

# Faculty Development Programme

on

**“AI and Machine Learning”**

**4<sup>th</sup> – 8<sup>th</sup> June 2018**

under

**Ministry of Electronics & Information Technology (MeitY)  
Government of India**

**Government of India Initiative for Employability Enhancement**

Organized at

**Department of Computer Science and Engineering**

**Shri Ramdeobaba College of Engineering and Management,  
Nagpur (State: Maharashtra), India**



<p><b>ABOUT THE FACULTY DEVELOPMENT PROGRAMME</b></p>	<p><b>Shri Ramdeobaba College of Engineering and Management [RCOEM], Nagpur</b>, is one of the Nodal centres for conduction of Faculty Development Programmes in core areas of Electronics and Information &amp; Communication Technology (ICT) streams that have been planned by Electronics and ICT Academies at 07 (seven) institutions viz. IIT Guwahati, IIT Kanpur, NIT Warangal, NIT Patna and IIITDM Jabalpur and IIT Roorkee, MNIT Jaipur for delivery during Summer (i.e., May - June 2018). All these summer courses will be offered through National Knowledge Network (NKN) by inviting experts from IITs, NITs, IIITs and other premier institutes/industries.</p> <p>Brief information about all the Academies is available at : <a href="http://Meity.gov.in/content/scheme-financial-assistance-setting-electronics-andict-academies">http://Meity.gov.in/content/scheme-financial-assistance-setting-electronics-andict-academies</a></p>
<p><b>ABOUT THE INSTITUTE</b></p>	<p>RCOEM, an autonomous institution permanently affiliated to Rashtrasant Tukadoji Maharaj Nagpur University, an ISO 9001:2008 certified institution. NAAC accredited with 'A' grade was established in 1984 by Shri Ramdeobaba Sarvajanik Samiti (SRSS), a trust which has been involved in community service for over four decades. More than 30 years of existence has helped RCOEM grow deep roots and establish a strong foundation in technical education.</p> <p>The Department of Computer Science &amp; Engineering aims to continually improve the education environment, in order to develop graduates with strong academic and technical background, needed to achieve distinction in the discipline. The Department has good interaction with Software industries, Government organization and Private Sectors around the region.</p> <p>Institute web-site: <a href="http://www.rk nec.edu">http://www.rk nec.edu</a></p>
<p><b>COURSE NAME:</b></p>	<p><b>AI AND MACHINE LEARNING</b></p>
<p><b>PROPOSED DATE:</b></p>	<p><b>4<sup>th</sup> – 8<sup>th</sup> June 2018</b></p>
<p><b>Principal Coordinating – Academy:</b></p>	<p><b>IIT Roorkee</b></p>
<p><b>Co-principal Coordinating – Academy:</b></p>	<p><b>MNIT Jaipur</b></p>
<p><b>Target Beneficiaries:</b></p>	<p>Interested Faculty of engineering/technical institutions is eligible to attend the Faculty Development Programme</p>
<p><b>Number of seats at each offering Academy:</b></p>	<p><b>20</b></p>
<p><b>Course Duration:</b></p>	<p>Each summer course is designed for 40 hours (Theory Lectures: 20-25 hours, Hands-on/Design-oriented/activity linked/Problem Solving/Case Studies sessions/Quiz Tests: 15-20 hours)</p>

## REGISTRATION PROCEDURE

No Registration fee is charged for attending this programme planned at any designated academies/Remote centers. However, candidate should **submit a refundable Demand Draft of Rs.1000/-** along with **application** and the same will be handed over to participant on the last day of the training. Satisfactory Certificate will be given subject to fulfillment of attending all sessions, submission of assignments and clearing the tests.

Candidates could apply for training at academy locations or identified centers as per the convenience. For details about identified centers, please refer to respective academy websites.

### Last Date for Submission of Applications and Intimation of Selection:

IMPORTANT DATES	
Last Date for Submission of Application form	28 <sup>th</sup> May, 2018
Selection list Intimation by E-mail/Display in web site	31 <sup>st</sup> May, 2018

### Accommodation

Boarding and Lodging at Hostels/Guest House will be provided at free of cost only at Identified E & ICT Academies. For details refer respective Academy websites. At other identified Remote centers only working lunch and snacks will be provided

### Travel

No Travel Allowance will be paid to the participants.

### How to apply:

- A duly filled in application form in the prescribed form signed by the Head of the Institute to which candidate belongs (along with demand draft) **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 DD can also be submitted in the online mode to Local Coordinator of the **respective academy**.

### \*Postal Address of Local Coordinator:

#### Coordinator, FDP on AI and Machine Learning

Department of Computer Science & Engineering  
Shri Ramdeobaba College of Engineering and Management,  
Ramdeo Tekdi, Gittikhadan,  
Katol Road, Nagpur - 440 013 (M.S.) (India)

### MODE OF PAYMENT:

Academy Payment through DD Name	Payment through DD [interested candidates must pay to <b>ANY ONE</b> of the following Academies only]
IIT Roorkee	<b>DD in favor of "Dean SRIC IIT Roorkee" payable at Roorkee AND</b> Submit Demand Draft to <b>stated postal address*</b>
MNIT Jaipur	<b>DD in favor of "Electronics and ICT Academy, MNIT Jaipur" Payable at Jaipur AND</b> Submit Demand Draft to <b>stated postal address*</b>

## Module details of AI and Machine Learning:

(Offered during 4<sup>th</sup> - 8<sup>th</sup> June 2018)

S. No.	Module Name	Topics
1.	AI Fundamentals	Fundamental Concepts of AI: Agents, environments, general model; Problem Solving techniques
2.	Search Techniques	Uninformed search, heuristic search, adversarial search and game trees; Solution of constraint satisfaction problems using Search
3.	Knowledge Representation	Propositional and predicate calculus, semantics for predicate calculus, inference rules
4.	Machine Learning Structures	Supervised and unsupervised learning. Artificial Neural Network (Multi-Layer Perception), Radial Basis Function, Functional Link ANN, Self-Organizing Map, Clustering Adaptive FIR and IIR structures
5.	Machine Learning Algorithms	Least Mean Square algorithm, Back Propagation, Genetic algorithm, Differential Evolution, Particle Swarm Optimization and Other Nature Inspired Optimization

### Coordinators at the Host Institute [RCOEM, Nagpur]

#### **Prof. Dilipkumar Borikar**

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Contact details: +91-9834616665

#### **Prof. Heena Agrawal**

Asst. Prof., CSE Dept., RCOEM, Nagpur