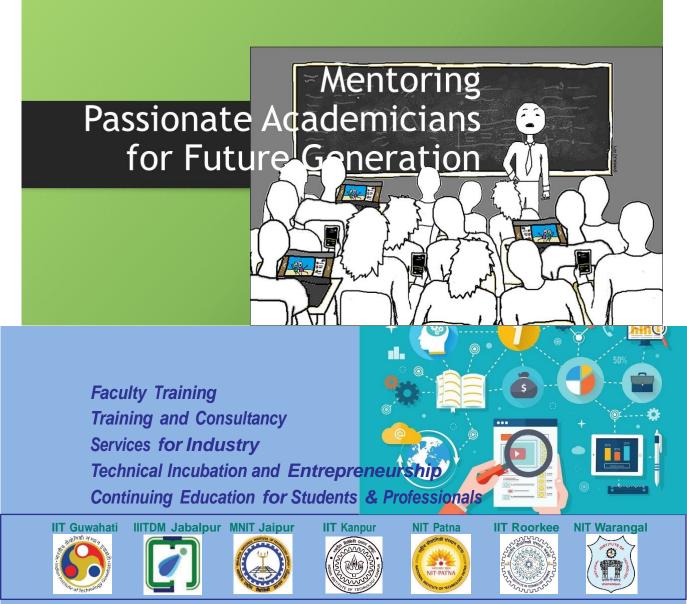




Ministry of Electronics & Information Technology



# Government of India Initiative for Employability Enhancement



India is fast emerging as a world power in Information, Communications Technology and Electronics (ICTE) sectors. To complement its growth and further development, there is an ever-increasing need for trained professionals with specialization in this space. This includes training of professionals not only in existing and changing technologies but also in the fields of R&D and electronics manufacturing. This will specifically be aimed at the ICTE sector to create a substantial resource pool of talent and generate ample opportunities for entrepreneurs. Ministry of Electronics & Information Technology (MeitY) has approved a scheme and setup Electronics and ICT Academies at 07 (seven) institutions viz. IIT Guwahati, IIT Kanpur, NIT Warangal, NIT Patna and IIITDM Jabalpur (all five under Category-A); and IIT Roorkee, MNIT Jaipur (both under Category B). The Ministry had earlier setup two ICT Academies at Tamil Nadu and Kerala respectively. Estimated cost and targets for the Electronics and ICT Academy in the two Categories for a period of four years are as under:

Category	Total Outlay	Internal Revenue Generation	Grants-in-Aid from Central Government	Training Target (Faculty members)
Category-A	Rs. 25 crore	Rs. 7.50 crore	Rs. 17.50 crore	16,000
Category-B	Rs. 10 crore	Rs. 3.00 crore	Rs. 7.00 crore	6,400

These Academies are aimed at faculty/mentor development and upgradation to improve the employability of the graduates, diploma holders in various streams, through collaboration of States/Union Territories. Each Academy is being provided funding support for four years and is expected to generate revenue by charging fee and taking up other activities to meet the recurring cost in a gradual manner and become self-sustainable by the end of fourth year onwards. All these Academies will cater to the requirements of identified neighbouring States and UTs also. Brief information about all the Academies is available at :

https://meity.gov.in/esdm/scheme-financial-assistance-setting-electronics-and-ict-academies

#### Activities of the Academies

- Faculty development for
  - Specialized training with hands-on on basic and advanced level topics for Engineering streams and
  - Domain based training on use of ICT tools and techniques for non-engineering streams
- Training and consultancy services for industry
- Curriculum development for industry
- · Continuing Education programme for students / working professionals
- · Design, Develop and Deliver specialized modules for specific research areas
- · Providing advice and support for technical incubation and entrepreneurial activities

#### About Winter Courses

Faculty Development Programmes in core areas of Electronics and Information & Communication Technology (ICT) streams have been planned by academies for delivery during Winters (i.e., Dec'19–Jan'20). All these Winter courses will be offered through National Knowledge Network (NKN) based Video Conferencing, with lectures delivered by invited experts from IITs, NITs, IIITs and other premier institutes/industries. In addition, local course coordinators at respective academies /identified remote centres will take care of sessions on design orientation/activity linked problems/ assignments/ case studies and quiz test(s). All seven EICT Academies will host the participants simultaneously alongwith some select remote centres all over our country, through NKN-VC infrastructure. Candidates could attend the training programme at Academy locations or at identified remote centres as per the convenience. For registration participants need to apply to one of the Academies, however, they can attend the training programme at that Academy or any remote centre attached to that respective Academy, please refer to respective academy websites.

#### How to apply:

- \* A duly filled in application form in the prescribed form signed by the Head of the Institute to which the candidate belongs (along with demand draft/CBS-Cheque) should reach by post to the local coordinator of the participating academy.
- \* Government of India norms will be followed for SC/ST category participants.
- \* The application form along with the DD/CBS-Cheque can also be submitted in the online mode to Local Coordinator of the respective academy.
- Note: Refer offering Academies websites for complete postal address and other details of Winter courses.

## Following are the programmes being offered in this Winters, Dec 2019- Jan 2020, each of 5 days duration.

		,		,	
S.No.	Course Name	Principal Coordinating Academy	Co-Principal Coordinating Academy	Starting date of Programme	Last date of receiving applications
1	Python Programming with Industry perspective	MNIT Jaipur Dr. E. S. Pilli	NIT Patna Dr. Bharat Gupta	2 Dec 2019	25 Nov 2019
2	Deep Learning and Applications	IIITDM Jabalpur Prof. Aparajita Ojha	NITW Prof. R. B. V. Subramanyam	9 Dec 2019	2 Dec 2019
3	VLSI Chip Design Hands on using open source EDA	IIT Guwahati Dr. Gaurav Trivedi	MNIT Jaipur Prof. Vineet Sahula	16 Dec 2019	9 Dec 2019
4	AI & Machine Learning	IIT Roorkee Prof. Sanjeev Manhas	MNIT Jaipur Dr. S. J. Nanda	23 Dec 2019	16 Dec 2019
5	Natural Language Processing (NITP+IIITDMJ/MNITJ)	NIT Patna Dr. J. P. Singh	IIITDM Jabalpur Prof. Atul Gupta	6 Jan 2020	23 Dec 2019
6	ICT Tools for Teaching, Learning process & Institutes	MNIT Jaipur, IIITDM Jabalpur, NIT Patna, IIT Guwahati, NIT Warangal (All Academies)		13 Jan 2020	6 Jan 2020

#### Target Beneficiaries:

Interested Faculty of engineering/technical institutions are eligible to attend these Winter courses. Une DT Boodkee DTF Warangat Availability of seats at each offering Academy:

Fifty (50) seats are available for each course to be offered at each Academy/Remote Centre. Participants will be selected based on first-cum-first-serve basis by each academy. Selected participants will be communicated through e-mail / notified in E&ICT Academy websites.

Each course is designed as 3 credit equivalent for 40 hours (Theory Lectures, Hands-on/Design orientation/Activity linked problems/Assignments Problem Solving/Case Studies sessions/Quiz Tests)

#### Accommodation & Travel

Boarding and Lodging at Hostels/Guest House will be provided at free of cost only at Identified E&ICT Academies. For details please refer to respective Academy websites. At identified Remote centres only working lunch and snacks will be provided. No Travel Allowance will be paid to the participants. Registration Fee for each Winter Course:

No Registration fee is charged for attending this programme planned at any designated academies/Remote centres. However, candidate should submit a Demand Draft/ CBS-Cheque of Rs.1000/- along with application form and the same will be handed over to the participant on the last day of the training. Certificate for participation as well as for Satisfactory performance will be given to the participants subject to fulfillment of attending all sessions, submission of assignments and clearing the test(s).

#### Mode of Payment:

Academy Name	Payment through DD/CBS-Cheque	
IIT Guwahati	Demand Draft in favor of "Registrar, IIT Guwahati" Payable at Guwahati	
IIITDM Jabalpur	Demand Draft in favor of "Electronics and ICT Academy, IIITDMJ" payable at Jabalpur	
MNIT Jaipur	Demand Draft in favor of "Electronics and ICT Academy, MNIT Jaipur" Payable at Jaipur	
IIT Kanpur	Demand Draft in favor of "Director, IIT Kanpur" Payable at Kanpur	
NIT Patna	Demand Draft in favor of "Director, NIT Patna" payable at Patna	
IIT Roorkee	Demand Draft in favor of "Dean SRIC IIT Roorkee" payable at Roorkee	
NIT Warangal	Demand Draft in favor of "Electronics and ICT Academy, NITW" payable at NIT Warangal	

Last Date for Submission of Applications is Monday of earlier week from the start date of respective programme.

• The intimation of Selection for participation will be posted on website on Wednesday of previous week.

## The following are the details of Winter courses being offered during Dec'19 –Jan'2020

1: Python Programming with Industry perspective

2 – 6 Dec 2019

Prospective external Experts- (i) Dr. Mani Madhukar, Program Manager - University Relations, IBM India Pvt. Ltd Experts from host institutes- (ii) Dr. E. S. Pilli,

# **Contents of Python Programming with Industry Perspective**

S.No	Module Name	Topics
1.	Introduction & basics of to Python Programming:	History of Python, Installing Python, Executing Python Programs, Internal Working of Python, Python Implementations. Python Character Set, Token, Python Core Data Type, print() function, Assigning Value to Variable, input() function, eval() function, Formatting Number and Strings, Operators and Expressions
2.	Decision Statements; Loop Control Statements;	Boolean Type, Boolean Operators, Using Number and Strings with Boolean Operators, Decision Making Statements and Conditional Expressions While loop, range() Function, For Loop, Nested Loops, Break Statement, Continue Statement
	Functions, Strings	Syntax and Basics of a Function, Use of a function, Parameters and Arguments, Local and Global Scope Scope of a Variable, return statement and Recursive Functions. str class, Inbuilt functions for String, index[] operator, traversal of String, String
		operators, String Operations
3.	Lists and Dictionaries; Tuples and Sets; File Handling; Pandas	Creating Lists, Basic list operators, Slicing, Inbuilt functions for Lists, List operator, List Methods, Splitting, Need of Dictionary, Creating a Dictionary, Adding and Replacing Values, Retrieving Values; Deleting Items and Traversing Dictionaries. Tuples and Sets: Creating Tuples; Tuple () Function, Inbuilt Functions for Tuples, Indexing and Slicing; Operations on Tuples; Traverse Tuples from a List, Set operators; Set class. Object-Oriented Programming: Classes and objects, methods, Operator Overloading, Inheritance, super () and Method Overriding. File Handling: Need of File Handling, Reading/Writing Text and Numbers to/from a File; Directories on a disk. Pandas: Using Pandas, the python data analysis library and data frames
4.	Data Handling and Use Cases	RE Pattern Matching, Parsing Data, Introduction to Regression, Types of Regression, Use Cases, Exploratory data analysis, Correlation Matrix, Visualization using Matplotlib and Implementing linear regression.
5.	Machine Learning	Machine Learning - Algorithm, Algorithms - Random forest, Super vector Machine, Random Forest, Build your own model in python and Comparison between random forest and decision tree.

Principal Coordinator - Academy	Co- Principal Coordinator - Academy	Participating Academies and Local Coordinator Details
Dr. E. S. Pilli espilli.cse@mnit.ac.i n_M: 954 965 8131 MNIT Jaipur	Dr. Bharat Gupta_ bharat@nitp.ac.in Mobile:93314 06964 NIT Patna	IIITDM Jabalpur- Dr. Atul Gupta, M: 9425152499 Phone:+761-2794223 Email: <u>atul@iiitdmj.ac.in</u>
		MNIT Jaipur - Dr. Dinesh Tyagi & Dr. Yogesh Meena, <u>dktyagi.cse@mnit.ac.in</u> , M: 9549658130, <u>ymeena.cse@mnit.ac.in</u> , M: 9461306647
		NIT Patna- Dr. Mukesh Kumar, & Dr. Somaraju Suvvari, mukesh.kumar@nitp.ac.in M: 8984142557, somaraju@nitp.ac.in , M: 9676430356

# 2: Deep learning & and applications

## 9 - 13 Dec 2019

Prospective external Experts- (i) Industry support from NVidia, MathWorks (MATLAB) (ii) Dr. Anupama Ray, IBM (iii) Dr. Ritu, Intel, (iv) Prof. R. Venkatesh Babu, IISc Banglore (confirmation awaited) Experts from host institutes- (iii) ) Prof. Aparajita Ojha, IIITDMJ (iv) Dr. Santosh Vipparthi, MNITJ

# **Contents of modules of Deep Learning & Applications**

S.No.	Module Name	Topics
1.	Introduction to Machine Learning & Artificial Neural Networks	Overview of machine learning, Supervised and unsupervised learning, Artificial Neural Networks, Feedforward Neural networks, Gradient Descent and the back propagation algorithms, Regularization and Optimization. Difference between typical machine learning and deep learning <b>Practice Session:</b> Introduction to Python Programming, Tensorflow and Keras. Making a Neural Network, training and testing. Saving the best weights and model
2.	Convolutional Neural Networks	Convolutional Neural Network (CNN), Convolution/Pooling layers, Activation maps, CNN as a feature extractor, Some Standard CNN architectures like
		AlexNet, VGGNet, GoogLeNet, ResNet and more recent networks <b>Practice Session:</b> Building a CNN model, CNN for image classification. Using Googel Colab for building and training Deep Learning Models.
3.	Autoencoders and Generative Adversarial Networks	Autoencoders (AEs), Undercomplete and Overcomplete AE, Convolutional AE, Regularization, Sparsely regulated AEs, Denoising and Stacked AE. Generative Adversarial Networks (GAN), Variants of GAN. <b>Practice Session:</b> Using pretrained models, Transfer learning, Applying GoogleNet and ResNet for specific problems. Using Autoencoders
<b>4.</b>	Recurrent Neural Networks	Brief Introduction to Recurrent Neural Networks, LSTM, GRU and their applications in machine translation, language modelling and sentiment classification. Practice Session: Building an Al application for sentiment classification from travel/hotel website user feedback data.
5	CNN Application to Classification and Detection problems	Object detection algorithms, R-CNN, Faster R-CNN, YOLO and SSD. Hands on- Object detection. <b>Practice Session:</b> Installing Darknet framework on your laptop, how to use YOLO for object detection.

Principal Coordinator - Academy	Co- Principal Coordinator - Academy	Participating Academies and Local Coordinator Details
Prof. Aparajita Ojha aojha@iiitdmj.ac.in M: 9425800334 IIITDM Jabalpur	Prof. R. B. V. Subramanyam eict.nitw@gmail.com M: 091210 16547 NIT Warangal	IIITDM Jabalpur- Dr. Irshad Ansari, Email: <u>irshad@iiitdmj.ac.in</u> <u>M: </u> 9109106995; Phone: +761-2794478;
		MNIT Jaipur - Dr. Santosh Vipparthi & Dr. Ramesh Battula, MNIT Jaipur skvipparthi@mnit.ac.in, M: 954 965 8135 rbbattula.cse@mnit.ac.in, M: 954 9654 395;
		NIT Patna - Dr. Subodh Srivastava, & Dr. Rajib Ghosh, subodh@nitp.ac.in M: 7565036892, rajib.ghosh@nitp.ac.in M: 8084023813
		NIT Warangal- Prof. R. B. V. Subramanyam eict.nitw@gmail.com, M: 091210 16547

#### 3: VLSI Chip Design Hands on using open source EDA

16 - 20 Dec 2019

Prospective external Experts- Prospective external Experts- (i) Dr. H. S. Jatana, (ii) Industry support- VLSI System Design Corp. Experts from host institutes- (vi) Prof. Gaurav Trivedi, IIT Guwahati, (vii) Prof. Vineet Sahula, MNITJ

The participants will additionally get exposure for integrating SCL (ISRO, Chandigarh) PDK library kit with open source CAD tools. Contents of VLSI Chip Design Hands on using open source EDA

S.No.	Module Name	Topics
1.	Study various components of RISC-V microprocessor based SoC and review all components using MAGIC Layout tool	<ul> <li>Brief introduction RISC-V ISA</li> <li>Overview of RISC-V based micro-processor and its related SoC</li> <li>Overview of QFN48 package, pads, macros and memory in MAGIC</li> <li>Idea of chip-planning, aspect ratio, utilization factor, power planning, decoupling capacitor, pads/memory and macro placement</li> </ul>
2.	Study the importance of standard cell library and design & characterize one cell using MAGIC Layout tool and ngSPICE for SPICE simulations	<ul> <li>Pros and cons of good-bad floorplan</li> <li>Introduction to lab to create floorplan for small design, which will be covered in detail on Day 4)</li> <li>System-on-Chip (SoC) planning and design concepts overview</li> <li>Physical design overview</li> <li>Why Libraries are called the soul and heart of semi-conductor industry?</li> <li>Standard cells library overview</li> </ul>
3.	Pre-layout timing analysis of SoC using OpenSTA, chip planning using MAGIC and block-level placement/routing using qflow RTL2GDS opensource EDA toolchain	<ul> <li>Art of layout – Stick diagram + Euler's path using MAGIC</li> <li>Characterization of important parameters using ngSPICE</li> <li>Introduction to 16-Mask CMOS process and its significance to chip design flow</li> <li>Logic synthesis and high fanout net synthesis interactive tutorial using Yosys opensource synthesis tool</li> </ul>
4	Hierarchical placement/routing using pads and blocks, and perform sign-off checks viz. LVS/DRC using Magic	<ul> <li>Introduction to static timing analysis and the related Industry standard reporting formats</li> <li>Pre-layout timing analysis of a design using OpenSTA opensource STA tool, which includes setup timing analysis for reg2reg and IO</li> <li>Introduction to clock tree synthesis (CTS) and its related checks viz. skew, latency, pulse-width, duty cycle</li> <li>Placement/Routing/CTS of a design using qflow opensource RTL2GDS tool</li> <li>Perform CTS quality and routing quality checks using OpenSTA</li> </ul>
5.	Post-layout timing analysis using OpenSTA and engineering change order (ECO) using Tritonsizer	<ul> <li>Full chip integration using MAGIC for a design with blocks and pads.</li> <li>Revise floorplan from Day 2</li> <li>Populate layout from library manager in MAGIC, select digital core block and additional pads</li> <li>Arrange pads and create a pad-frame hierarchy</li> <li>Project work using SiFive E31 RISC-V design blocks</li> </ul>

Principal	Co- Principal	Participating Academies and Local Coordinator
Coordinator- Academy	Coordinator- Academy	Details
Dr. Gaurav Trivedi trivedi@iitg.ernet.in M: 9435582802 IIT Guwahati	Prof. Vineet Sahula pmpradhan.fec@iitr.ac. @mnit.ac.in M: 954 9654 227 MNIT Jaipur	IIT Guwahati- Dr. Gaurav Trivedi trivedi@iitg.ernet.in M: 9435582802/8011000783 IIITDM Jabalpur- r. Dip Prakash Samajdar Email: dip.samajdar@iiitdmj.ac.in, M: 9477137992 Phone: +761-2794474 MNIT Jaipur- Dr. Menka Yadav, menka.ece@mnit.ac.in , M: 94167 94011 NIT Patna- Dr. Bal Chand Nagar & Mr. Pankaj Kumar balchandnagar@nitp.ac.in , M: 9993102487, pankajjha@nitp.ac.in , M: 7004727085,

## Course 4: AI & Machine Learning

#### 23 – 27 Dec 2019

Prospective Experts: (i) Experts from NVIDIA, from IITM/IISc Bangalore/IIT Gandhinagar, Experts from host institutes-Dr. R. Balasubramanian (IIT Roorkee) and Dr. Partha Pratim Roy (IIT Roorkee)

# Module details of AI & Machine Learning

S.No	Module Name	Topics
1.	AI Fundamentals	Fundamental Concepts of AI: Agents, environments, general model; Problem Solving techniques.
2.	Search Techniques & Knowledge Representation	Uninformed search, heuristic search, adversarial search and game trees; Solution of constraint satisfaction problems using Search. Propositional and predicate calculus, semantics for predicate calculus, inference rules.
3.	ML Fundamentals	Basic machine learning concepts and examples, Regression Analysis, Decision trees
4.	Machine Learning Algorithms	Supervised and Unsupervised Learning, Ensemble methods (Boosting, Bagging) Random Forest, Dimensionality Reduction (PCA, LDA, KPCA), SVM
5.	Neural Network & its Applications	Artificial Neural Network (Multi-Layer Perception), An Insight on Deep Learning Algorithms, Applications in Imaging & Data Analytics

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Principal Coordinator - Academy	Co- Principal Coordinator - Academy	Participating Academies and Local Coordinator Details
Prof. Sanjeev Manhas samanfec@iitr.ac.in M: 7078627392 IIT Roorkee	Dr. S J Nanda sinanda.ece@mnit.ac.in M: 954 9654 237 MNIT Jaipur	MNIT Jaipur- Dr. Arka Prokash Mazumdar & Dr. Rahul Chaurasia, apmzumdar.cse@mnit.ac.in M:954 9654 8129 rahul.ece@mnit.ac.in , M: +91-9165971639 NIT Patna- Dr. M P Singh , & Dr. Rajeev Kumar Arya, eict@iitr.ac.in mps@nitp.ac.in , M: 9431200106 rajeev.arya@nitp.ac.in , M:813033645
		IIT Roorkee- Dr. R. Balasubramanian & Dr. Partha Pratim Roy balarfma@iitr.ac.in, M: 7078627392 proy.fcs@iitr.ac.in, 01332-286457

# 5. Natural Language Processing

## 6 – 10 Jan 2020

Prospective external Experts: (i) (ii) Prof. Pushpak Bhattacharya, IIT Bombay (ii) Prof. Rajeev Sangal, IIIT Hyderabad, (Consent awaited) (iii) Dr. Asif Ekbal, IITP (iv) Dr. Sriparna Saha, IITP Experts from host institutes- (ii) Dr. Atul Gupta, IIITDMJ (ii) Dr. J. P. Singh, NITP (iii) Dr.Namita Mittal, MNITJ,

## **Contents of Modules of Natural Language Processing**

S.No	Module Name	Topics	
1.	Intro and text classification	Processing Text using Perl • Use of Regular Expressions • Elements of Morphology • Character N-gram Based Text Mining • Text Classification	
2.	Language modeling and sequence tagging	texts as sequences of words. language modeling and use for suggests in search, machine translation, chat-bots, etc predict a sequence of tags for a sequence of words. part-of-speech tags, named entities or any other tags • Probabilistic Modeling • N-grams Model • HMM Model • Sum-product Algorithms	
3.	Vector Space Models of Semantics	higher abstraction for texts: vectors representing meanings traditional models of distributional semantics, cover modern tools for word and sentence embeddings, such as word2vec, FastText, StarSpace	
4	Syntactic Processing	Phrase Structure and Natural Language Syntax      Chart Parsing and CYK Algorithm     Probabilistic Context-Free Grammars	
5	Sequence to sequence tasks	a sequence to sequence task: machine translation, summarization, question answering, a general encoder-decoder-attention architecture	
6	Dialog systems	task-oriented dialog systems like Apple Siri or Amazon Alexa. main building blocks of such systems namely Natural Language Understanding (NLU) and Dialog Manager (DM)	
7	Unification-based NLP and Semantics	First-order Predicate Logic and Resolution      Classical and Feature-structure Unification      Unification-based Grammars	

Principal Coordinator - Academy	Support Coordinator - Academy	Participating Academies and Local Coordinator Details
Dr. J. P. Singh jps@nitp.ac.in Mobile: 8521159014 NIT Patna	Prof. Atul Gupta atul@iiitdmj.ac.in M: 94251 52499 IIITDM Jabalpur	IIITDM Jabalpur - Dr. Kusum Kumari Bharti, Email: <u>kusum@iiiitdmj.ac.in</u> M: 9406711296; Phone:+761-2794232;
		MNIT Jaipur - Dr. Namita Mittal & Dr.Satyendra Singh Chouhan, <u>nmittal.cse@mnit.ac.in</u> , M: 954 9654 394, <u>sschouhan.cse@mnit.ac.in</u> , M: 8954221599
		NIT Patna- Dr. M P Singh, Email: mps@nitp.ac.in M: 9431200106

#### 6. ICT Tools & Techniques for Teaching, Learning process & Institutes 13-17 Jan 2020

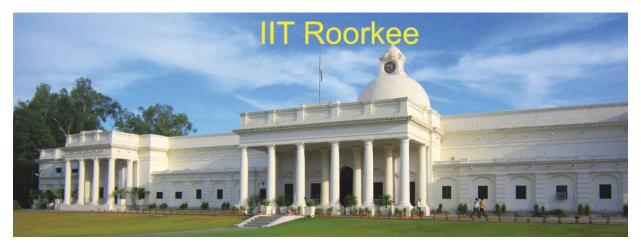
Prospective Experts: (i) Prpof. D. B. Phatak, IITB (ii) Prof. Prabhakar, IITK (confirmation awaited) Experts from host institutes- (iii) Prof. A. Ojha, IIITDMJ (iv) Dr. E. S. Pilli, MNITJ, Dr. Arka Prokash Mazumdar, MNITJ Dr. A. M. Joshi, Dr. R. K. Maddila, MNITJ,

# Contents of Modules of ICT Tools & Techniques for Teaching, Learning process & Institutes

Information and Communication Technology is expected to be a game changer for developing economy like India. Digital Services would be all pervading, ensuring faster action and quick dissemination of information. Education Institutes are expected to be first movers in this since usage here allows quick proliferation through the Society, also with the aim of increasing enrolment at Higher education level, the needs of providing quality education can only be met through ICT only.

S.No.	Module Name	Topics
1.	Use of ICT	Effective use of ICT for transforming pedagogy and empowering students; Empowerment through Communication skills
2.	Online/blended Learning	Adopting online/blended-learning in teaching learning process
3.	МооС	Use of MooC for contents management, class organization, assessment; MOOCS deployment and use; Building Course Website and Google Suite
4.	Teaching Learning Tools & e-content generation	Using tools for teaching learning- interactive whiteboards/smart-screens, video-conferencing, digital content creation, design of instructional material & presentation; Content Dissemination, Management, Version Control; ICT tool for English language teaching and learning; <u>Illustration tools and author aids</u> Visio
5.	Computer Based Training	CBT for letters generation, certificate preparation, report writing, Presentation and posters preparation, Spreadsheets & evaluation, Research Resources & Bibliography Management etc.

Principal Coordinator - Academy	Support Coordinator - Academy	Participating Academies and Local Coordinator Details	
IIITDM Jabalpur	f. L. Bhargava, MNIT Jaipur · Dr. Prashant Jain ⁄l: 9425800310, Phone: +761-	IIITDM Jabalpur - Dr. Atul Gupta, Email: <u>atul@iiitdmj.ac.in</u> M: 9425152499,Phone:+761-2794223	
NIT Patna- Dr. Bh	<u>in</u> , M: 9435582802 narat Gupta,	MNIT Jaipur- Dr. Amit M. Joshi & Dr. Ravi Maddila, amjoshi.ece@mnit.ac.in, M: 954 9654 227; rkmaddila.ece@mnit.ac.in M: 954 9654 238	
bharat@nitp.ac.in, M- 9331406964 NIT Warangal- Prof. R. B. V. Subramanyam eict.nitw@gmail.com, M: 091210 16547		NIT Patna- Dr. Bharat Gupta, bharat@nitp.ac.in, M- 9331406964	















# **INDIA'S FIRST MICROPROCESSOR!**



ESDM Make in India Initiative



Pratyush: India's fastest and first multi-peta-flops supercomputer

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Academy & States/UTs catred	Advisory Board Chairman	Chief Investigator	Contact Details at Academy
			For all general queries
Electronics & ICT Academy at IIT	Prof. T. G. Sitharam	Prof. Ratnajit Bhattacharjee	Ms Feroza Haque (PM)
Guwahati	director@iitg.ac.in	ratnajit@iitg.ac.in	Email: feroza.haque@iitg.ac.in
Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland,		M: 9954498116	M: 789 6233 561
Tripura,Sikkim			Website: www.iitg.ernet.in/eictacad/
Electronics & ICT Academy at IIITDM	Prof Sanjeev Jain	Prof. Aparajita Ojha	Ms Neha Rawat (BM)
Jabalpur	director@iiitdmj.ac.in M:	aojha@iiitdmj.ac.in	Email: academyiiitdmj@gmail.com ,
Madhya Pradesh, Chhattisgarh, Maharashtra		M:+91 9425800334	<u>neharawat@iiitdmj.ac.in</u>
			M: +91 9893443284
			Website: http://ict.iiitdmj.ac.in/
Electronics & ICT Academy at	Prof. Udaykumar R. Y.	Prof. Vineet Sahula	Dr. Shailesh Sharma (PM)
MNIT Jaipur	director@mnit.ac.in	vsahula.ece@mnit.ac.in	Email: academy@mnit.ac.in
Rajasthan, Gujarat, Dadra & Nagar Haveli, Daman & Diu		M: 954 9654 227	L: 0141-2715084
			M: +91 96724 72877
			Website: http://www.mnit.ac.in/eict
Electronics & ICT Academy at IIT	Prof. Abhay Karandikar	Prof. B. V. Phani	Email: eict@iitk.ac.in
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UP, Punjab, Haryana, Delhi		M: +91 9451423721	Website: https://ict.iitk.ac.in/
Electronics & ICT Academy at NIT	Prof. Pradip Kumar Jain	Dr. Bharat Gupta	Mr. Ram Gopal (TPO)
Patna	director@nitp.ac.in	bharat@nitp.ac.in	Email: eictapatna@nitp.ac.in
Bihar, Jharkhand, Odisha, West Bengal		M: 9331406964	M: +91 8434305807
			Website: http://www.nitp.ac.in/ict
Electronics & ICT Academy at IIT	Prof. Ajit K. Chaturvedi	Dr. Sanjeev Manhas	Mr. Prateek Sharma (PM)
Roorkee Jammu and Kashmir, Himachal Pradesh and	director@iitr.ac.in	samanfec@iitr.ac.in,	Email: <u>prateek2789@gmail.com</u> ,
Uttarakhand	1	eict@iitr.ac.in	M: +91 7078627392
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