



NETAJI SUBHASH ENGINEERING COLLEGE

Techno City, Garia, Kolkata – 700 152

REPORTS ON PROFESSIONAL DEVELOPMENT PROGRAMMES ORGANIZED DURING THE LAST FIVE YEARS

During the last five years, various departments of Netaji Subhash Engineering College solely or in association with IITs and MHRD, Govt. of India organized several professional development programs for teaching staffs. In every year, some departments of the institution have arranged short-term training programs (STTPs), workshops and faculty development programs. A brief report on various programs organized by the institution yearly is presented here.

Programs organized in 2017-2018

In 2017, the department of Computer Science & Engineering and Electrical Engineering organized two programs, where four and eight faculty members respectively participated. The first one was a Foundation Program in ICT for Education' from 3rd August, 2017 to 13th September, 2017 and the second one was a Two-week ISTE STTP on Electric Power Systems, from 10th July, 2017 to 15th July, 2017. Besides this, the department of Electronics & Communication Engineering organized two seminars, one on Remote sensing and Application RSA-2017; and the other on Circuits and Devices 2017, where 15 and 17 faculty members were participated respectively.

In the one-day seminar on Remote Sensing and Application, Dr. Koushik Dutta, Netaji Subhash Engineering College, Dr. Saurabh Das, DST INSPIRE Faculty at Center for Soft computing Research, Indian Statistical Institute, Kolkata and Dr. Abhirup Das Barman, Institute of Radio Physics and Electronics, University of Calcutta, Kolkata were the speakers. Prof. Koushik Dutta explained the theories and physics behind antenna radiation. Dr. Saurabh Das spoke about big data and how can it be used for huge climatic data. Prof. Abhirup Das Barman talked about 4G mobile systems. Few new technologies have been introduced in 4G. He discussed the physical layer issues of OFDM based LTE-4G downlink air interface. Future challenges of spectrum scarcity and its mitigation techniques had also been discussed. Characteristics of cellular network for future 5G highlighted.

The one-day seminar on Circuits and Devices had Dr. Jawad Yaseen Siddiqui, University of Calcutta, Dr. Debaprasad Das, Assam University and Dr. Atanu Kundu, Heritage Institute of Technology, Kolkata as the eminent speakers. Dr. Jawad Yaseen Siddiqui, faculty of University of Calcutta, discussed the benefits of the IEEE membership. Dr. Debaprasad Das explained about



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“Integrated circuits design and its challenges” and he also discussed about new techniques of the circuit design. Dr. Atanu Kundu spoke about Advanced MOSFET for analog/radio frequency circuits. Few new modifications have been introduced in MOSFET structure.

Electrical Power System, being a core course for undergraduate program in Electrical Engineering, the STTP was typically meant for participants who already have some introductory knowledge on Electric Circuits, Electric Machines and Control Systems. The course covered the basic foundations of Power System Analysis, which can be used to assess effective Electric Power Delivery in practice. During the training program, need for renewable energy resources were also brought out. Participants were exposed to usefulness of employing ICT in developing smart grids. Some of the topics covered during the program includes Introduction and Components of Power System, Steady State Operation of Power System, Power Flow Analysis, Symmetrical Components, Symmetrical and Un-symmetrical Faults, Power System Stability, Economic Operation of Power System, Power System Protection, Application of Software for Power System Analysis, Recent Trends and Application of ICT in Power System Operation, Overview of a Laboratory Course on Power Systems, Control of Power Systems and Renewable Energy Issues. Some eminent professors from the department of Electrical Engineering of IIT Kharagpur, IIT Bombay and IEST Kolkata such as Prof. N. K. Kishore, Prof. Sreevardhan A and Prof. Goutam Bandyopadhyay gave lectures on the aforesaid topics.

After completion of this course, a participant was expected to properly identify the components of an Electric Power System and examine its inherent complexity. He/she also acquired the ability to explore different ways to develop an algorithmic solution by analyzing the various alternatives and to finally develop a good practical solution that is supported by logical and theoretical justification. A faculty member in the department of Electrical Engineering /Electrical and Electronics Engineering with basic understanding of Electrical Power system can enhance their knowledge in Electric Circuits, Signals and Systems, Electric Machines, Power Electronics, Power Systems, Energy Science and High Voltage Engineering.

Programs organized in 2016-2017

In 2016-2017, the department of Information Technology of this institution organized overall four programs: 1) a Faculty Enabled Program on Object Oriented Programming with JAVA and RDBMS from 2nd July, 2016 to 13th July, 2017; 2) two Workshops on Pattern Recognition, one from 20th July, 2016 to 29th July, 2016 and the other from 18th January, 2017 to 20th January, 2017; 3) a one-day ACM India Education Committee & iSIGCSE Workshop on Computing Curricula for India: Learning Outcomes, Pedagogy and Assessment on 9th January, 2017; and 4) a one-day workshop on Virtual Lab on 21st April, 2017. Except the last program, one participant



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attended all the remaining programs, whereas, in the last program, the number of participants was eight.

The first one included Java and DBMS related problem trivial problem solving which enriched its thirty participants in better understanding on Java programming and database queries and also their correlations. The second one dealt with the basics of machine learning, where upon completion of the program, the participant was able to understand machine-based learning in a better way by using various well-known algorithms. The third program helped the faculty member in computing studies, where he or she enriched with better understanding on pedagogy, assessment and learning outcomes. The last one gave an exposure on virtual reality to its eight participants.

Besides the above programs, the department of Electronics & Communication Engineering organized a workshop from 26th December, 2016 to 4th February, 2017 on CMOS, Mixed signal and radio frequency VLSI design, 11 participants were successfully completed the course. The principal objective of this workshop was to train and educate in the advance field of microwave and VLSI engineering. The workshop focused upon exploring new avenues with latest advances in the field of microwave and VLSI technology through lectures of distinguished faculties. Prof. Indrajit Chakrabarti, Dept. of Electronics & Communication Engineering, IIT Kharagpur and Prof. T.K. Bhattacharyya, Dept. of Electronics and Electrical Communication Engineering delivered the key-lectures to the participants.

Programs organized in 2015-2016

In 2015-2016, the institution arranged three STTPs, two of which lasts for two weeks and the duration of the remaining one is five days. STTPs are based on Environmental Studies and on Engineering Physics under National Mission on Education through ICT (NMEICT), MHRD, where thirty and ten faculty members respectively participated. Besides, one faculty member participated on a five-day STTP on Computational Intelligence for Optimization Problems from 28th March, 2016 to 1st April, 2016. Besides these, the department of Biomedical Engineering organized one Faculty Development Program from 9th July, 2015 to 10th July, 2015 where six faculty members participated. Lastly, one 6-day workshop on Introduction to Structural Engineering and one 4-week workshop on Use of ICT in Education for Online and Blended Learning were organized by Civil Engineering department and Computer Science Engineering department with six and twenty two participants respectively who have completed the program successfully.

The two-week ISTE STTP on Environmental Studies, as had been organized by the department of Basic Engineering Science includes the lecture sessions on Sustainable Development, Ecology, Biodiversity, Natural Resources (Food, water, energy, forest), Environmental Pollution, Social issues and Environment, Ethics, Economics, and Global Climate



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Change. Some eminent professors including Prof. Munish Chandel, Prof. Nikhil K Kothurkar, Amrita Vishwa Vidyapeetham, Prof. Maya Mahajan, Prof. K. Narayanan, Prof. Ranjan Kumar Panda, Prof. D. Parthasarathy, Prof. Harish Phuleria and Prof. Virendra Sethi from IIT Bombay delivered lectures on the aforesaid topics. Since the workshop was truly a multidisciplinary in nature, besides refreshing the knowledge and skill of the teachers who teach the particular subject, the workshop also enlightened the teachers from other subjects and disciplines about the topics.

The course of two-week ISTE STTP, as had been organized by the department of Basic Engineering Science, was modeled after the Engineering Physics curriculum recommended by AICTE. The course consisted of several basic areas of Physics with emphasis on applications of principles of Physics such as, Optics, Electrostatics and electrodynamics, Special Theory of Relativity, Quantum Mechanics, Crystallography and Solid State and Nuclear Physics. Prof. Shiva Prasad, Prof. Dipan K. Ghosh and Prof. K. G. Suresh from the Department of Physics, IIT Bombay were the eminent speakers in the program. Since the course was a refresher course, it helped the faculty members to enhance their teaching skills in these topics. The final edited audio-visual content, along with other course material, were released in Open Source. The content can be freely used by all teachers, students and other learners.

The program on Computational Intelligence for Optimization Problems dealt with real-time problem handling based on different types of optimization techniques, during which the faculty member acquired better understanding on real-time examples to manage distinct optimization techniques available in the market.

IIT Kharagpur organized two weeks ISTE STTP on Introduction to Structural Engineering under National Mission on Education through ICT (MHRD, Govt. of India. The participating teachers of Netaji Subhash engineering College completed the equivalent of two-week full time work online, spread over six physical weeks where video lectures and assignments were uploaded beforehand. After completing the online assignments spread over 4 to 5 weeks the faculty members were present at the Remote Center (One remote center was Netaji Subhash Engineering College) for six days (from 4th January, 2016 to 9th January, 2016) face to face interaction and lecture sessions through A-VIEW technologies through internet. The workshop has benefited faculty members who are teaching subjects like structural analysis, design of steel structures, design of R.C. structures etc. Eminent personalities from IIT Kharagpur including Prof. Baidurya Bhattacharya, Prof. S. K. Bhattacharyya and Dr. Sushanta Chakraborty delivered speeches on different topics of Structural Engineering such as Structural Analysis, Design of Steel Structure and Design of RC structures. The program certainly helped teachers to enhance teaching skills in aforesaid subjects. All course materials and audio visual contents were given to participating teachers and some important video lectures were shown to students. Teachers are motivated to attend workshops, seminars and other programs related to advanced technologies used in static and dynamic structural analysis, various construction



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methodologies used in recent times. Seminar and project topics (Design of multistoried building using STAAD Pro, Design of Intze tank etc) are chosen in such a manner that students are keen to develop their knowledge/ innovative idea on structural engineering related subjects.

The four- week AICTE approved FDP by IIT Bombay on "Use of ICT in Education for Online and Blended Learning" was organized by the department of Computer Science & Engineering, where the following faculty members played the roles of coordinators:

1. Workshop Coordinator: Dr. Atanu Das, Dept. of CSE, NSEC
2. Remote Centre Coordinator: Prof. Swapna Roy, Dept. Of EE, NSEC
3. Course Coordinator: Professor Deepak B. Phatak, Department of Computer Science & Engineering, Indian Institute of Technology Bombay, Mumbai - 400076

The program was sponsored under the National Mission on Education through ICT (MHRD, GOVT OF INDIA) and conducted by Netaji Subhash Engineering College, Kolkata & IIT Bombay jointly. The date and duration of the program were as follows:

2nd May to 10th July 2016, Assignment Submission Complete by 10th August, 2016

Face to face sessions at NSEC: 14, 15 May; 4, 5 June; and 25, 26 June 2016.

The FDP is primarily designed as a MOOC (Massive Open Online Course). It will have the following 3 components:

1. Online work by individual participants: Each participant is expected to access the online platform, using a PC at home or office on any convenient day and time during the week, with an online test every week. Each participant has to spend 6 to 8 hours of efforts per week during this component of the FDP.

This activity will be spread over 10 calendar weeks: 2 May 2016 to 10 July 2016.

2. Face-to-Face interaction: Participants will have to physically attend these sessions at their chosen/designated Remote Centers (RCs), established across the country by IIT Bombay.

Focused interactive sessions with the participating teachers, will be conducted by the faculty from IIT Bombay. The discussions and local tutorial sessions will be moderated by the Workshop Coordinators appointed at each RC.

This activity will be conducted on 3 weekends: 14, 15 May; 4, 5 June; and 25, 26 June 2016.

3. Team assignment: This is to be done by teams of 3 to 5 members, formed from amongst the participants at each RC. The team is required to create and review the assignment, and submit the same online. Here again, each participant has to spend adequate effort, albeit in a coordinated manner with other members of the team. It will be undertaken from 11 July 2016, after completion of the 10 weeks of online activity, and will have to be submitted within four calendar weeks, before 5 August 2016.

The following eminent speakers took classes online and delivered lectures on various topics:

Prof. Deepak B. Phatak, Dept. of CSE, IIT Bombay

Prof. Sridhar Iyer, Dept. of CSE, IIT Bombay

Prof. Uday N. Gaitonde, Dept. of ME, IIT Bombay

Prof. Sahana Murthy, Dept of ET, IIT Bombay



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Participation fees were fixed at Rs.1000/-, which were paid to the RCs. These covered the cost of arranging face-to-face component of the FDP at RCs. Cost of food and accommodation was to be borne by the participants. There were no fees to be paid to IIT Bombay. The participants registered on the IITB-NMEICT website for the FDP. Next, their registration was verified by IIT Bombay. After the verification, the participants were intimated. After this the participant had to pay Rs.1000/- as the participation fees to the RCC. Ordinarily, this payment was to be made before beginning of the FDP. However, as a special case, participants of this FDP were permitted to pay the fees on the first day of face-to-face interaction (on 14 May 2016). Registration began on 19 April 2016. After the successful completion of the course, certificates were issued by IIT Bombay, only to those participants who successfully complete prescribed online tests with minimum 50% aggregate score, meaningfully participate in face-to-face sessions, and submit the team assignment of an acceptable quality. AICTE will recognize this as a four-week FDP.

Following are the details of participants during the course:

Total No of Enrolled Participants: 24

Total No of Registered Participants: 23

Total No of Participants Completed FDP (Tentative):22

Sl. No.	Name of the Institute	Number of Participants
1	Netaji Subhash Engineering College, Kolkata	17
2	B. P. Podder Institute of Management and Technology	1
3	Greater Kolkata College of Engineering of Management	3
4	Future Institute of Technology	2

Programs organized in 2014-2015

In 2014-15, institution organized six ISTE STTP workshops, two faculty development programs and one faculty enablement program and one workshop on funding opportunities and success stories of capturing grant.

In general, ISTE workshops had two-week duration, except one on Design of Algorithm, where twenty one faculty members participated for one week, during 25th May, 2015 and 30th May, 2015. The workshop on funding opportunities and success stories of capturing grant, which was organized on 11th July, 2014 and 12th July, 2014 dealt with funding options and enabled the participant to have better understanding on how one can fetch funding from different sources. During the month of August and September, faculty development programs on Big Data and Pattern Recognition respectively were organized by the department of Information Technology.



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The main content in the FDP on Big Data included handling of huge amount of data, whereas the FDP on Pattern recognition put stress on better understanding of different types of prediction schemes. A five-day deep dive faculty enablement program enabled the faculty members about deep dive-based overall operations. A two-week ISTE STTP workshop on Pedagogy for Effective use of ICT in Engineering Education in January, 2015 dealt with varieties of ICT usage so that the participants would gather better understanding on information and communication technology. Another two-week workshop on Introduction to Design of Algorithm under National Mission on Education through ICT, as organized by the department of Information Technology during April-May, 2015 covered design and analysis of various algorithms.

The department of Computer Science & Engineering organized one five-day ISTE workshop on Design of Algorithm and one two-week ISTE main workshop on Cyber Security. A two week ISTE workshop on "Introduction to Design of Algorithms" was held from 25 May to 30 May, 2015 where at Netaji Subhash Engineering College a remote center was set up under the Dept. of Computer Science & Engineering. Dr. Swapna Roy was Center Coordinator who handled the technology infrastructure and other logistics. Dr. Piyali Chatterjee served the role of Workshop Coordinator for corresponding subjects whose duty was to help in conducting laboratories and tutorials. There were 26 participants including 2 outstation faculties from other universities. The course was on Algorithm Design that is core course for any undergraduate program in CSE. It covered the basic foundations of designing correct and efficient sequential algorithm, complexity analysis and fundamental design technique etc. The participants got audio visual contents and interacted with eminent speakers for clearing doubts. They participated in solving assignments, tutorials, quizzes etc. After the completion of course, all participants got merit certificates and hence the course was completed successfully. Through this workshop, an important initiative was taken by IIT Kharagpur to work with Engineering Colleges of India to enhance the teaching skills of faculty colleagues in core engineering and Science subjects under ten thousands teachers program. Participating teachers attended live lectures at a remote center close to their own colleges and also attended tutorial and lab sessions conducted in the same centers. The lecture transmission and live interaction took place in distance mode using A-VIEW technology through Internet at the selected remote centers across the country. This initiative was a part of the "National Mission on Education through ICT" which is supported by MHRD.

A two week ISTE workshop on "Cyber Security", initiated by Indian Institute of Technology (IIT) – Bombay, Mumbai, India was held from July 10th 2014 to July 20th 2014 at Department of Computer Science and Engineering, Netaji Subhash Engineering College, Kolkata, India, which is a remote center of IIT – Bombay, Mumbai, India. Dr. Swapna Roy, Assistant professor, Dept. of Electrical Engineering of our college was Center Coordinator who handled the technology infrastructure and other logistics. Dr. Rajdeep Chakraborty, Assistant Professor, Department of Computer Science and Engineering of our college coordinated the workshop on "Cyber Security". There were 31 participants from Department of Computer



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Science and Engineering, Department of Information Technology and Department of MCA of our college. The course was on Cyber Security covering wide range of topics such as Secret Key Cryptography, Public Key Cryptography, Applications of the crypto hash, Key Management and PKI, Network Security, DDoS Attacks, Authentication Protocols, Transport Layer Security (SSL/TLS), Access Control and Firewalls, Software security, Worms, viruses, bots, etc., Malware protection, Web application security, Browser security, Intrusion detection and prevention. In this workshop various laboratories are also conducted such as DVWA, Wire Shark, Snort and Metasploit and the course was completed successfully. This initiative was also a part of the "National Mission on Education through ICT" which is supported by MHRD.

The remaining two programs in this academic year were organized by the department of Electrical Engineering. The first one was a two-week workshop organized on Control System from IIT Kharagpur and was held from 2nd December, 2014 to 12th December, 2014, where 22 participants successfully completed the workshop. Prof. Siddharyha Mukhopadhyay, Department of Electrical Engineering, IIT Kharagpur and Prof. Tapan Kumar Ghoshal, Department of Electrical Engineering, Jadavpur University were the eminent speakers during the course.

The course was covered into five following modules:

Module 1: Basic Concept: Introduction and significance of control system; Module 2: Model and response; Module 3: System Analysis; Module 4. Control Design; and Module 5: Implementation and validation.

The second program was a two-week ISTE STTP on Pedagogy for Effective use of ICT in Engineering Education from IIT Bombay from 5th to 31st January, 2015, where ten faculty members were participated. It is evident that educational technology is now ubiquitous; however, the potential of these technologies is lost without appropriate pedagogical strategies. Teachers not only need to have a knowledge of which ICT tools are relevant for education, but more importantly how to use them effectively. This training program focused on which pedagogical strategies are effective while using ICT tools in a given teaching-learning situation. In this training program, participants began by articulating the objectives for their course, and explored tools appropriate for some pedagogical goals of engineering courses. Participants learnt effective strategies for teaching with these tools. The training program gave participants several opportunities to apply these strategies to design materials and activities for their courses. The STTP was conducted in the blended-MOOC model. It consisted of the following parts:

1. Synchronous-remote-centre component, (SRC)-Part1:3 days + SRC-Part2: 3 days.

Participants assembled in their college. Sessions were conducted from IIT Bombay via A-view. The sessions were conducted in a workshop mode with extensive interaction. Participants worked in groups to explore educational technology tools and designed strategies for their courses.

2. Online component, "1-week equivalent".

Resources such as videos were posted on Moodle, and homework was assigned based on the resources. Participants were required to complete the assignments and submit them on Moodle



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by the due-dates. Feedback and help were provided via Moodle chat. Throughout the training program, participants worked on individual and group activities, participated in peer- reviews and involved in creating resources for the engineering teaching community.

Programs organized in 2013-2014

In 2013-14, institution organized one faculty development program (FDP), one international conference and nine workshops.

A two-week FDP under National Mission on Education through ICT (MHRD, Govt. of India) was organized from 1st July, 2013 to 18th July, 2013, where the key aspect was to enrich the participants for better understanding on information and communication technology and to give an exposure on overall ICT operations. In September, the 1st two-day International Conference on Computational Intelligence: Modeling, Techniques and Application (CIMTA-2013) was organized for sharing computational intelligence-based views and discussions in conference.

In this academic year, the workshops can be segregated in two categories: i) less than five days, for example, one or two-day workshop and ii) five or more than five days, for example, one-week or two-week workshops are also included in this category. Under the first category, there are five workshops, which are detailed as follows:

The department of Computer Science & Engineering (CSE) and Information Technology (IT) jointly organized Train The Trainer Workshop on “Mobile Application Development using Android” from 21st to 23rd April, 2014, where seventeen and eight faculty members from respective departments were participated. It was a three-day workshop (FEP) jointly approved by Netaji Subhash Engineering College and Infosys Campus Connect team on “Mobile Application Development using Android”. The following persons acted as coordinators:

- a) Workshop Coordinator: Dr. Anupam Ghosh, Dept. of CSE, NSEC
- b) Course Coordinator: Bhupesh Deka, Principal, ETA TAFF, Infosys Limited, Bhubaneswar.
- c) Sponsor: Netaji Subhash Engineering College, Kolkata

The daily course schedule was given below:

Day1:

Introduction to Mobility
Case Study briefing
Overview on Development Requirements and SDK Tools-Hands
User Interface in Mobile apps
User Interface in Android Mobile apps-hands-on



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Day2:

Services and Communications in Mobile Apps + Hands on
Data Handling in Mobile Apps
Data Handling in Mobile Apps-Hands on
Project Implementation

Day3:

Mobile Application Development-from and industry perspective
Project Presentation & Review
Post-TTT Feedback
TTT Road Ahead
Certificate Distribution

This TTT (Train the Trainer) program was primarily designed to set new standards for knowledge sharing between the industry and the educational institutions and contributed significantly towards strengthening the knowledge economy itself. Ms. Kalpana Balaraman, Infosys Ltd. Chennai-City, India and Mr. Bhupesh Deka Principal, ETA TAFF, Infosys Limited, Bhubaneswar were the teaching faculty in this program. Following are the details of participants in this program:

Total No of Enrolled Participants: 24

Total No of Registered Participants: 33

Total No of Participants Completed TTT (Tentative):57

Sl. No.	Name of the Institute	Number of Participants
1	Netaji Subhash Engineering College, Kolkata	17
2	BITM, Santiniketan	3
3	Meghnath Saha Institute of Technology	3
4	TICT	3
5	Techno India,Kolkata	3
6	Gurunanak Institute of Technology	3
7	RungtaGroup of Colleges	3



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8	Bengal Institute of Technology	3
9	Nurula Institute of Technology	3
10	Calcutta Institute of Technology	3
11	B.P. Poddar Institute of management and Technolgy	3
12	College of Engineering & Management	3

Train The Trainer Workshop on “J2EE”, as organized by the department of Information Technology from 17th to 19th November, 2013 was organized for better understanding on J2EE programing using different examples. On the other hand, workshop on Cloud Computing & Aneka Platform on 16th April, 2014 dealt with details of Aneka, where the participants were enriched with basic understanding on Aneka. The remaining two workshops, one on Computer Networking, and the other on Cloud Computing and Cryptography was organized in consecutive two days, on 28th and 29th April, 2014 respectively. The first workshop covered basics of computer networking, where participant understood computer network and its related protocols using distinct layers after the completion of the workshop. On the other hand, the second workshop offered cloud computing related encryption, where the participant had a better understanding on cloud architectures and its related encryption models.

The second category of workshops includes four workshops, where the duration varies from five days to two weeks. A two week ISTE workshop on “Introduction to Computer Programming” was held as per following schedule: One week full time work to be completed online (11th May – 15th June 2014) followed by One week Physical participation (16th June – 21st June 2014). Netaji Subhash Engineering College was a remote center (ID: 1266) set up under the Dept. of Computer Science & Engineering. Dr. Swapna Roy was Center Coordinator who handled the technology infrastructure and other logistics. Mr. Sumanta Das served the role of Workshop Coordinator for corresponding subjects whose duty was to help in conducting laboratories and tutorials. There were 27 participants from CSE department including 1 outstation faculties from other universities and 5 participants from IT department. The course was on Computer Programming that is core course for any undergraduate program in CSE. It covered the basic foundations of designing correct and efficient Computer Programs, complexity analysis and fundamental design technique etc. The participants got audio visual contents and interacted with eminent speakers for clearing doubts. They participated in solving assignments, tutorials, quizzes etc. After the completion of course, all participants got merit certificates and hence the course was completed successfully.

Two-week ISTE workshops are conducted during the vacation periods in summer and winter. Participating teachers attend live lectures delivered by IIT faculty at a remote center close to their own college, and also attend tutorial and lab sessions conducted in the same centers. The



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lecture transmission and live interaction takes place in distance mode using the AVIEW technology through internet, at selected remote centers across the country. This initiative is part of the 'National Mission on Education through ICT,' which is supported by MHRD. Faculty coordinators are appointed at each remote centre to handle the technology infrastructure and other operational logistics. Additionally, for each workshop there will be a workshop Faculty Coordinator for that subject, who will help in the conduct of labs and tutorials at each center. Under this initiative, the department of Electrical Engineering organized a two-week main workshop on Signals & Systems from IIT Kharagpur during 2nd and 12th January, 2014, where 43 faculty members were participated and successfully completed. Prof. Siddharyha Mukhopadhyay, Department of Electrical Engineering, IIT Kharagpur and Prof. Tapan Kumar Ghoshal, Department of Electrical Engineering, Jadavpur University, Kolkata delivered their lectures in the workshop. The course modules included five parts, such as:

Module 1. Basic Concept: Introduction and significance of control system

Module 2. Model and response

Module 3. System Analysis

Module 4. Control Design

Module 5. Implementation and validation

The remaining two workshops apparently dealt with similar topic, for example Computer Networking, where the organizers designed the course module to enrich the participants in protocol designs.

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