detailed walk through on the various capabilities and challenges underlying the conceptualization and implementation of 5G Wireless communication standards. The issues pertaining to the hardware as well as software end of the 5G communication shall be discussed with renowned experts of the field.

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, Physics and Literature. Under IIIT act, the Institute has been declared as an Institute of National Importance in January 2015. The institute is in a joint collaboration with Ministry of Foreign Affairs (MOFA), Japan and was established under Indo-Japan collaborative project of the MHRD, Government of India. 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 on 5G Communications

Who can attend: Programme is open to faculty from all the AICTE approved colleges and universities. The total number of participants is limited to 30. ***Limited seats are available for research scholars.***

How to apply :
Please send scanned copy of your completed application form to qip.iiitdmj@gmail.com, biswajeet.26@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 the selected participants have to pay online Rs. 1000/- from any nationalized bank in Allahabad Bank, Branch Mehgawan, Jabalpur (IFSC Code ALLA0212433) Account No 50388395415 in favor of QIP PDPM IIITDM Jabalpur as a security deposit for confirmation of their participation. The security money will be returned back to the participant account only if he/she joins the course.

Important Dates:
Last Date of Online Registration: March 11, 2020
Spot Registration also available if seats are available.
Course Dates: March 13-17, 2020

Registration Fee:
Academic: Rs. 1000/-
(Registration Fee shall be refunded after the successful completion of course as per norms mentioned in Fee section)

Contact us

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

Email: **qip.iiitdmj@gmail.com**
Website: qip.iiitdmj.ac.in

QIP sponsored Short Term Course

RECENT ADVANCES IN 5G COMMUNICATION SYSTEMS

March 13-17, 2020

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

5G COMMUNICATIONS
March 13-17, 2020

Course objectives: 5G stands for 5th generation mobile communication in which 802.11 WLAN, 802.16 WMAN, Ad-hoc WPAN etc. technologies are covered for high bandwidths. This course provides the information for better understanding towards the 5G communications. Recently Government of India has awarded the project of creating 5G standards and implementation of 5G in India to Six IITs. This course covers the given outlines namely Introductory part of 5G communications with detailed descriptions of its modulation techniques, recent trends in software networking; it also enhances knowledge for 5G antenna and microwave devices as well as 5G internet and security.

Resource People

Resource people shall be faculties from IITs/Institutes of National repute and Industry or research institutions like ISRO/DRDO, DAE, etc.

Fee and Financial Assistance

No course fee for participants sponsored by the AICTE approved Institutions. Only **refundable security deposit** of 1000/- rupee needs to be paid. Limited number of participants (30) from the AICTE approved engineering institutions will be eligible for **to and fro train 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 (including students), no TA or lodging support will be paid. Students (Research Scholars and M.Tech students) need to pay a fee of Rs. 1000/-. 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 Security deposit/ registration fee is to be paid online in Allahabad Bank, Branch Mehgawan, Jabalpur (IFSC Code ALLA0212433) Account No. 50388395415 in favor of QIP PDPM IIITDM Jabalpur through any nationalized bank and payable at Jabalpur. **Selected Participants shall be intimated by e-mail by March 11, 2020. Stay and food shall be provided from March 12, 2020 (evening) to March 18, 2020 (morning) only.**

Course contents

Introduction to 5G: Evolution of Wireless Communication technology generations, Roadmap to 5G: targeted specifications and Radio access technologies for 5GMassive MIMO and millimetre wave.

Modulation Techniques: Modulation techniques and waveform design for 5G communication Hands-on: Modulation techniques and waveform design for 5G communication.

Antennas in 5G: Role of Antennas in 5G and RF subsystem for 5G Hands-on: Antennas and RF subsystem for 5G.

Trends in Software Defined Networking: Hyper-dense small cell deployment for capacity improvement, Self-organizing network, Machine type communication, Cooperative communication and cognitive radio Hands-on: Cooperative communication and cognitive radio.

5G Internet and Security: 5G Internet, Security for 5G Communications and Unified, 5G Broadcast- Broadband Architecture. Hands-on: Security for 5G Communications.

AI and ML in 5G: Introduction to AI and ML, Application of AI and ML in communication systems, AI and ML in prospective 5G communication strategies

Course Coordinators

Dr. Biswajeet Mukherjee (9425805501)
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Dr. Matadeen Bansal (9425156287)
Email: mbansal@iiitdmj.ac.in

Website: qip.iiitdmj.ac.in

Application Form

Name of the Course / Programme: Recent Advances in 5G Communication Systems

Name of the Applicant (first, last): .....

.....

Gender: M / F/ T Category: GEN/SC/ST/OBC

Designation: .....

Name and Address of the Organization/Institute/College:

.....

.....

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 **March 12, 2020 (evening) to March 18, 2020 (morning) only**

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 .....