PROGRAMME CALENDAR 2019-20

National Institute of Technical Teachers' Training and Research, Kolkata

TECHNICAL EDUCATION MISSION 2020

TECHNICAL EDUCATION VISION 2020

NITTTR, Kolkata envisions to be the lead resource institute for promoting excellence in technical education, management education and vocational education & training system

- To introduce emerging scientific technologies for development of effective teaching-learning system in technical education,
- To increase the outreach of training by adopting flexible & Open Learning Technology,
- To integrate the world of work with the technical education system,
- To assist policy makers as a think-tank in formulating TVET strategies,
- To offer extension services and consultancy appropriate to TVET system, in collaboration with industry and community partnership,
- To develop and introduce Quality Management System,
- To share experience and collaborate with national and international agencies involved in technical education for mutual benefits,
- To undertake research in different areas of TVET system.

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About Us

National Institute of Technical Teachers' Training & Research (NITTTR), Kolkata was established in 1965 as Technical Teachers' Training Institute, Calcutta. This was the first of four such Institutes (other three being at Chandigarh, Bhopal and Chennai) established by the Department of Education, Govt. of India as fully centrally funded Autonomous Institution. The primary focus of the Institute is to provide in-service training to the teachers and staff of Degree and Diploma level technical institutions and conduct activities related to the quality improvement of the technical education system of the country. NITTTR, Kolkata has been actively involved in improvement of quality of the technical education system in various states including those in the north-east through innovative academic interventions, providing assistance to policy makers at the national and state levels, in formulation of educational plans, projects and their implementation in the fast changing scenario. By virtue of working closely over the last few decades, this institute has developed a thorough understanding of the technical educational needs of the states in the eastern region including those in the north-east. Govt. of India, in 2003, accorded national status to the Institute, in recognition to the expert services rendered for overall improvement of quality of Technical Education System. NITTTR, Kolkata acts as a catalyst in introducing changes in the various components of technical education system, plays a proactive role in identifying changes in the industry, technology, economy and society and acts as a facilitator in this process of change.

Some of the notable national level projects in which the Institute is associated are Nodal agency to Centrally Sponsored Community Development through Polytechnic Scheme, Designing & conducting AICTE sponsored "Induction Training Programme" for fresh teachers of engineering and polytechnic colleges, Facilitating implementation of Centrally sponsored Scheme for Integrating Persons with Disabilities (PWD) in the mainstream of Technical & Vocational Education etc.

The focal activities of the Institute are Short Term Training, Curriculum Development, Learning Resources Development, Research in the field of Technical Education System, Educational Management and Extension Services. Besides regular activities, the Institute has been offering, since 2003, AICTE approved M. Tech. Degree Programme in Manufacturing Technology, affiliated to WBUT. During 2005-2006 two more M. Tech. Programmes namely Multimedia & Software Systems and Mechatronics Engineering were started. The M. Tech. Programme in Structural Engineering was also started from 2011-12. The Institute has highly qualified faculty members and excellent infrastructural support in the form of well-equipped laboratories, computers, library facilities, Welding Centre, CAD/CAM and other resources. The institute has two Extension Centres one at Guwahati and the other in Bhubaneswar for reaching out to its clients in the North-east and Orissa. At present this Institution is also focusing on others, Teachers' Training through ICT Mode.

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Faculty and Staff Members of NITTTR, Kolkata

4th Regional Workshop on
Technical Education System in North Eastern States, 2018
"Challenges in Achieving Excellence through Accreditation in Polytechnics of North Eastern States"
April 7 – 9, 2018
at Hotel Vivor, Kohima, Nagaland

Programme Co-ordinator and Participants of STTP on " Student Friendly Methods of Instruction" at NITTTR, Kolkata from August 6-10, 2018

Preface

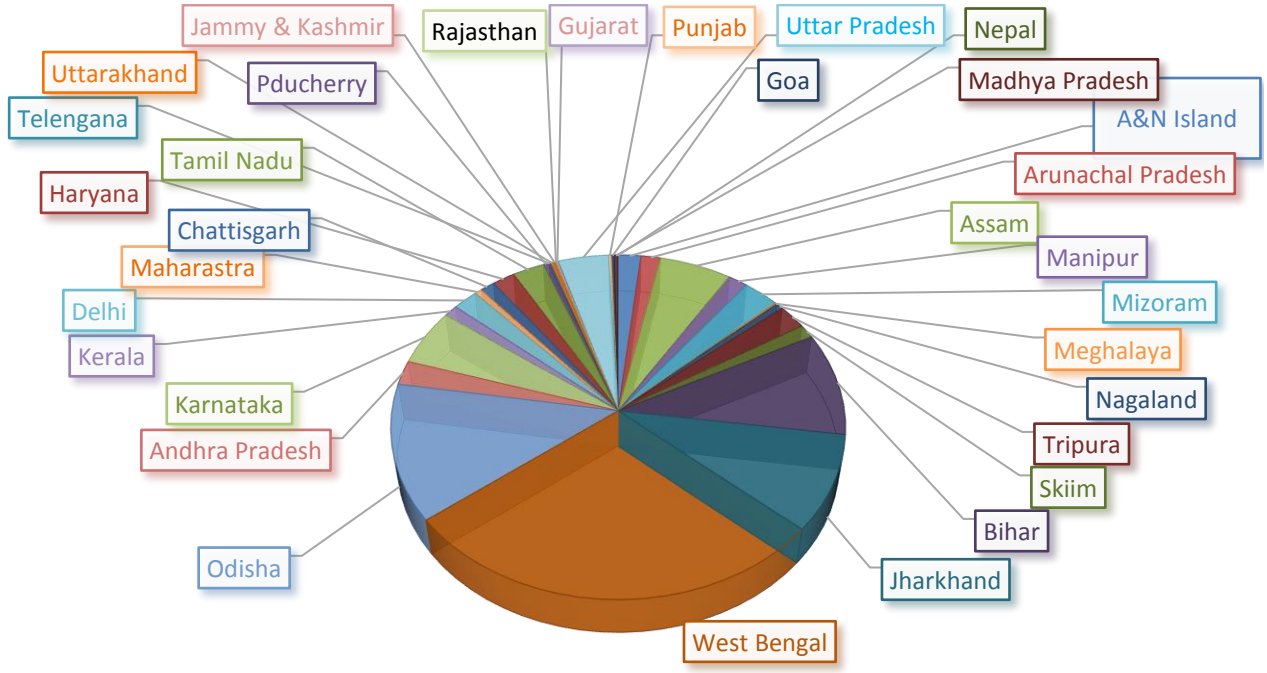
Like previous years, National Institute of Technical Teachers' Training & Research (NITTTR), Kolkata has prepared its Programme Calendar for the year 2019 – 20 based on the training need analysis (TNA) conducted for the technical institutes of Eastern Region of the country. The TNA questionnaire was prepared to receive feedback on the attributes like past training experiences, content updating / refreshment advancement in respective subjects / specialization areas and Education, Pedagogy, Teaching Skill Development, Curriculum Development, Rural & Community Development, Media Development, Maintenance of Office Equipment, Management, Communication etc.

In order to fulfill the needs of technical teachers of the eastern regions, Short- Term Training programmes (STTP) in the following modes are planned.

1. Contact mode at NITTTR, Kolkata and/or the extension centres
2. ICT-based Programmes
3. In-House Programmes
4. Demand-based Special Programmes
5. Collaborative Programmes

The schedules of the trainings planned in this calendar are not exhaustive. The Institute also provides trainings based on specific needs of various stake holders including Private Technical Institutes following the guidelines of the Institute. Further, In-House training may be organized to fulfil the requirement of Faculty Development Programme (FDP) under TEQIP/NEQIP of various Technical Institutes.

It is intended that all Technical Institutes will come up with their needs and take advantage of services provided by NITTTR, Kolkata. This helps to upgrade the learning-teaching system of the institutes and in turn, enriches the education system of the country.



A Brief List of the Institutes where In-House Programmes were conducted in 2018-19

Sl. No.	Name of the Institute	State
1.	Dr. B. R. Ambedkar Government Polytechnic	A & N Island
2.	Annamacharya Institute of Technology and Science, Tirupati	Andhra Pradesh
3.	Sasi Institute of Technology and Engineering	Andhra Pradesh
4.	National Institute of Technology	Arunachal Pradesh
5.	North Eastern Regional Institute of Science & Technology	Arunachal Pradesh
6.	Bongaigaon Polytechnic, Bongaigaon	Assam
7.	Central Institute of Technology, Kokrajhar	Assam
8.	Dibrugarh University Institute of Engg. & Technology, Dibrugarh	Assam
9.	Bhagalpur College of Engineering, Bhagalpur	Bihar
10.	Gaya College of Engineering, Gaya	Bihar
11.	Government Polytechnic, Gaya	Bihar
12.	Government Polytechnic, Katihar	Bihar
13.	Government Women's Polytechnic, Patna	Bihar
14.	Muzaffarpur Institute of Technology, Muzaffarpur	Bihar
15.	Chhattisgarh Swami Vivekanand Technical University, Bhilai	Chhattisgarh
16.	Government Polytechnic, Jhajjar	Haryana
17.	Birla Institute of Technology, Mesra	Jharkhand
18.	Cambridge Institute of Technology, Ranchi	Jharkhand
19.	Government Polytechnic, Bhaga, Dhanbad	Jharkhand
20.	Government Polytechnic, Koderma	Jharkhand
21.	Government Polytechnic, Ranchi	Jharkhand
22.	Xavier Institute of Polytechnic and Technology, Ranchi	Jharkhand
23.	Government Engineering College, Haveri	Karnataka
24.	MIT Academy of Engineering, Pune	Maharashtra
25.	Government Polytechnic, Imphal, Manipur	Manipur
26.	Mizoram Polytechnic	Mizoram
27.	Women's Polytechnic, Aizawl	Mizoram
28.	Women's Polytechnic, Kohima	Nagaland
29.	Bhubaneswar Extension Centre, Bhubaneswar	Odisha
30.	C.V. Raman College of Engineering	Odisha
31.	Divine Institute of Engineering & Technology, Baripada	Odisha
32.	Government College of Engineering, Keonjhar	Odisha
33.	Government Polytechnic, Puri	Odisha
34.	Mayurbhanj School of Engineering	Odisha
35.	Paralamaharaja Engineering College, Berhampur	Odisha
36.	Silicon Institute of Technology, Bhubaneswar	Odisha

Sl. No.	Name of the Institute	State
37.	SKDAV Govt. Polytechnic, Raourkela	Odisha
38.	Uma Charan Patnaik Engg. School, Brahmapur	Odisha
39.	CCCT, Chisopani	Sikkim
40.	National Institute of Technology, Agartala	Tripura
41.	North Tripura District Polytechnic, Dharmanagar	Tripura
42.	TTAADC Polytechnic Institute	Tripura
43.	Women's Polytechnic, Hapania	Tripura
44.	Ashoka Institute of Technology & Management, Varanasi	Uttar Pradesh
45.	Chhatrapati Shahu Ji Maharaj University, Kanpur	Uttar Pradesh
46.	Dr. A. P. J. Abdul Kalam Technical University, Lucknow	Uttar Pradesh
47.	Instt. of Engg. & Technology, Bundelkhand University	Uttar Pradesh
48.	A.P.C. Roy Polytechnic, Kolkata	West Bengal
49.	Cooch Behar Govt. Engineering College, Cooch Behar	West Bengal
50.	Cooch Behar Polytechnic	West Bengal
51.	Engineering Instituter for Junior Executives, Howrah	West Bengal
52.	Ghani Khan Choudhury Instt. Of Engineering & Technology (GKCIET), Malda	West Bengal
53.	Government College of Engg. & Textile Technology, Serampore, Hooghly	West Bengal
54.	Government Women's Polytechnic, Kolkata	West Bengal
55.	Heritage Institute of Technology, Kolkata	West Bengal
56.	Hooghly Institute of Technology	West Bengal
57.	Indian Maritime University, Kolkata Campus	West Bengal
58.	Jalpaiguri Government Engineering College, Jalpaiguri	West Bengal
59.	Jalpaiguri Government Polytechnic, Jalpaiguri	West Bengal
60.	JIS College of Engineering, Kalyani, Nadia	West Bengal
61.	K. G. Engg. Institute, Bishnupu	West Bengal
62.	Kanyapur Polytechnic, Asansol	West Bengal
63.	M.B.C. Institute of Engineering & Technology	West Bengal
64.	MCKV Institute of Engineering, Howrah	West Bengal
65.	Murshidabad Institute of Technology, Murshidabad	West Bengal
66.	Nazrul Centenary Polytechnic, Burdwan	West Bengal
67.	Pailan College of Management & Technology	West Bengal
68.	Raiganj Polytechnic, Uttar Dinajpur	West Bengal
69.	Siliguri Govt. Polytechnic, Siliguri	West Bengal
70.	Sree Ramkrishna Silpa Vidyapith, Suri, Birbhum	West Bengal
71.	The Calcutta Technical School, Kolkata	West Bengal

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APRIL, 2019

1st Week (1-6)		2nd Week (8-12)		3rd Week (15-19)		4th Week (22-26)	
		BBSR01	Development of Laboratory Instructions Nirmal Kumar Mandal 08.04.2019 - 12.04.2019			BBSR02	Programming in C++ Methogologies Rajeev Chatterjee & Samir Roy 22.04.2019 - 26.04.2019
						GUW01	Microprocessors & Microcontrollers Soumitra Kumar Mandal 22.04.2019 - 26.04.2019
CU01	Advance Programming in C Rajeev Chatterjee 01.04.2019 – 05.04.2019	CU02	Engineering Thermodynamics Rayapati Subbarao 08.04.2019 - 12.04.2019			CU03	Laboratory and Workshop manual for Electrical, Electronics and Instrumentation Engineering Sagarika Pal 22.04.2019 - 26.04.2019
						MGT01	Institutional Management Sukanta Kumar Naskar 22.04.2019 – 26.04.2019
						ICT01	NBA Accreditation Rayapati Subbarao 22.04.2019 - 26.04.2019

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MAY, 2019

1st Week (29/4 – 3/5)		2nd Week (6-10)		3rd Week (13-17)		4th Week (20-24)		5th Week (27-31)	
BBSR03	Bio Medical Instrumentation Subrata Chattopadhyay 29.04.2019 - 03.05.2019			BBSR04	Skill Assessment in Laboratory and Workshop Dipankar Bose 13.05.2019 - 17.05.2019				
		GUW02	Curriculum Development & Implementation Sukanta Kumar Naskar 06.05.2019 - 10.5.2019			GUW03	Membranes for Water Treatment: Challenges and Opportunities Subrata Mondal 20.05.2019 - 24.05.2019		
CU04	Numerical Methods : Theories and Applications Kinsuk Giri 29.04.2019 - 03.05.2019	CU06	Indian Electricity Rule and Code of Practices Prasanta Sarkar 06.05.2019 - 10.05.2019	CU09	Testing of Brick, Cement, Aggregates and Concrete Uday Chand Kumar 13.05.2019 - 17.05.2019	CU13	Theory and Operation of DC Machines & Transformers Subrata Chattopadhyay 20.05.2019 - 24.07.2019	CU16	Laboratory Practice on Concrete Materials Mithu Dey 27.05.2019 - 31.05.2019
CU05	Introduction to Robotics Samiran Mandal 29.04.2019 - 03.05.2019	CU07	Waste Water Treatment: Pollution Control and Reuse Subrata Mondal 06.05.2019 - 10.5.2019	CU10	Database Design Theory and Practice Ranjan Dasgupta 13.05.2019 - 17.05.2019	CU14	Networking Principles, Management and Administration Rajeev Chatterjee 20.05.2019 - 31.05.2019	CU17	Sensors, Transducers and Signal Conditioning Sagarika Pal 27.05.2019 - 31.05.2019
		CU08	Testing of Drinking Water and Health Sailendra Nath Mandal 06.05.2019 - 17.05.2019	CU11	Solar PV System & Smart Grid Soumitra Kumar Mandal 13.05.2019 - 17.05.2019	CU15	LABVIEW & MATLAB Applications in Engineering Soumitra Kumar Mandal 20.05.2019 - 31.05.2019	CU18	Engineering Metrology Dipankar Bose 27.05.2019 - 31.05.2019
				CU12	Programming and Operations on CNC Machines Nirmal Kumar Mandal 13.05.2019 - 17.05.2019				
				PS01	How to Write Thesis and Research paper Rayapati Subbarao 13.05.2019 - 24.05.2019				
		ICT02	Introduction to Artificial Intelligence Samir Roy 06.05.2019 - 10.05.2019			ICT03	Problem Based Learning Sagarika Pal, Indrajit Saha, Kinsuk Giri, Arpan Kumar Mondal 20.05.2019 - 31.05.2019		

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JUNE, 2019

1st Week (3-7)		2nd Week (10-14)		3rd Week (17-21)		4th Week (24-28)	
BBSR05	Induction Training Subrata Chattopadhyay 03.06.2019 – 08.06.2019	BBSR06	Refresher Course on Computer Aided Analysis, Design and Detailing using STAAD. Pro Software Santanu Bhanja 10.06.2019 - 14.06.2019			BBSR07	Thesis and Research Paper writing Rayapati Subbarao 24.06.2019 - 28.06.2019
GUW05	Theory of Computation Samir Roy 03.06.2019 – 08.06.2019	GUW04	MATLAB Applications in Engineering Sagarika Pal 10.06.2019 - 14.06.2019			GUW06	Analysis of Nonlinear Control Systems Urmila Kar 24.06.2019 - 28.06.2019
CU19	Analysis of Nonlinear Control Systems Urmila Kar 03.06.2019 – 08.06.2019	CU22	Renewable Energy Sources and Emerging Technologies Sheela Yadav Rai 10.06.2019 - 14.06.2019	CU28	Power System Instrumentation Subrata Chattopadhyay 17.06.2019 - 21.06.2019	CU30	Commentary on IS: 456-2000 - Explanation, Interpretation, Application & Limitations Santanu Bhanja 24.06.2019 - 28.6.2019
CU21	Three Dimensional Modelling with AUTOCAD and SOLIWORKS Nirmal Kumar Mandal 03.06.2019 - 14.06.2019	CU23	Computational Techniques for Mechanical Engineers Rayapati Subbarao 10.06.2019 - 14.06.2019	CU29	Fluid Mechanics & Machinery Dipankar Bose 17.06.2019 - 21.06.2019	CU31	PLC Programming and Applications Sagarika Pal 24.06.2019 - 05.07.2019
		CU24	Domestic Water Purifier and Health Sailendra Nath Mandal 10.06.2019 - 21.06.2019	MGT02	Laboratory Safety Management Subrata Mondal 17.06.2019 - 28.06.2019	CU32	Problem Solving with SCILAB Kinsuk Giri 24.06.2019 - 05.07.2019
		CU25	IP Networking Rajeev Chatterjee 10.06.2019 - 21.06.2019	PS03	Effective Training Sukanta Kumar Naskar 17.06.2019 - 21.06.2019	CU33	Laboratory Instructions in Electrical and Electronics Engineering Soumitra Kumar Mandal 24.06.2019 - 05.07.2019
		CU26	Control Engineering with MATLAB Prasanta Sarkar 10.06.2019 - 21.06.2019	CU20	Formal Languages and Automata Samir Roy 17.06.2019 - 21.06.2019		
		CU27	Mechanical Workshop Arpan Kumar Mondal 10.06.2019 - 21.06.2019				
		PS02	Leadership & Management for Teachers Habiba Hussain 10.06.2019 - 21.06.2019				
		ICT04	Assessment and Evaluation under Outcome Based Education Urmila Kar 10.06.2019 - 14.06.2019			ICT05	Introduction to Network Security Indrajit Saha 24.06.2019 - 28.6.2019

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JULY, 2019

1st Week (1-5)		2nd Week (8-12)		3rd Week (15-19)		4th Week (22-26)		5th Week (29/7 – 2/8)	
		BBSR08	Instructional Media and CAI Subrata Chattopadhyay 08.07.2019 - 12.07.2019			BBSR09	Renewable Energy Sources and Emerging Technologies Sheela Yadav Rai 22.07.2019 - 26.07.2019		
GUW07	Networking Principles Rajeev Chatterjee 01.07.2019 - 05.07.2019	GUW08	Strategic Management Sukanta Kumar Naskar 08.07.2019 - 12.07.2019	GUW09	Theory, Operation and Applications of Transducers & Actuators in Industry Subrata Chattopadhyay 15.07.2019 - 19.07.2019			GUW10	Environmental Pollution - An Overview Sailendra Nath Mandal 29.07.2019 - 02.08.2019
CU34	Laboratory Experiments on Engineering Chemistry Sailendra Nath Mandal 01.07.2019 - 05.07.2019	CU37	Laboratory Experiment on Electrical Machine and Power System Prasanta Sarkar 08.07.2019 - 12.07.2019	CU42	Limit State Design of Steel Structures Mithu Dey 15.07.2019 - 19.07.2019	CU46	Industrial Process Control Subrata Chattopadhyay 22.07.2019 - 26.07.2019	CU51	Exposure on MATLAB Prasanta Sarkar 29.07.2019 - 02.08.2019
CU35	Power Generation from Energy Resources Sheela Yadav Rai 01.07.2019 - 05.07.2019	CU38	Fluid Power Dipankar Bose 08.07.2019 - 12.07.2019	CU43	Application of MATLAB Control System, Image Processing, Fuzzy Logic Tool box and GUI Sagarika Pal 15.07.2019 - 19.07.2019	CU47	PLC Applications in Automations Soumitra Kumar Mandal 22.07.2019 - 26.07.2019	CU52	Development of Mechanical Engineering Experiments and Laboratory Instruction Sheets Samiran Mandal 29.07.2019 - 02.08.2019
CU36	Geotechnical Investigation & Testing Jagat Jyoti Mandal 01.07.2019 - 12.07.2019	CU39	Development of Laboratory Instruction and Manual Subrata Mondal 08.07.2019 - 12.07.2019	CU44	Computer Numerical Controlled Machines: Constructional Features and Programming Nirmal Kumar Mandal 15.07.2019 - 19.07.2019	CU48	Applied Thermodynamics Rayapati Subbarao 22.07.2019 - 26.07.2019	CU53	Testing of Concrete material & Design and testing of Concrete Mixes Jagat Jyoti Mandal 29.07.2019 - 09.08.2019
PS04	Outcome Based Education for Accreditation Habiba Hussain 01.07.2019 - 05.07.2019	CU40	Multimedia Tools and It's Applications Indrajit Saha 08.07.2019 - 19.07.2019	CU45	Basics of Computer, IT and ITes for Faculty and Stuffs Arpan Kumar Mondal 15.07.2019 - 26.07.2019	CU49	Software Engineering Fundamentals & Application Development Ranjan Dasgupta 22.07.2019 - 02.08.2019	MGT03	Human Resource Management Sukanta Kumar Naskar 29.07.2019 - 02.08.2019
		CU41	Active Learning under Engineering Education Urmila Kar 08.07.2019 - 19.07.2019	PS05	Induction Training Uday Chand Kumar 15.07.2019 - 19.07.2019	CU50	Fundamental and Applications of Nanomaterials Subrata Mondal 22.07.2019 - 02.08.2019	PS06	Microteaching for Teaching Improvement Habiba Hussain 29.07.2019 - 02.08.2019
ICT06	Automated Manufacturing Systems Nirmal Kumar Mandal 01.07.2019 - 05.07.2019			ICT07	Effective Teaching Habiba Hussain 15.07.2019 – 19.07.2019			ICT08	Rural Development through Technical Institution Uday Chand Kumar 29.07.2019 - 02.08.2019

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AUGUST, 2019

1st Week (5-9)		2nd Week (12-16)		3rd Week (19-23)		4th Week (26-30)			
BBSR10	Modeling and Analysis of Electrical Circuits and Networks Urmila Kar 05.08.2019 - 09.08.2019			BBSR11	Control Engineering with MATLAB Prasanta Sarkar 19.08.2019 - 23.08.2019				
				GUW11	Concept Mapping in Teaching Learning Samiran Mandal 19.08.2019 - 23.08.2019				
CU54	Application of Soft Tools in Civil Engineering Mithu Dey 05.08.2019 - 09.07.2019			CU57	Statistical Methods : Theories and Applications Kinsuk Giri 19.08.2019 - 23.08.2019	CU61	Structural Audit Uday Chand Kumar 26.08.2019 - 30.08.2019		
CU55	Fundamentals of Computer and Internet (Especially designed for Office Staff) Rajeev Chatterjee 05.08.2019 - 09.08.2019			CU58	Industrial Automation using PLC, DCS & SCADA Sagarika Pal 19.08.2019 - 23.08.2019	CU62	Data Analysis using MATLAB Indrajit Saha 26.08.2019 - 30.08.2019		
CU56	Mechatronics and Automation Subrata Chattopadhyay 05.08.2019 - 09.08.2019			CU59	Estimating & Costing of Non-Conventional Energies Sheela Yadav Rai 19.08.2019 - 23.08.2019	CU63	Microprocessors & Microcontrollers Soumitra Kr. Mandal 26.08.2019 - 30.08.2019		
				CU60	Testing Drinking Water for Domestic Use Sailendra Nath Mandal 19.08.2019 - 30.08.2019	CU64	Theory and Practices of CNC Machining Operations Arpan Kumar Mondal 26.08.2019 - 06.09.2019		
				MGT04	Strategic Management Sukanta Kumar Naskar 19.08.2019 - 23.08.2019				
				PS07	Effective Communication Habiba Hussain 19.08.2019 - 23.08.2019				
ICT09	Advanced Manufacturing Processes Arpan Kr. Mondal 05.08.2019 - 09.08.2019					ICT10	Analysis and Design of Shallow Foundations Jagat Jyoti Mandal 26.08.2019 - 30.08.2019		

STTP SCHEDULE 2019-20

SEPTEMBER, 2019

1st Week (2-6)		2nd Week (9-13)		3rd Week (16-20)		4th Week (23-27)	
BBSR12	Laboratory Safety Management Subrata Mondal 02.09.2019 - 06.09.2019			BBSR13	Ecology and Environmental Studies Uday Chand Kumar 16.09.2019 - 20.09.2019		
GUW12	Fundamental Concepts of Geotechnical Engineering Jagat Jyoti Mandal 02.09.2019 - 06.09.2019			GUW13	Control Engineering with MATLAB Prasanta Sarkar 16.09.2019 - 20.09.2019		
CU65	Drawing, Analysis and Design of structures by Limit State Method using software Mithu Dey 02.09.2019 - 06.09.2019	CU68	Mathematics and Logic Samir Roy 09.09.2019 - 14.09.2019	CU70	Environmental Awareness Sailendra Nath Mandal 16.09.2019 - 20.09.2019	CU74	Electrical Circuit Analysis Urmila Kar 23.09.2019 - 27.09.2019
CU66	Recent Trends in Optimization : Theory and Applications Kinsuk Giri 02.09.2019 - 06.09.2019	CU69	Introduction to Concepts of Machining Science Samiran Mandal 09.09.2019 - 14.09.2019	CU71	Laboratory Experiment and Students' Project Sagarika Pal 16.09.2019 - 20.09.2019	CU75	LABVIEW & VHDL Applications Soumitra Kr. Mandal 23.09.2019 - 27.09.2019
CU67	Application of MATLAB in Engineering Prasanta Sarkar 02.09.2019 - 06.09.2019			CU72	Electrical Measurement and Instrumentation Subrata Chattopadhyay 16.09.2019 - 20.09.2019		
				CU73	Image Processing using MATLAB Indrajit Saha 16.09.2019 - 27.09.2019		
				MGT05	Office Management Sukanta Kumar Naskar 16.09.2019 - 20.09.2019		
				ICT11	Principles of RCC Design up to & beyond Limit States, Applications and Limitations of IS:456-2000 Santanu Bhanja 16.09.2019 - 20.09.2019		

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OCTOBER, 2019

1st Week (30/9 – 04/10)		2nd Week (7-11)		3rd Week (14-18)		4th Week (21-25)			5th Week (28/10 – 01/11)
				BBSR14	Problem Solving and Decision Making Sukanta Kumar Naskar 14.10.2019 - 18.10.2019	BBSR15	MATLAB Applications in Engineering Sagarika Pal 21.10.2019 - 25.10.2019		
				GUW14	Evaluating Students' Performance & Designing Question Papers Habiba Hussain 14.10.2019 - 18.10.2019			GUW15	Machine Learning and It's Applications Indrajit Saha 28.10.2019 - 01.11.2019
				CU76	Bio Medical Instrumentation Subrata Chattopadhyay 14.10.2019 - 18.10.2019	CU79	Earthquake Resistant Design of RC Buildings with an Introduction to Shake Table Santanu Bhanja 21.10.2019 - 25.10.2019	CU81	Power Plant Engineering Rayapati Subbarao 28.10.2019 - 01.11.2019
				CU77	Power Electronics Soumitra Kumar Mandal 14.10.2019 - 18.10.2019	CU80	Product Design Samiran Mandal 21.10.2019 - 25.10.2019		
				CU78	Topics in Data Structures and Algorithms Samir Roy 14.10.2019 - 25.10.2019	PS08	Administrative Effectiveness for Academic Administrators Subir Basak 21.10.2019 - 25.10.2019		
						ICT12	Water Pollution and Health Sailendra Nath Mandal 21.10.2019 - 25.10.2019		

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NOVEMBER, 2019

1st Week (4-8)		2nd Week (11-15)		3rd Week (18-22)		4th Week (25-29)	
BBSR16	Numerical Methods : Theories and Applications Kinsuk Giri 04.11.2019 - 08.11.2019			BBSR17	Student Mentorship Habiba Hussain 18.11.2019 - 22.11.2019		
GUW16	Application of Software in Engineering Drawing Mithu Dey 04.11.2019 – 08.11.2019			GUW17	Stores Management & Purchase Procedures Sukanta Kumar Naskar 18.11.2019 - 22.11.2019		
Cu82	Construction and Disaster Management Uday Chand Kumar 04.11.2019 – 08.11.2019	CU84	Advanced Control System with MATLAB Simulation Prasanta Sarkar 11.11.2019 - 16.11.2019	CU87	Solid and Liquid Waste Management Sailendra Nath Mandal 18.11.2019 - 29.11.2019	CU91	Object Oriented Software Design and Modeling Samir Roy 25.11.2019 - 29.11.2019
CU83	Health Assessment and Rehabilitation of RCC Structures Santanu Bhanja 04.11.2019 - 08.11.2019	CU85	Mechanical Measurements and Control Samiran Mandal 11.11.2019 - 16.11.2019	CU88	Introduction to PYTHON Programming Kinsuk Giri 18.11.2019 - 22.11.2019	CU92	Engineering Thermodynamics and its Applications Rayapati Subbarao 25.11.2019 - 29.11.2019
		CU86	Design of Payroll Systems using ORACLE Ranjan Dasgupta 11.11.2019 - 22.11.2019	CU89	Solar PV System Soumitra Kumar Mandal 18.11.2019 - 22.11.2019		
				CU90	CAD/CAM Nirmal Kumar Mandal 18.11.2019 - 22.11.2019		
				PS09	Outcome Based Accreditation Urmila Kar 18.11.2019 - 22.11.2019		
ICT13	Management Issues of Laboratory and Workshop Class Dipankar Bose 04.11.2019 - 08.11.2019			ICT14	Control and Automation Sagarika Pal 18.11.2019 - 22.11.2019		

STTP SCHEDULE 2019-20

DECEMBER, 2019

1st Week (2-6)		2nd Week (9-13)		3rd Week (16-20)		4th Week (23-27)		5th Week (30/12 – 03/01)	
BBSR18	Design & Detailing of Reinforced Concrete Structural Elements Jagat Jyoti Mandal 02.12.2019 - 06.12.2019			BBSR19	Introduction to Environmental Pollution Sailendra Nath Mandal 16.12.2019 - 20.12.2019			BBSR20	NBA Accreditation and SAR Preparation Rayapati Subbarao 30.12.2019 - 03.01.2020
GUW18	Estimating & Costing of Non-Conventional Energies Sheela Yadav Rai 02.12.2019 - 06.12.2019			GUW19	Modelling of Engineering Systems Nirmal Kumar Mandal 16.12.2019 - 20.12.2019				
CU93	Network Infrastructure & Cloud Security Ranjan Dasgupta & Rajeev Chatterjee 02.12.2019 - 06.12.2019	CU94	Oil Hydraulics & Pneumatics Dipankar Bose 09.12.2019 - 13.12.2019	CU96	Introduction to Structural Analysis and Design Software for Buildings - ETABS Santanu Bhanja 16.12.2019 - 20.12.2019	CU99	Engineering Optimization with MATLAB Nirmal Kumar Mandal 23.12.2019 - 03.01.2020	CU102	Application of Total Station in Present day Surveying Santanu Bhanja 30.12.2019 – 03.01.2020
MGT06	Research Methodology Urmila Kar 02.12.2019 - 13.12.2019	CU95	Automobile Engineering Samiran Mandal 09.12.2019 - 13.12.2019	CU97	Power Generation from Energy Resources Sheela Yadav Rai 16.12.2019 - 20.12.2019	CU100	Introduction to IS 800-2007 Mithu Dey 23.12.2019 - 27.12.2019		
PS10	Designing Outcome Based Learning Framework Habiba Hussain 02.12.2019 - 06.12.2019	MGT07	Office Management using IT and ITes Arpan Kumar Mondal 09.12.2019 - 20.12.2019	CU98	Polymer Composites and Nanocomposites Subrata Mondal 16.12.2019 - 20.12.2019	CU101	Mathematical Foundation of Computer Science Samir Roy & Kinsuk Giri 23.12.2019 - 03.01.2020		
		PS11	Research Methodology in Engineering and Technical Writing using LaTeX Kinsuk Giri & Indrajit Saha 09.12.2019 - 20.12.2019						
				PS12	Writing Research Proposals Habiba Hussain 16.12.2019 - 20.12.2019				
ICT15	Problem Based Learning Arpan Kr. Mondal, Indrajit Saha, Sagarika Pal, Kinsuk Giri 02.12.2019 - 06.12.2019			ICT16	Indian Electricity Rule and Code of Practices Prasanta Sarkar 16.12.2019 - 20.12.2019			ICT17	Theory, Operation and Applications of Transducers & Actuators in Industry Subrata Chattopadhyay 30.12.2019 - 03.01.2020

STTP SCHEDULE 2019-20

JANUARY, 2020

1st Week (6-10)		2nd Week (13-17)		3rd Week (20-24)		4th Week (27-31)	
		BBSR21	Power System Instrumentation Subrata Chattopadhyay 13.01.2020 - 17.01.2020	BBSR22	Introduction to Accreditation Mechanism – NBA Approach Ranjan Dasgupta 20.01.2020 - 24.01.2020	BBSR23	Advanced Process Control & Instrumentation System Subrata Chattopadhyay 27.01.2020 – 01.02.2020
GUW20	Designing Assessment Tools for Effective Implementation of Technical Curriculum Urmila Kar 06.01.2020 - 10.01.2020	GUW21	Introduction to Accreditation Mechanism – NBA Approach Ranjan Dasgupta 13.01.2020 - 17.01.2020	GUW22	Arc Welding Processes Arpan Kr. Mondal 20.01.2020 - 24.01.2020		
CU103	Testing of Bituminous Material and Design of Bituminous Mixes Jagat Jyoti Mandal 06.01.2020 - 10.01.2020						
CU104	AutoCAD for Engineers Mithu Dey 06.01.2020 - 10.01.2020	CU109	Discrete Mathematics and Its Applications Kinsuk Giri 13.01.2020 - 17.01.2020	CU112	Functional Textiles and Protections Subrata Mondal 20.01.2020 - 24.01.2020		
CU105	Ecology and Environmental Studies Uday Chand Kumar 06.01.2020 - 10.01.2020	CU110	Power System Protection Sheela Yadav Rai 13.01.2020 - 17.01.2020	CU113	Introduction to Soft Computing Samir Roy & Indrajit Saha 20.01.2020 - 31.01.2020		
CU106	Design and Development of content for E-learning Rajeev Chatterjee 06.01.2020 - 10.01.2020	CU111	Production and Operations Management Samiran Mandal 13.01.2020 - 17.01.2020				
CU107	LABVIEW Applications in Engineering Sagarika Pal 06.01.2020 - 10.01.2020						
CU108	Inferential Statistics for Engineering Research Nirmal Kumar Mandal 06.01.2020 - 10.01.2020						
PS13	Induction Training Habiba Hussain 06.01.2020 - 10.01.2020						
				ICT18	Organizational Behaviour Mithu Dey 20.01.2020 - 24.12.2020		

STTP SCHEDULE 2019-20

FEBRUARY, 2020

1st Week (3-7)		2nd Week (10-14)		3rd Week 17-21)		4th Week (24-28)	
BBSR24	Commentary on IS: 456-2000 Explanation, interpretation, application & Limitations Santanu Bhanja 03.02.2020 - 07.02.2020			BBSR25	Outcome Based Assessment Urmila Kar 17.02.2020 - 21.02.2020	BBSR26	Design of Steel Structures Mithu Dey 24.02.2020 - 28.02.2020
GUW23	Skill Assessment in Laboratory and Workshop Dipankar Bose 03.02.2020 - 07.02.2020	GUW24	Ecology and Environmental Studies Uday Chand Kumar 10.02.2020 - 14.02.2020	GUW25	How to write Thesis or Research paper Rayapati Subbarao 17.02.2020 - 21.02.2020		
CU114	Transmission Line Parameters Sheela Yadav Rai 03.02.2020 - 07.02.2020	CU118	Concept teaching in Engineering Mechanics Jagat Jyoti Mandal & Dipankar Bose 10.02.2020 - 21.02.2020	CU120	Advanced Materials Science and Engineering Subrata Mondal 17.02.2020 - 21.02.2020	CU122	Mobile & Wireless Networking Rajeev Chatterjee 24.02.2020 - 28.02.2020
CU115	8086 Microprocessor Soumitra Kr. Mandal 03.02.2020 - 07.02.2020	CU119	Machine Design Samiran Mandal 10.02.2020 - 14.02.2020	CU121	Environmental Pollution Testing Sailendra Nath Mandal 17.02.2020 - 28.02.2020		
CU116	Advanced Manufacturing Processes Arpan Kumar Mondal 03.02.2020 - 07.02.2020						
CU117	Introduction to DBMS Ranjan Dasgupta 03.02.2020 - 14.02.2020						
ICT19	Development of Laboratory Instruction and Manual Subrata Mondal 03.02.2020 - 07.02.2020			ICT20	Problem Solving and Decision Making Sukanta Kumar Naskar 17.02.2020 - 21.02.2020		

STTP SCHEDULE 2019-20

MARCH, 2020

	1st Week (2-6)		2nd Week (7-13)		3rd Week (16-20)		4th Week (23-27)
BBSR27	Instructional Planning Samiran Mandal 02.03.2020 - 06.03.2020			BBSR28	Introduction to Network Security Indrajit Saha 16.03.2020 - 20.03.2020	BBSR29	Basics of Welding processes and CNC Machining Arpan Kr. Mondal 23.03.2020 - 27.03.2020
GUW26	Bio Medical Instrumentation Subrata Chattopadhyay 02.03.2020 - 06.03.2020			GUW27	Modeling, Analysis, Design & Detailing of Structures as per latest Indian Standards using a new generation Software Santanu Bhanja 16.03.2020 - 20.03.2020	GUW28	Statistical Methods : Theories and Applications Kinsuk Giri 23.03.2020 - 27.03.2020
CU123	Transmission lines Faults Sheela Yadav Rai 02.03.2020 - 06.03.2020			CU125	Laboratory Tests on Civil Engineering Material Mithu Dey 16.03.2020 - 20.03.2020	CU127	Topics on Computer Architecture & Organization (Theoretical Discussion) Ranjan Dasgupta 23.03.2020 - 27.03.2020
CU124	Design and Development of MOOC based e-content Ranjan Dasgupta 02.03.2020 - 13.03.2020 (including Saturday)			CU126	Computer Aided Design with Ansys Nirmal Kumar Mandal 16.03.2020 - 20.03.2020		
ICT21	Commentary on IS: 456-2000 with an Introduction to IS:13920-2016 Santanu Bhanja 02.03.2020 - 06.03.2020					ICT22	Renewable Energy Sources and Emerging Technologies Sheela Yadav Rai 23.03.2020 - 27.03.2020

STTP SCHEDULE 2019-20

A. NATIONAL LEVEL SHORT TERM TRAINING PROGRAMMES

The schedule of Short Term Training Programmes (STTP) to be conducted by NITTTR, Kolkata during the year 2019 – 2020 is given below.

I. CONTENT UPDATING (CU) VENUE: NITTTR, KOLKATA

Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
1.	CU01	Advance Programming in C	Rajeev Chatterjee	01.04.2019	05.04.2019	1	All with Programming background	After completing the course the participant will be able to • Compile and execute programs for arrays, structures and pointers. • Function and function overloading • Handle dynamic memory allocation using linked lists
2.	CU02	Engineering Thermodynamics	Rayapati Subbarao	08.04.2019	12.04.2019	1	Faculty of Mechanical & allied disciplines	At the end of the programme, the participants will be to: • paraphrase the basics of thermodynamics. • apply laws of thermodynamics in various problems. • appreciate more about entropy. • analyze thermodynamic cycles.
3.	CU03	Laboratory and Workshop manual for Electrical, Electronics and Instrumentation Engineering	Sagarika Pal	22.04.2019	26.04.2019	1	Faculty of Electrical, Electronics, Instrumentation and Mechatronics	After attending the course the participants will be able to • Select the laboratory experiments from curriculum • Prepare laboratory and workshop manual • Guide student to perform laboratory experiment • Write laboratory report in proper format • Evaluate the laboratory performance of students
4.	CU04	Numerical Methods : Theories and Applications	Kinsuk Giri	29.04.2019	03.05.2019	1	Faculty of Engineering & Science disciplines	After completing the course the participant will be able to • get an overview on different numerical methods • get an overview on solution techniques • solve problems on numerical methods using tools
5.	CU05	Introduction to Robotics	Samiran Mandal	29.04.2019	03.05.2019	1	Faculty of Mechanical & allied disciplines	After attending the programme, the participants will be able to describe the construction of industrial robots explain the applications of industrial robots explain kinematics of industrial robots assess the economic justification of robot
6.	CU06	Indian Electricity Rule and Code of Practices	Prasanta Sarkar	06.05.2019	10.05.2019	1	Faculty of Electrical, Electronics & allied disciplines	After attending the programme, the participants will be able to • Familiarize with Indian Electricity Act and National Electric Code • Understand fundamental principles for electrical installation • Design electrical installation • Enforce safety in electrical work.
7.	CU07	Waste Water Treatment: Pollution Control and Reuse	Subrata Mondal	06.05.2019	10.05.2019	1	Faculty of Chemistry, Chemical, Material Science, Environmental Sc. & Engineering	After attending this program, participants would be able to: • explain the characterizations of wastewater. • explore the characteristics of various industrials wastewater. • describe the wastewater treatment using low cost adsorbents and nano sized adsorbents. • describe the wastewater treatment using membrane technology etc.

STTP SCHEDULE 2019-20

Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
8.	CU08	Testing of Drinking Water and Health	Sailendra Nath Mandal	06.05.2019	17.05.2019	2	All disciplines	After attending the programme the participants will be able to acquire • knowledge of basic concept of drinking water, sampling, preservation, analysis, interpretation of result, national and international standards, Common water pollutants – analysis and impacts on health, • skill of handling equipment, performing experiments, interpreting results, preparing test report, providing laboratory instructions to develop inquiring attitude among the student and evaluation of laboratory performance in related to water analysis/treatment laboratory, • attitude of hand-on working in the laboratory/field (Plant Visit)
9.	CU09	Testing of Brick, Cement, Aggregates and Concrete	Uday Chand Kumar	13.05.2019	17.05.2019	1	Faculty of Civil, Architecture & Allied Disciplines	After attending the programme the participants will be able to • Explain basic concepts on laboratory tests of Bricks, cement, Aggregates • Guide students in conducting different laboratory experiments for determination of various parameters. • Demonstrate different tests on cement, aggregates and concrete.
10.	CU10	Database Design Theory and Practice	Ranjan Dasgupta	13.05.2019	17.05.2019	1	Faculty of CSE, IT, & Computer Application	After attending the course the participants will be able to • get exposure in database design theory • design and develop small database application
11.	CU11	Solar PV System & Smart Grid	Soumitra Kumar Mandal	13.05.2019	17.05.2019	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the programme, the participants will be able to • Describe the principles of Solar Cell • Identify the various parameters of Solar PV Module • Develop an in-depth knowledge about Solar PV Module by performing basic experiments & through field visit • Modelling of Solar PV System • Understand fundamentals of Smart grid
12.	CU12	Programming and Operations on CNC Machines	Nirmal Kumar Mandal	13.05.2019	17.05.2019	1	Faculty of all disciplines	After attending the programme the participants will be able to • Explain CNC Technology. • Develop programs in CNC Lathe. • Operate CNC Lathe.
13.	CU13	Theory and Operation of DC Machines & Transformers	Subrata Chattopadhyay	20.05.2019	24.07.2019	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the course the participants will be able to • Understand the working principle, operation and maintenance of the following machines ➢ DC Generator ➢ DC Motor ➢ Transformer ➢ Stepper Motor ➢ Brush less Motor • Classify the Hazardous areas in Industries for selecting the machines in operation • Familiar with the source of ignition in Industries. • Explain the Electrical Protection system used in Hazardous area. • Know the ingress protection.

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
14.	CU14	Networking Principles, Management and Administration	Rajeev Chatterjee	20.05.2019	31.05.2019	2	Faculty of CSE, IT, ECE, Electrical, & Computer Application	After completing the course the participant will be able to • Explain the concept of Computer Network and Internetwork, • Identify the various components of Network and Internetwork, • Explain various network topologies, media, Protocols and devices used in networks, • Explain the various protocols in TCP/IP Suite, • Explain the concept of switching and routing, LAN & VLAN • Demonstrate configuration of the devices such as routers, switches, etc., • Explain the concept of network security, and • Explain software defined network.
15.	CU15	LABVIEW & MATLAB Applications in Engineering	Soumitra Kumar Mandal	20.05.2019	31.05.2019	2	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the programme, the participants will be able to • Understand fundamentals of LABVIEW • Implement LABVIEW Applications in Engineering • Explain the different aspect of MATLAB & Simulink • Solve simple problem using MATLAB programming • Develop simple model using Simulink • Use MATLAB in analysis, design and simulation of Engineering problems
16.	CU16	Laboratory Practice on Concrete Materials	Mithu Dey	27.05.2019	31.05.2019	1	Faculty & Technician of Civil & allied disciplines	After attending the program, participants are expected to be able to • Explain the physical significance of laboratory tests on Concrete Materials. • Demonstrate to the students on different tests of Concrete Materials • Understand the concrete mix design
17.	CU17	Sensors, Transducers and Signal Conditioning	Sagarika Pal	27.05.2019	31.05.2019	1	Faculty of Electrical, Electronics, Instrumentation and Mechatronics	After completing the course the participant will be able to • Differentiate sensors and transducers • Define & classify different measuring elements • Measure different types of parameters • Design & simulate signal conditioning circuit • Implement signal conditioning circuit in hardware
18.	CU18	Engineering Metrology	Dipankar Bose	27.05.2019	31.05.2019	1	Faculty of Mechanical & allied disciplines	After attending the programme the participants will be able to • define different terms of metrology • state various measuring techniques • know manipulative technique of measurement
19.	CU19	Analysis of Nonlinear Control Systems	Urmila Kar	03.06.2019	08.06.2019	1	Faculty of Electrical & allied disciplines	After attending this programme, the participants will be able to • explain fundamentals nonlinear control systems • explain the need for analysis of nonlinear control systems • explain types of commonly available nonlinearities and their representation • identify approaches for analysis of nonlinear control systems • select techniques for analyzing stability of nonlinear control systems • simulate models for analysis of nonlinear control systems using MATLAB programming / SIMULINK • use MATLAB control system tool box for designing experiments on nonlinear control systems

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
20.	CU20	Formal Languages and Automata	Samir Roy	17.06.2019	21.06.2019	1	Faculty of CSE, IT, Computer Application, Electronics & Electrical & Mathematics	After successful completion the course the participant will be able to • Apply the principles & techniques of Formal Languages and Automata in computational systems. • Implement Formal languages and Automata in software design. • Explain the concepts of Formal Languages and Automata in classroom
21.	CU21	Three Dimensional Modelling with AUTOCAD and SOLIDWORKS	Nirmal Kumar Mandal	03.06.2019	14.06.2019	2	Faculty of all disciplines	After attending the programme the participants will be able to • Use various drafting and editing tools • Model 3D parts using AUTOCAD and SOLIWORKS
22.	CU22	Renewable Energy Sources and Emerging Technologies	Sheela Yadav Rai	10.06.2019	14.06.2019	1	Faculty of Engineering disciplines	After attending the programme the participants will be able to: • Understand Energy Sources and their utilization • Explain Environmental aspects of electric energies generation • Understand the scope of Solar Thermal Conversion and Solar Photovoltaic system • Describe about wind energy, Geothermal energy and Biomass • Apply Non-conventional energies through various agencies • viz.WBREDA
23.	CU23	Computational Techniques for Mechanical Engineers	Rayapati Subbarao	10.06.2019	14.06.2019	1	Faculty of Mechanical & allied disciplines	At the end of the programme, the participants will be to: • Identify the purpose of Computational Techniques • Understand and write applicable programs in C. • Appreciate tools like MS Excel and Origin. • Gain exposure to various software packages to solve problems in Mechanical Engineering.
24.	CU24	Domestic Water Purifier and Health	Sailendra Nath Mandal	10.06.2019	21.06.2019	2	All disciplines	After attending the programme the participants will be able to acquire – • knowledge of common domestic water purification techniques, different domestic water purifier, parameters of drinking water, sampling, preservation, analysis, interpretation of result and human health, different water treatment methods, • skill of handling equipment, performing experiments, interpreting results, preparing test report, providing laboratory instructions to develop inquiring attitude among the student and evaluation of laboratory performance in related to water analysis/treatment laboratory, • attitude of hand-on working in the laboratory/field (Plant Visit)
25.	CU25	IP Networking	Rajeev Chatterjee	10.06.2019	21.06.2019	2	Faculty of CSE, IT, ECE, Electrical & Computer Application	After completing the course the participant will be able to • Have basic knowledge of Internet Architecture, Regional Internet Registries and Autonomous Systems • Knowledge of various protocols used in the Internet such as RIP, OSPF, BGP • Have basic concept of switching (both L2 and L3) • Configure router and other networking devices • Able to design Institute Network • Virtual Private Network • Have Basic knowledge of Security Issues in IP based Infrastructures and Mobile IP based systems.

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
26.	CU26	Control Engineering with MATLAB	Prasanta Sarkar	10.06.2019	21.06.2019	2	Faculty of Electrical, Electronics & Tele-communication, Mechanical, Aerospace and allied disciplines	After attending the programme, the participants will be able to • Model physical systems • Analyze in time & frequency domain • Determine input – output stability • Design controller • Apply MATLAB Control System Toolbox
27.	CU27	Mechanical Workshop	Arpan Kumar Mondal	10.06.2019	21.06.2019	2	Faculty & Technician of Mechanical, Production, Manufacturing and Industrial	After attending the programme the participants will be able to Classify various components of mechanical workshop. Understand the principles of various metal working processes. Practice on welding, forming, machine tools, CNC, mechanical testing etc.
28.	CU28	Power System Instrumentation	Subrata Chattopadhyay	17.06.2019	21.06.2019	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the course the participants will be able to • Understand electrical equipment used in power system • Know instrument transformers [CT & PT] and their applications • Familiar with measurement and instrumentation in power system • Classify the Different types of transducers and fundamental of pressure, flow, temperature, level, velocity, acceleration, vibration, position, displacement measuring transducers used in power system. • Application of PLC & DCS in power system • Apply SCADA and power system automation • Design boiler, furnace instrumentation and control • Know hazardous area classification
29.	CU29	Fluid Mechanics & Machinery	Dipankar Bose	17.06.2019	21.06.2019	1	Faculty of Mechanical & allied disciplines	After attending the programme, the participants will be able to • define different terms and concepts of fluid mechanics • state various laws and principles • explain working principles of various fluid machines
30.	CU30	Commentary on IS: 456-2000 - Explanation, Interpretation, Application & Limitations	Santanu Bhanja	24.06.2019	28.06.2019	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme, the participants will be able to • Interpret some of the important clauses of the code in their true letter and spirit • Implement the codal clauses in a better manner for design and construction of Civil Engineering Structures • Identify the steps to be taken for concrete production, quality control and testing • Understand the philosophy and principles Limit State Method in a comprehensive manner • Conceive that this code cannot be considered as a single package for the design of concrete structures and has to be mandatorily read in conjunction with other codes • Identify the major design and detailing considerations • Identify the limitations of the code • Apply a standard software for designing structures Participants will be awarded a complete unlimited licenced version of STAAD.Pro Connect with STAAD.Pro Advanced Concrete Design Solution for personal use on their PC's for full one year for academic purpose

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
31.	CU31	PLC Programming and Applications	Sagarika Pal	24.06.2019	05.07.2019	1	Faculty of Electrical, Electronics, Instrumentation, Mechanical and Mechatronics	After completing the course the participant will be able to • Explain working principle of PLC • Describe architecture of PLC system • Develop PLC programmes • Run PLC programmes • Apply PLC in various control systems
32.	CU32	Problem Solving with SCILAB	Kinsuk Giri	24.06.2019	05.07.2019	2	Faculty of Engineering & Science disciplines	After completing the course the participant will be able to • understand and explain the different aspects of SCILAB • apply SCILAB to solve for mathematical, statistical and • optimization problems • use SCILAB for graphics and visualization
33.	CU33	Laboratory Instructions in Electrical and Electronics Engineering	Soumitra Kumar Mandal	24.06.2019	05.07.2019	2	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the programme, the participants will be able to • Choose experiments form the detailed curriculum • Perform the experiments • Record & analyze the experimental data • Write the instruction manual for students • Evaluate the laboratory performance of students
34.	CU34	Laboratory Experiments on Engineering Chemistry	Sailendra Nath Mandal	01.07.2019	05.07.2019	1	Chemistry disciplines	After attending the programme the participants will be able to gain and develop– • knowledge of 'modern principles of laboratory experimentation' in engineering chemistry, • skill of handling conventional and modern sophisticated equipment, preparation of laboratory instruction sheets, interpreting experimental results, providing laboratory instruction such as to develop in enquiring attitude among students, preparing related test reports, related to engineering chemistry, • attitude of hands-on-working in the laboratory/field. (Plant Visit)
35.	CU35	Power Generation from Energy Resources	Sheela Yadav Rai	01.07.2019	05.07.2019	1	Faculty of Engineering disciplines	After attending the programme the participants will be able to • Understand potential sources of conventional energies for power generation • Describe potential sources of non-conventional energies for power generation • Understand environmental aspects of power generation • Appreciate about various power projects
36.	CU36	Geotechnical Investigation & Testing	Jagat Jyoti Mandal	01.07.2019	12.07.2019	2	Faculty of Civil, Architecture & allied disiciplines	After attending the programme the participants will be able to • Explain basic concepts on geotechnical investigation & testing • Guide students in conducting different laboratory experiments related to determination of related parameters • Demonstrate and conduct different laboratory and insitu tests on soil for determination of strength and compressibility parameter of soil • Prepare report for typical exploration programme

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
37.	CU37	Laboratory Experiment on Electrical Machine and Power System	Prasanta Sarkar	08.07.2019	12.07.2019	1	Faculty of Electrical, Electronics & Tele-communication, Mechanical, Aerospace and allied disciplines	After attending the programme, the participants will be able to • Familiar with the electrical machine and power system equipment's. • Perform experiment on electrical machine and power system • Determine the characteristic of electrical machine and power system.
38.	CU38	Fluid Power	Dipankar Bose	08.07.2019	12.07.2019	1	Faculty of Mechanical & allied disciplines	After attending the programme the participants will be able to • know principle of fluid power and its applications • describe various elements of fluid powered systems • design and development of hydraulic and pneumatic circuits
39.	CU39	Development of Laboratory Instruction and Manual	Subrata Mondal	08.07.2019	12.07.2019	1	Faculty of all disciplines	After attending this programme, participants would be able to: • explore the role of laboratory in student learning • explore development of laboratory exercise • explore writing of laboratory report • explore standard operating procedure (SoP) in laboratory • explore safety management in laboratory etc.
40.	CU40	Multimedia Tools and It's Applications	Indrajit Saha	08.07.2019	19.07.2019	2	Faculty of all disciplines	After attending the program, the participants will be able to • describe the multimedia components • get exposure in various multimedia related software • prepare a small computer based training material
41.	CU41	Active Learning under Engineering Education	Urmila Kar	08.07.2019	19.07.2019	2	Faculty of all Engineering disciplines	After attending the programme, participants will be able to: • identify features of learning-teaching system under engineering education • explain the need for active learning • analyse the learning styles of engineering students • identify innovative approaches for active learning • illustrate the features of Problem Based Learning and Project Based Learning • identify the way to incorporate active learning into engineering curricula
42.	CU42	Limit State Design of Steel Structures	Mithu Dey	15.07.2019	19.07.2019	1	Faculty of Civil, Architecture & allied disiciplines	After attending the program, participants are expected to be able to • Appreciate the understanding principles on plastic analysis of Steel structures. • Design the different structural elements by limit state method. • Familiar with the new code IS 800 : 2007
43.	CU43	Application of MATLAB Control System, Image Processing, Fuzzy Logic Tool box and GUI	Sagarika Pal	15.07.2019	19.07.2019	1	Faculty of Electrical, Electronics & allied disciplines	After completing the course the participant will be able to • Use MATLAB commands • Apply Control System Tool Box Commands • Illustrate Simulink Modelling techniques • Apply Image processing Tool Box Commands • Apply Fuzzy Logic Tool Box • Use GUI to perform interactive task
44.	CU44	Computer Numerical Controlled Machines: Constructional Features and Programming	Nirmal Kumar Mandal	15.07.2019	19.07.2019	1	Faculty of all disciplines	After attending the programme the participants will be able to • Identify Machining Centre. • Develop programs on CNC Vertical machining Centre. • Operate machining Centre.

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
45.	CU45	Basics of Computer, IT and ITes for Faculty and Staffs	Arpan Kumar Mondal	15.07.2019	26.07.2019	2	Faculty and Staff of all Departments	After attending the programme the participants will be able to • Understanding the computer hardward • Know about basic computer applications and operating systems used in engineering education and office management. • Practice session on MS Word, Power Point, Excel, specialized graph plotting software, Open office. • Have exposure on handling various operating systems. • Have an exposure on various OS and applications. • Candidates have to bring their own laptop with latest OS and MS Office installed.
46.	CU46	Industrial Process Control	Subrata Chattopadhyay	22.07.2019	26.07.2019	1	Faculty of Engineering discipline	After attending the course the participants will be able to • Familiar with closed loop control system • Understand the pressure, Temperature, Flow & Level Measurement system • Know hazardous area classification • Utilize the electrical instruments in hazardous area in process plant • Design the conventional complex control system like ratio, cascade, feed forward, selective, override etc. • Apply the control system in distillation column in industry • Know the fundamental of PLC, DCS and SCADA
47.	CU47	PLC Applications in Automations	Soumitra Kumar Mandal	22.07.2019	26.07.2019	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the programme, the participants will be able to • Describe the architecture of PLC • Develop PLC Programs • Run PLC Programs • Apply PLC in Industrial Automation
48.	CU48	Applied Thermodynamics	Rayapati Subbarao	22.07.2019	26.07.2019	1	Faculty of Mechanical & allied disciplines	At the end of the programme, the participants will be to: • interpret the working principle and features of steam engines, turbines and condensers. • explain the basics of I.C. Engines and analyze the performance. • identify the functions of gas turbines and power plants.
49.	CU49	Software Engineering Fundamentals & Application Development	Ranjan Dasgupta	22.07.2019	02.08.2019	2	Faculty of CSE, IT, & Computer Application	After attending the course the participants will be able to • get exposure in various issues related to software engineering • get exposure in application development process • design small application
50.	CU50	Fundamental and Applications of Nanomaterials	Subrata Mondal	22.07.2019	02.08.2019	2	Faculty of all disciplines	After attending this program, participants would be able to: • explore the concept of nanotechnology. • describe the fundamental of nanoscale materials' properties. • identify various carbon based nanomaterials. • describe applications of nanomaterials in various fields. • explain the nano toxicology and nano safety etc.

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
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51.	CU51	Exposure on MATLAB	Prasanta Sarkar	29.07.2019	02.08.2019	1	Faculty of Electrical, Electronics & Tele-communication, Mechanical, Aerospace and allied disciplines	After attending the programme, the participants will be able to • Explain the different aspect of MATLAB & simulink • Solve simple problem using MATLAB programming • Develop simple model using simulink • Use MATLAB in Analysis, design and simulation of engineering problem
52.	CU52	Development of Mechanical Engineering Laboratory Experiments and Laboratory Instruction Sheets	Samiran Mandal	29.07.2019	02.08.2019	1	Faculty and Technician in Mechanical & allied disciplines	After attending the programme, the participants will be able to • classify the laboratory experiments • develop laboratory experiments • plan the laboratory instruction • prepare laboratory instruction sheets • evaluate laboratory skills
53.	CU53	Testing of Concrete material & Design and Testing of Concrete Mixes	Jagat Jyoti Mandal	29.07.2019	09.08.2019	2	Faculty of Civil, Architecture & allied disciplines	After attending the programme the participants will be able to • Guide students & conduct different tests on concrete materials ✓ Cement ✓ Aggregates ✓ Water • Carry out design of Concrete mixes • Conduct tests on concrete (including NDT)
54.	CU54	Application of Soft Tools in Civil Engineering	Mithu Dey	05.08.2019	09.08.2019	1	Faculty & Technician of Civil Engineering	After attending the program, participants are expected to be able to • Use of different soft tools. • Use of Mat Lab in civil engineering
55.	CU55	Fundamentals of Computer and Internet (Especially Designed for Office Staff)	Rajeev Chatterjee	05.08.2019	09.08.2019	1	Technical and Office Staff	After completing the course the participant will be able to • Explain Computer fundamentals • Prepare Office document and presentation using office tools • Use Internet for searching and browsing operation • Communicate through Internet using email.
56.	CU56	Mechatronics and Automation	Subrata Chattopadhyay	05.08.2019	09.08.2019	1	Faculty of Engineering discipline	After attending the course the participants will be able to • Understand the fundamental of Mechatronic System • Understand Mechatronics and Mechatronic System Dynamics. • Application of Sensors & Transducers in Mechatronics & Robotics • Design the conventional complex control system like ratio, feed forward, selective control etc. • Use of Programmable Logic Controllers (PLC), LabView for Mechatronics system Application.
57.	CU57	Statistical Methods : Theories and Applications	Kinsuk Giri	19.08.2019	23.08.2019	1	Faculty of Engineering & Mathematics disciplines	After completing the course the participant will be able to • get an overview on different statistical methods • get an overview on correlation, regression, curve fitting etc. • solve problems on statistical methods using tools
58.	CU58	Estimating & Costing of Non-Conventional Energies	Sheela Yadav Rai	19.08.2019	23.08.2019	1	Faculty of Engineering disciplines	After attending the programme the participants will be able to : • Describe various type of Non-conventional Energies Sources • Understand the scope of Solar energy, Solar Thermal Conversion, Solar Collector, Wind Energy • Estimating & costing of various energies

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
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59.	CU59	Industrial Automation using PLC, DCS & SCADA	Sagarika Pal	19.08.2019	23.08.2019	1	Faculty of Electrical, Electronics, Instrumentation & Mechanical	After completing the course the participant will be able to • Explain Conventional control techniques for industrial automation • Describe complex controls such as ratio, cascade, feed forward etc. • Develop programme on PLC and DCS for process automation • Explain SCADA systems for various process control systems
60.	CU60	Testing Drinking Water for Domestic Use	Sailendra Nath Mandal	19.08.2019	30.08.2019	2	All disciplines	After attending the programme the participants will be able to acquire – • knowledge of different drinking water testing equipment, methods of testing different parameters and impact on human health, • skill of handling different device, performing experiments, interpreting results, preparing test report, providing laboratory instructions to develop inquiring attitude among the student and evaluation of laboratory performance in related to drinking water testing laboratory, • attitude of hand-on working in the laboratory/field (Plant Visit)
61.	CU61	Structural Audit	Uday Chand Kumar	26.08.2019	30.08.2019	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme the participants will be able to • Be acquainted with causes for deterioration of RCC structures • Know the measures prescribed in the Indian Standards for making and testing concrete • Importance of non-destructive and semi-destructive testing • Procure hands –on demonstration of various Instruments for non-destructive and semi-destructive testing • Know how to assess in –situ concrete strength • Know about repair, rehabilitation and retrofitting measures • Understand different methods of Repair and Rehabilitation
62.	CU62	Data Analysis using MATLAB	Indrajit Saha	26.08.2019	30/08/2019	1	Faculty of all disciplines	After attending the program, the participants will be able to • analyze the data using various statistical methods • visualize the data for better understanding • develop prediction model for real-life data driven problems
63.	CU63	Microprocessors & Microcontrollers	Soumitra Kumar Mandal	26.08.2019	30.08.2019	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the programme, the participants will be able to • Describe Architecture and programming of 8085 Microprocessor & 8051 Microcontroller • Design interfacing circuits for Microprocessor & Microcontroller based systems • Write assembly language programs for embedded system
64.	CU64	Theory and Practices of CNC Machining Operations	Arpan Kumar Mondal	26.08.2019	06.09.2019	2	Faculty & Technician of Mechanical, Production, Manufacturing and Industrial Engineering	After attending the programme the participants will be able to • Understand the fundamentals of CNC programming. • Understand the basics of CNC machining simulation • Perform independently various CNC machining operations

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
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65.	CU65	Drawing, Analysis and Design of Structures by Limit State Method using Software	Mithu Dey	02.09.2019	06.09.2019	1	Faculty of Civil, Architecture & allied disciplines	After attending the program, participants are expected to be able to • Appreciate the importance of the Limit State Method. • Compare with Working Stress Method. • Understand the different methods of structural analysis • Design the different structural elements (RCC & Steels structures) by Limit State Method. • Use of software to drawing analysis and design the different Structural elements.
66.	CU66	Recent Trends in Optimization : Theory and Applications	Kinsuk Giri	02.09.2019	06.09.2019	1	Faculty of Engineering & Science disciplines	On successful completion of the programme the participants will be able to • understand various types of optimization problems • apply optimization techniques in different fields • solve some basic problems using tools
67.	CU67	Application of MATLAB in Engineering	Prasanta Sarkar	02.09.2019	06.09.2019	1	Faculty of Electrical, Electronics & Tele-communication, Mechanical, Aerospace and allied disciplines	After attending the programme, the participants will be able to • Explain the different aspect of MATLAB & simulink • Solve simple problem using MATLAB programming • Develop simple model using simulink • Use MATLAB in Analysis, design and simulation of engineering problem
68.	CU68	Mathematics and Logic	Samir Roy	09.09.2019	14.09.2019	1	Faculty of CSE, IT, Computer Application, Electronics & Electrical & Mathematics	After successful completion of the programme the participants will be able to • Explain Mathematical Logic in classroom • Relate logic as the foundation of Mathematics. • Apply logic and mathematics in problem solving.
69.	CU69	Introduction to Concepts of Machining Science	Samiran Mandal	09.09.2019	14.09.2019	1	Faculty of Mechanical & allied disciplines	After attending the programme, the participants will be able to • explain the geometry of cutting tools • explain mechanism of clip formation • analyse the cutting forces in machining • explain the thermal aspects in machining • analyse machinability of materials • select tool materials for machining
70.	CU70	Environmental Awareness	Sailendra Nath Mandal	16.09.2019	20.09.2019	1	All disciplines	After attending the programme the participants will be able to gain and develop– • knowledge of basic idea of Air pollution, water pollution, noise pollution, light pollution and impact on human health, • skill of handling conventional and modern sophisticated equipment, preparation of laboratory instruction sheets, interpreting experimental results, providing laboratory instruction such as to develop in enquiring attitude among students, preparing related test reports, • attitude of hands-on-working in the laboratory/field. (Plant Visit)
71.	CU71	Laboratory Experiment and Students' Project	Sagarika Pal	16.09.2019	20.09.2019	1	Faculty of Electrical, Electronics, Instrumentation & Mechatronics	After attending the course the participants will be able to • Select the laboratory experiments and projects as per curriculum • Perform experiments and record the data properly • Prepare laboratory manual for different experiments • Guide student to perform project work • Write project report in proper format • Evaluate the laboratory and project performance of students

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
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72.	CU72	Electrical Measurement and Instrumentation	Subrata Chattopadhyay	16.09.2019	20.09.2019	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the course the participants will be able to • Classification of Measuring Instruments, control, balancing and damping, errors in measurement • Working of Ammeters, voltmeters (DC/AC), Wattmeter, Energy meters. Operation of Instrument Transformers: Potential and current transformers, • Application of DC/AC Bridges: General equations for bridge balance, measurement of self-inductance by Maxwell's bridge Hay's bridge, Owen's bridge, measurement of capacitance by De Sauty bridge, Schearing bridge, errors, Wagner earth device, Kelvin's double bridge. • Classify the Different types of Transducers & Actuators used in Industry • Transducer: Strain Gauges, Thermistors, Thermocouples, Linear Variable Differential Transformer (LVDT), Capacitive Transducers, Peizo-Electric transducers, Optical Transducer, Torque meters, inductive torque transducers, electric tachometers, photo-electric tachometers, Hall Effect Transducer • Understand fundamental of pressure, flow, temperature, level, velocity, acceleration, vibration, position, displacement measuring transducers used in process industries.
73.	CU73	Image Processing using MATLAB	Indrajit Saha	16.09.2019	27.09.2019	2	Faculty of Computer Application, Computer Science, IT, Mechanical, Electrical & Electronics	After attending the program, the participants will be able to • describe the fundamentals of image processing (IP) • apply MATLAB commands to do IP • explain image processing in classroom
74.	CU74	Electrical Circuit Analysis	Urmila Kar	23.09.2019	27.09.2019	1	Faculty of Electrical & allied disciplines	After attending the programme, participants will be able to: • explain the concept of electric circuits and networks • explain the need for circuit analysis • illustrate the techniques of circuit analysis • identify the mathematical tools for circuit analysis • develop models for analysis using Pspice and MATLAB • design experiments on electric circuit theory using • Pspice and MATLAB
75.	CU75	LABVIEW & VHDL Applications	Soumitra Kumar Mandal	23.09.2019	27.09.2019	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the programme, the participants will be able to • Understand fundamentals of LABVIEW & VHDL • Implement LABVIEW & VHDL Applications
76.	CU76	Bio Medical Instrumentation	Subrata Chattopadhyay	14.10.2019	18.10.2019	1	Faculty of Engineering & Pharmacy discipline	After attending the course the participants will be able to • Understand Cells, Digestive System, Excretory System, Endocrinology • Describe Origins of electro-physiological signal and their characteristics • Design practical clinical sensors and transducers • Understand the ECG, EEG, EMG and their Electrodes • Understand the operation of X-ray, Fluoroscopy and Radiography, Pacemaker, Magnetic Resonance Imaging etc. • Explain Electric shock hazards and safety devices

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
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77.	CU77	Power Electronics	Soumitra Kumar Mandal	14.10.2019	18.10.2019	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the programme, the participants will be able to • Study performance characteristics of Power Diode, MOSFET, SCR, IGBT, DIAC and TRIAC • Describe Single Phase and Three Phase Uncontrolled and Controlled Converters • Understand Commutation of SCRs, Inverter, Chopper & Cyclo-converter • Study AC and DC Drives, UPS, Power factor Improvement
78.	CU78	Topics in Data Structures and Algorithms	Samir Roy	14.10.2019	25.10.2019	2	Faculty of CSE, IT, Computer Application, Electronics & Electrical	On successful completion of the programme the participants will be able to • Design data structures& algorithms to solve computational problems. • Analyze algorithms for their effectiveness and efficiency. • Implement data structures & algorithms to solve real-life problems.
79.	CU79	Earthquake Resistant Design of RC Buildings with an Introduction to Shake Table	Santanu Bhanja	21.10.2019	25.10.2019	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme, the participants will be able to • Understand the modifications suggested as per the revised (2016) Standards –IS: 1893 Part 1 and IS :13920 • Appreciate the underlying principles of earthquake resistant design of R.C. buildings • Differentiate between Static and Dynamic analysis and know the domain of their application • Design RC elements for earthquake resistance and investigate their behavior up to the failure levels • Know the basic features and use of a high end Shake Table • Apply software for analysis & design of seismic resistant structures Participants will be awarded a complete unlimited licenced version of STAAD.Pro Connect with STAAD.Pro Advanced Concrete Design Solution for personal use on their PC's for full one year for academic purpose
80.	CU80	Product Design	Samiran Mandal	21.10.2019	25.10.2019	1	Faculty of Mechanical & allied disciplines	After attending the programme, the participants will be able to • identify customer needs • establish product function • carry out product teardown and benchmarking • generate and select concepts • perform concept embodiment • design for X • develop analytical, numerical and physical models
81.	CU81	Power Plant Engineering	Rayapati Subbarao	28.10.2019	01.11.2019	1	Faculty of Mechanical & allied disciplines	At the end of the programme, the participants will be to: • understand the need and importance of alternative fuels in power section. • recognize the necessity of newer fuels in transportation. • analyze alternative sources of energy. • explore the possibilities in making modifications to power plant scenario. • investigate about various alternative fuels available.

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
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82.	CU82	Construction and Disaster Management	Uday Chand Kumar	04.11.2019	08.11.2019	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme, participants will be able to • Describe construction management • Describe the role, responsibility and risk involved in construction • Describe the organizational structure • Explain planning and scheduling technique • Describe the different causes of disaster • Describe disaster management and mitigation.
83.	CU83	Health Assessment and Rehabilitation of RCC Structures	Santanu Bhanja	04.11.2019	08.11.2019	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme, the participants will be able to • Be acquainted with causes for deterioration of RCC structures • Know the importance of non-destructive and semi-destructive testing • Understand repair, rehabilitation and retrofitting measures • Be exposed to hands –on demonstration of various Instruments • Know the methods of Repair and Rehabilitation • Appreciate the effect of earthquake on Structures
84.	CU84	Advanced Control System with MATLAB Simulation	Prasanta Sarkar	11.11.2019	16.11.2019	1	Faculty of Electrical, Electronics & Tele-communication, Mechanical, Aerospace and allied disciplines	After attending the programme, the participants will be able to • Understand the recent trends in automation & control • Use modern control technique in controller design • Us robust control technique in controller design • Implement intelligent control techniques • Apply MATLAB Control System Toolbox
85.	CU85	Mechanical Measurements and Control	Samiran Mandal	11.11.2019	16.11.2019	1	Faculty of Mechanical & allied disciplines	After attending the programme, the participants will be able to • explain the principles of measurement of physical quantities in mechanical engineering applications • explain the basic principles of control system.
86.	CU86	Design of Payroll Systems using ORACLE	Ranjan Dasgupta	11.11.2019	22.11.2019	2	Faculty members of CSE, IT, & Computer Application	After attending the course the participants will be able to • get exposure in various process of Payroll Systems • get exposure in designing the processes using Software Engineering approach • design & develop the system
87.	CU87	Solid and Liquid Waste Management	Sailendra Nath Mandal	18.11.2019	29.11.2019	2	All disciplines	After attending the programme the participants will be able to acquire – • knowledge of basic concept of solid waste, wastewater, sampling, preservation, analysis, interpretation of result and disposal of wastewater, Solid waste, impact on human health , • skill of handling equipment, performing experiments, interpreting results, preparing test report, providing laboratory instructions to develop inquiring attitude among the student and evaluation of laboratory performance in related to solid waste, wastewater analysis/ treatment laboratory, • attitude of hand-on working in the laboratory/field (Plant Visit)
88.	CU88	Introduction to PYTHON Programming	Kinsuk Giri	18.11.2019	22.11.2019	1	Faculty of Engineering & Science disciplines	On successful completion of the programme the participants will be able to • understand and explain the different aspects of PYTHON • apply PYTHON to solve problems • use PYTHON for visualizations

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
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89.	CU89	Solar PV System	Soumitra Kumar Mandal	18.11.2019	22.11.2019	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the programme, the participants will be able to • Describe the principles of Solar Cell • Identify the various parameters of Solar PV Module • Develop an in-depth knowledge about Solar PV Module by performing basic experiments & through field visit • Modelling of Solar PV System
90.	CU90	CAD/CAM	Nirmal Kumar Mandal	18.11.2019	22.11.2019	1	Faculty of all disciplines	After attending the programme the participants will be able to • Define automation. • Classify automation. • Operate automated system.
91.	CU91	Object Oriented Software Design and Modeling	Samir Roy	25.11.2019	29.11.2019	1	Faculty of CSE, IT, Computer Application, Electronics & Electrical & Mathematics	After successful completion of the programme the participants will be able to • Explain Object Oriented Software System design in classroom • Design object oriented software • Develop object oriented software models.
92.	CU92	Engineering Thermodynamics and its Applications	Rayapati Subbarao	25.11.2019	29-11-2019	1	Faculty of Mechanical & allied disciplines	At the end of the programme, the participants will be to: • paraphrase the basics of thermodynamics. • apply laws of thermodynamics in various problems. • appreciate more about entropy and the processes of perfect gases. • identify and analyze thermodynamic air cycles. • familiarize the basics of fuels and combustion.
93.	CU93	Network Infrastructure & Cloud Security	Ranjan Dasgupta & Rajeev Chatterjee	02.12.2019	06.12.2019	1	Faculty of CSE, IT, ECE, & Computer Application	After completing the course the participant will be able to • Explain the Network Security • Management of Assets, Vulnerability and Threats • Identity and Access Management • Explain the structure and application of cloud computing • Explain the importance of cloud security
94.	CU94	Oil Hydraulics & Pneumatics	Dipankar Bose	09.12.2019	13.12.2019	1	Faculty of Mechanical & allied disciplines	After attending the course the participants will be able to • describe various elements of oil powered hydraulic systems • Illustrate working principles of air powered pneumatic systems
95.	CU95	Automobile Engineering	Samiran Mandal	09.12.2019	13.12.2019	1	Faculty of Mechanical & allied disciplines	After attending the course the participants will be able to • classify the Automobiles • describe the construction of automobiles • explain the principle of working of different subsystems of automobiles.
96.	CU96	Introduction to Structural Analysis and Design Software for Buildings - ETABS	Santanu Bhanja	16.12.2019	20.12.2019	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme, the participants will be able to • Be acquainted with the basic methodology of software application in structural analysis and design of RC buildings • Apply latest IS codal provisions in analysis and design like IS 456, 1893, 875, 13920 etc. • Know the basic features of a universally accepted standard software-ETABS • Appreciate the effect of earthquake on Structures

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
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97.	CU97	Power Generation from Energy Resources	Sheela Yadav Rai	16.12.2019	20.12.2019	1	Faculty of Engineering disciplines	After attending the programme the participants will be able to • Understand potential sources of conventional energies for power generation • Describe potential sources of non-conventional energies for power generation • Understand environmental aspects of power generation • Appreciate about various power projects
98.	CU98	Polymer Composites and Nanocomposites	Subrata Mondal	16.12.2019	20.12.2019	1	Faculty of Mechanical, Material Sc. & Engg., Chemistry, Textile Engg. Chemical Engg. and Physics	After attending this program, participants would be able to: • explain the fundamental concept of nanotechnology. • differentiate the microfillers and nanofillers. • explore the fundamental of polymeric composites and nanocomposites. • describe the properties of polymeric composites and nanocomposites. • explain the applications of polymeric composites and nanocomposites etc.
99.	CU99	Engineering Optimization with MATLAB	Nirmal Kumar Mandal	23.12.2019 -	03.01.2020	2	Faculty of all disciplines	After attending the programme the participants will be able to • Model a physical system • Explain linear and nonlinear regression • Optimise a function using GA, PSO
100.	CU100	Introduction to IS 800-2007	Mithu Dey	23.12.2019	28.12.2019	1	Faculty of Civil, Architecture & allied disciplines	After attending the program, participants are expected to be able to • Appreciate the understanding principles on plastic analysis of Steel structures. • Design the different structural elements as per new codes: • Familiar with the new code IS 800 : 2007
101.	CU101	Mathematical Foundation of Computer Science	Samir Roy & Kinsuk Giri	23.12.2019	03.01.2020	2	Faculty of CSE, IT, Computer Application, Electronics & Elect. Engg. & Mathematics	After successful completion of the programme the participants will be able to • Explain mathematical/logical foundation of Computer Science • Model computational tasks in terms of mathematical formalism • Apply appropriate mathematical tools to solve computational problem
102.	CU102	Application of Total Station in Present day Surveying	Santanu Bhanja	30.12.2019	03.01.2020	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme, the participants will be able to • Be introduced to Total Station • Understand the processes involved in operating Total Station • Carry out different types of Surveying using Total Station • Assimilate and store data from site and plot the same • Be introduced to DGPS
103.	CU103	Testing of Bituminous Material and Design of Bituminous Mixes	Jagat Jyoti Mandal	06.01.2020	10.01.2020	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme the participants will be able to • Explain basic concepts on tests of different bituminous Material required for construction of bituminous layers of pavements • Guide students in conducting different tests on bituminous material • Design bituminous mixes • Design flexible pavement according to the guideline of IRC 37 - 2012

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
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104.	CU104	AutoCAD for Engineers	Mithu Dey	06.01.2020	10.01.2020	1	Faculty & Technician of all discipline	After attending the program, participants are expected to be able to • Know the different commands of the Software • Draw the 2D and 3D • Appreciate the use of AutoCAD in Engg. And Science Field.
105.	CU105	Ecology and Environmental Studies	Uday Chand Kumar	06.01.2020	10.01.2020	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme the participants will be able to • estimate the water demand • suggest the treatment required of water • describe the sewerage system • describe the different causes of air, water and soil pollution and effect of pollution • describe low cost sanitation • describe the solid waste management
106.	CU106	Design and Development of Content for E-learning	Rajeev Chatterjee	06.01.2020	10.01.2020	1	Faculty of all disciplines	After completing the course the participant will be able to • To explain the various standard for development of content for E-learning systems • To design Learning Objects with respect to instructional Objectives • To design content for flipped classroom environment • To design MOOC based learning content.
107.	CU107	LABVIEW Applications in Engineering	Sagarika Pal	06.01.2020	10.01.2020	1	Faculty of Electrical, Electronics & Instrumentation	After completing the course the participant will be able to • Explain fundamentals of LABVIEW • Use graphical programming language • Apply LABVIEW in various analog and digital systems • Illustrate applications of LABVIEW in DAS
108.	CU108	Inferential Statistics for Engineering Research	Nirmal Kumar Mandal	06.01.2020	10.01.2020	1	Faculty of all disciplines	After attending the programme the participants will be able to • Model a physical system using statistical data • Analyse the error and uncertainty of the model
109.	CU109	Discrete Mathematics and Its Applications	Kinsuk Giri	13.01.2020	17.01.2020	1	Faculty of Engineering & Science disciplines	On successful completion of the programme the participants will be able to • understand the fundamentals of discrete mathematics • solve problems in various areas of discrete mathematics • apply tools to solve few discrete math problems
110.	CU110	Power System Protection	Sheela Yadav Rai	13.01.2020	17.01.2020	1	Faculty of Electrical disciplines	After attending the programme the participants will be able to: • Describe the structure of Power System • Understand power system protective relays • Know protection of Alternators & Transformers • Understand the various types of protection system of Bus-bars & Lines

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
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111.	CU111	Production and Operations Management	Samiran Mandal	13.01.2020	17.01.2020	1	Faculty of Mechanical & allied disciplines	After attending the program, participants are expected to be able to To use techniques related to following • linear programming forecasting • waiting line models • product and process strategies • location layout and operations layout • MRP • aggregate planning • inventory management • project management • TQM
112.	CU112	Functional Textiles and Protections	Subrata Mondal	20.01.2020	24.01.2020	1	Faculty of Textile, Polymer Sc. & Engg., Material Sc. & Engg. Chemical and Chemistry	After attending this program, participants would be able to: • explain the concept of functional textiles. • explain heat and moisture management in the clothing. • explore the UV blocking textiles. • describe the nanotechnology applications for the functional textiles. • explore the medical textile etc.
113.	CU113	Introduction to Soft Computing	Samir Roy & Indrajit Saha	20.01.2020	31.01.2020	2	Faculty of CSE, IT, Computer Application, Electronics & Electrical & Mathematics	After successful completion the program, the participants will be able to • Explain the principles & techniques of soft computing • Apply Soft Computing techniques for complex computational problem • Design intelligent systems applying soft computing techniques
114.	CU114	Transmission Line Parameters	Sheela Yadav Rai	03.02.2020	07.02.2020	1	Faculty of Electrical disciplines	After attending the programme the participants will be able to • Understand various transmission lines • Determine ABCD Parameters • Understand Transmission lines T and Pi Models • Calculate regulation, efficiency & power flow
115.	CU115	8086 Microprocessor	Soumitra Kumar Mandal	03.02.2020	07.02.2020	1	Faculty of Electrical, Electronics & allied disciplines	After attending the programme, the participants will be able to • describe architecture and working principles of 8086 microprocessor • describe addressing mode & instruction sets of 8086 microprocessor • write assembly language programs
116.	CU116	Advanced Manufacturing Processes	Arpan Kumar Mondal	03.02.2020	07.02.2020	1	Faculty & Technician of Mechanical & allied disciplines	After attending the programme the participants will be able to • understand the fundamentals of advanced manufacturing processes • classify various advanced manufacturing processes. • explain the principles of non-conventional manufacturing processes • explain the principles of welding processes • know the recent developments in the field of advanced manufacturing.
117.	CU117	Introduction to DBMS	Ranjan Dasgupta	03.02.2020	14.02.2020	2	Faculty of all disciplines	After attending the course the participants will be able to • get acquainted with Database Management System • get exposure in database design theory • design and develop database application

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118.	CU118	Concept Teaching in Engineering Mechanics	Jagat Jyoti Mandal & Dipankar Bose	10.02.2020	21.02.2020	2	Faculty of Civil, Mechanical and allied disciplines	After attending the programme the participants will be able to • explain the theory and applications of engineering mechanics in solving practical problems • teach engineering mechanics from basic principles • apply these concepts to solve practical problems • impart acquired knowledge to students in a systematic manner
119.	CU119	Machine Design	Samiran Mandal	10.02.2020	14.02.2020	2	Faculty of Mechanical & allied disciplines	After attending the programme the participants will be able to • explain the theories of features • design levers • design shafts and couplings • design power servers • design brakes and duties • design bearings • design gears
120.	CU120	Advanced Materials Science and Engineering	Subrata Mondal	17.02.2020	21.02.2020	1	Faculty of Mechanical, Chemical, Polymer Sc. & Engg., Material Sc. & Engg., Physics & Chemistry	After attending this program, participants would be able to: • explain the structure sensitive properties of polymers, metals and alloys. • explain the fundamental of nanomaterials, types of nanomaterials, principle methods of nanomaterials preparation, properties and applications. • explain types, manufacturing process, properties and applications of metal matrix, ceramic matrix and polymer matrix composites/nanocomposites. • explain biocompatible and biodegradable materials, characteristics and applications for various biomaterials.
121.	CU121	Environmental Pollution Testing	Sailendra Nath Mandal	17.02.2020	28.02.2020	2	All disciplines	After attending the programme the participants will be able to acquire – • knowledge of testing and maintenance of different water, wastewater, solid waste, Noise, air pollution testing equipment, and impact on human health, • skill of handling different equipment, performing experiments, interpreting results, preparing test report, providing laboratory instructions to develop inquiring attitude among the student and evaluation of laboratory performance in related to water, wastewater, solid waste, air pollution testing laboratory, • attitude of hand-on working in the laboratory/field (Plant Visit)
122.	CU122	Mobile & Wireless Networking	Rajeev Chatterjee	24.02.2020	28.02.2020	1	Faculty of CSE, IT, ECE, & Computer Application	After attending the programme the participants will be able to • Setting-up of the PAN • Configuration of wifi systems with security parameters • Mobile Network and security • Identity and Access Management
123.	CU123	Transmission Lines Faults	Sheela Yadav Rai	02.03.2020	06.03.2020	1	Faculty of Electrical disciplines	After attending the programme the participants will be able to : • Describe the structure of Power System • Understand per unit representation of transmission lines • Know unsymmetrical faults • Know symmetrical faults

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
124.	CU124	Design and Development of MOOC based e-content	Ranjan Dasgupta	02.03.2020	13.03.2020	2	Faculty of all disciplines	After attending the course the participants will be able to • get exposure in MOOC / SWAYAM platform • get exposure in different equipment related to e-content develop • get exposure in design and develop of e-content.
125.	CU125	Laboratory Tests on Civil Engineering Material	Mithu Dey	16.03.2020	20.03.2020	1	Faculty & Technician of Civil, Architecture & allied disciplines	After attending the program, participants are expected to be able to • Develop Skill & Knowledge on the fundamentals involved in testing of various ingredients of Civil Engg. Materials. • Familiar with the use of NDT equipment's
126.	CU126	Computer Aided Design with Ansys	Nirmal Kumar Mandal	16.03.2020	20.03.2020	1	Faculty of all disciplines	After attending the programme the participants will be able to • Explain a mechanical system. • Use of software packages to analyse mechanical system
127.	CU127	Topics on Computer Architecture & Organization (Theoretical Discussion)	Ranjan Dasgupta	23.03.2020	27.03.2020	1	Faculty of CSE, IT, & Computer Application	After attending the course the participants will be able to • get exposure in different hardware components of modern computer • get exposure in the limitation of modern computer in context of high performance • get exposure in HPC and Cloud Computing

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II. MANAGEMENT (MGT)

Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
1.	MGT01	Institutional Management	Sukanta Kumar Naskar	22.04.2019	26.04.2019	1	Faculty of all disciplines	After attending the programme, the participants will be able to: • Explore management principles and its applications • Identify quality parameters in institutional development • Able to identify management tools Apply management tools for managing institutional activities
2.	MGT02	Laboratory Safety Management	Subrata Mondal	17.06.2019	28.06.2019	2	Faculty of all disciplines	After attending this program, participants would be able to: • demonstrate the proper housekeeping in the laboratory area. • explain various personal protective equipment for the laboratory works. • evaluate the risk assessment for the hazardous laboratory works. • identify the emergency equipment for the laboratory work area. • explain the hazardous waste management for the laboratory etc.
3.	MGT03	Human Resource Management	Sukanta Kumar Naskar	29.07.2019	02.08.2019	1	Faculty of all disciplines	After attending the programme, the participants will be able to: • Appreciate importance of HRM in managing organizations • Identify functions & scopes of HRM • Apply gained knowledge in respective organizations
4.	MGT04	Strategic Management	Sukanta Kumar Naskar	19.08.2019	23.8.2019	1	Faculty of all disciplines	After attending the programme, the participants will be able to: • Explore nature and scope of strategic management • Identify steps in strategic planning • Apply strategic management principles in respective organizations • Initiate strategic planning process
5.	MGT05	Office Management	Sukanta Kumar Naskar	16.09.2019	20.9.2019	1	Faculty of all disciplines	After attending the programme, the participants will be able to: • Identify management principles to manage office • Apply management principles to manage office • Develop knowledge in purchase • Follow purchase procedure • Develop skills in applying basic office management software
6.	MGT06	Research Methodology	Urmila Kar	02.12.2019	13.12.2019	2	Faculty of all disciplines	After attending the programme, participants will be able to: • explain the basic principles of Scientific and Technical Research • elaborate the basic skills necessary for planning and carrying out research • identify different sources of information and effective utilization of the same. • identify ethical issues involved • formulate scientific and technical arguments from unstructured textual data. • prepare a scientific communication from given material • prepare a critical assessment for summarizing a scientific communication • demonstrate skills in statistical analysis and presentation of data
7.	MGT07	Office Management using IT and ITes	Arpan Kumar Mondal	09.12.2019	20.12.2019	2	Faculty and Staff of all disciplines	After attending the programme the participants will be able to • Understanding the basics of office management • Know about various information technology tools used in office management • Basic computer applications and operating systems • Practice session on MS Word, Power Point, Excel • Candidates have to bring their own laptop with latest OS and MS Office installed.

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III. PROFESSIONAL SKILL DEVELOPMENT (PS)

Sl. No	Prog Code	Programme Title	Programme Co-ordinator (s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
1.	PS01	How to Write Thesis and Research paper	Rayapati Subbarao	13.05.2019	24.05.2019	2	Faculty of all disciplines	At the end of the programme, the participants will be to: • describe the steps involved in writing a thesis. • identify the scope of a thesis. • construe the results in a better way. • derive conclusions from the plots and contours made. • discover the ways of writing a research paper. • Communicate a paper in their area of research.
2.	PS02	Leadership & Management for Teachers	Habiba Hussain	10.06.2019	21.06.2019	2	Faculty & Technicians of all disciplines	After completing the course the participant will be able to • Analyse leadership attributes • Identify the managerial roles of a teacher • Build learning team in the class
3.	PS03	Effective Training	Sukanta Kumar Naskar	17.06.2019	21.06.2019	1	Faculty of all disciplines	After attending the programme, the participants will be able to: • Appreciate importance of training activity as a part of HRD • Identify steps in conducting any training programme • Conduct training needs analysis • Apply parameters for designing training programme
4.	PS04	Outcome Based Education for Accreditation	Habiba Hussain	01.07.2019	05.07.2019	1	Faculty & Technicians of all disciplines	After completing the course the participant will be able to • Distinguish between OBE & traditional education • Relate OBE & accreditation • Align learning experiences, assessment with outcomes
5.	PS05	Induction Training	Uday Chand Kumar	15.07.2019	19.07.2019	1	Faculty & Technicians of all disciplines	After attending the programme the participants will be able to • Identify attributes of instruction • Identify principles of design Curriculum • Demonstrate effective communication • Role of a teacher • Instructional objective and lesson planning • Evaluate • Create class room motivation
6.	PS06	Microteaching for Teaching Improvement	Habiba Hussain	29.07.2019	02.08.2019	1	Faculty & Technicians of all disciplines	After completing the course the participant will be able to • Classify the different teaching skills • Practice microteaching • Integrate the skills in teaching in actual classroom
7.	PS07	Effective Communication	Habiba Hussain	19.08.2019	23.08.2019	1	Faculty & Technicians of all disciplines	After completing the course the participant will be able to • Identify the elements of effective communication • Influence students' learning through better communication • Communicate to build interpersonal relations
8.	PS08	Administrative Effectiveness for Academic Administrators	Subir Basak	21.10.2019	25.10.2019	1	Faculty & Staff of all disciplines	After attending the programme, the participants will be able to Concept of Academic Administration, Effective and Efficient Administration, HRM, PM, Performance Appraisal & Need Analysis, Budgeting, Purchase Procedure, Quality Management, Grievance Management, Conflict Management, Leadership, Communication, Motivation, Gender Issues, RTI and e-Governance.

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Sl. No	Prog Code	Programme Title	Programme Co-ordinator (s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
9.	PS09	Outcome Based Accreditation	Urmila Kar	18.11.2019	22.11.2019	1	Faculty of all disciplines	After attending the programme, participants will be able to: explain the need for and features of Outcome Based Education (OBE) justify the requirement of Outcome Based Accreditation(OBA) identify parameters for OBA explain the features of Outcome Based Curriculum (OBC) identify outcome based learning-teaching and assessment processes explain the process of preparing self-assessment report (SAR) for Accreditation by NBA
10.	PS10	Designing Outcome Based Learning Framework	Habiba Hussain	02.12.2019	06.12.2019	1	Faculty & Technicians of all disciplines	After completing the course the participant will be able to • Explore principles of OBE • Design activities for active learning • Demonstrate learner centred instruction
11.	PS11	Research Methodology in Engineering and Technical Writing using LaTeX	Kinsuk Giri & Indrajit Saha	09.12.2019	20.12.2019	2	Faculty of all disciplines	After attending the program, the participants will be able to • get exposure in Research Methodology • describe the fundamentals LaTeX programming • apply LaTeX commands for preparing scientific and non-scientific documents
12.	PS12	Writing Research Proposals	Habiba Hussain	16.12.2019	20.12.2019	1	Faculty of all disciplines	After completing the course the participant will be able to • Identify components of research proposal • Distinguish between research proposal & research report • Prepare a research proposal
13.	PS13	Induction Training	Habiba Hussain	06.01.2020	10.01.2020	1	Faculty & Technicians of all disciplines	After attending the programme the participants will be able to • Identify different roles of a teacher • Analyse components of LT system • Prepare lesson plan • Assess learning performance

B. E-LEARNING PROGRAMME (ON-LINE PROGRAMME DELIVERY THROUGH ICT MODE):

Government of India has approved two projects titled National Mission on Education through Information and Communication Technology (NME-ICT) (mission document at www.sakshat.ac.in) and the National Programme on Technology Enhanced Learning' (NPTEL) in order to leverage the potential of ICT in providing high quality personalized and interactive knowledge modules over the internet to offer short term training programmes in cutting edge technologies for the faculty/staff members of polytechnics and engineering colleges. In order to assist the Government in realizing the goals of these two Missions, NITTTR, Kolkata has decided to offer programmes throughout the academic session 2019-20. A list of the training programmes to be offered through ICT Mode in 2019-20 is provided below:

Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
1.	ICT01	NBA Accreditation	Rayapati Subbarao	22.04.2019	26.04.2019	1	Faculty of all disciplines	At the end of the programme, the participants will be to: • Find the Impact of NBA Accreditation • Prepare Vision, Mission, Program Educational Objectives • Prepare Outcomes and Program Outcomes • Learn how to prepare SAR. • Practice Criteria I to X
2.	ICT02	Introduction to Artificial Intelligence	Samir Roy	06.05.2019	10.05.2019	1	Faculty of CSE, IT, Computer Application, Electronics & Electrical & Mathematics	After successful completion of the programme, the participants will be able to • Explain the concepts of Artificial Intelligence in classroom. • Apply Artificial Intelligence techniques to solve complex problems. • Develop intelligent computational systems.
3.	ICT03	Problem Based Learning	Sagarika Pal, Indrajit Saha, Kinsuk Giri, Arpan Kumar Mondal	20.05.2019	31.05.2019	2	Faculty of Engineering disciplines	After completing the course the participant will be able to • Explain the basic problem solving strategies in classroom • Identify specific problems covering a particular area of learning • Solve problems in various branches of Engineering through PBL • Analyse the benefits associated with PBL compared to conventional learning
4.	ICT04	Assessment and Evaluation under Outcome Based Education	Urmila Kar	10.06.2019	14.06.2019	1	Faculty of all disciplines	After attending this programme, the participants will be able to • identify features of Outcome Based Education (OBE) • distinguish between assessment and evaluation • explain the importance of assessment and evaluation under OBE • plan assessment under OBE • design assessment tools under OBE
5.	ICT05	Introduction to Network Security	Indrajit Saha	24.06.2019	28.06.2019	1	Faculty of Computer Application, Computer Science, IT, Mechanical, Electrical & Electronics	After attending the program, the participants will be able to • describe the fundamentals of Network Security • demonstrate how to maintain the privacy of computer data • explain network security in classroom
6.	ICT06	Automated Manufacturing Systems	Nirmal Kumar Mandal	01.07.2019	05.07.2019	1	Faculty of all disciplines	After attending the programme the participants will be able to • Explain Automation • Analyse the performance of Automated Manufacturing System
7.	ICT07	Effective Teaching	Habiba Hussain	15.07.2019	19.07.2019	1	Faculty & Technicians of all disciplines	After attending the programme the participants will be able to • Analyse components of effective teaching • Identify paradigm change in Learning-Teaching system • Design instruction for active learning • Manage classroom behaviour • Develop a tool for assessing teaching effectiveness

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
8.	ICT08	Rural Development through Technical Institution	Uday Chand Kumar	29.07.2019	02.08.2019	1	Faculty & Technicians of all disciplines	After attending the programme the participants will be able to • Understand the history rural development • Understand the activities of the various scheme. • Aware the role of Technical Institution in implementing the various scheme. • Prepare project report. • Prepare action plan of the scheme. • Involve PRI /NGO in implementing the scheme.
9.	ICT09	Advanced Manufacturing Processes	Arpan Kumar Mondal	05.08.2019	09.08.2019	1	Faculty & Technician of Mechanical & allied disciplines	After attending the programme the participants will be able to • Classify various advanced manufacturing processes. • Explain the principles of non-conventional manufacturing processes • Explain the principles of welding processes • Know the recent developments in the field of advanced manufacturing.
10.	ICT10	Analysis and Design of Shallow Foundations	Jagat Jyoti Mandal	26.08.2019	30.08.2019	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme the participants will be able to • Determine settlement and bearing capacity of shallow foundations and deep foundation • Design different types of shallow foundations • Isolated, • combined footing and • raft foundation and • Teach the related topics in more efficient manner
11.	ICT11	Principles of RCC Design up to & beyond Limit States, Applications and Limitations of IS:456-2000	Santanu Bhanja	16.09.2019	20.09.2019	1	Faculty of Civil, Architecture & allied disciplines	After attending the course, the participants will be able to • Understand the philosophy of Limit State Method in a comprehensive manner as per IS:456-2000 • Understand the importance of ductility in R.C. Design • Identify the major design and detailing considerations • Differentiate between load and capacity design • Understand Performance based design
12.	ICT12	Water Pollution and Health	Sailendra Nath Mandal	21.10.2019	25.10.2019	1	All disciplines	After attending the programme the participants will be able to acquire – • knowledge of basic concept of water pollution, different parameters of water, and impact of each water parameter on human health, • skill of demonstrating conventional & modern sophisticated equipment, performing related experiments in the laboratory, interpreting experimental results, preparing related test-reports with remarks/comments (if any), • attitude of demonstrating the water pollution analysis equipment.

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
13.	ICT13	Management Issues of Laboratory and Workshop Class	Dipankar Bose	04.11.2019	08.11.2019	1	Faculty & Laboratory Technicians, Workshop Instructors	After attending he programme the participant will be able to • know nature of learning process in laboratory and workshop, • prepare laboratory log book • explain the role of instructor for laboratory/workshop, and issues of laboratory and workshop development • state management Issues such as management of students, their attitude, diversity, timings • know assessment procedures of students for laboratory and workshop class • state the steps of procurement of laboratory items inventory and storage of apparatus, • suggest the training modules for laboratory personnel:
14.	ICT14	Control and Automation	Sagarika Pal	18.11.2019	22.11.2019	1	Faculty of Electrical, Electronics, Instrumentation and Mechanical	After completing the course the participant will be able to • Classify various control strategies used for industrial automation • Explain Conventional and complex control techniques • Apply PLC for discrete and continuous control systems • Apply DCS and SCADA for automation
15.	ICT15	Problem Based Learning	Arpan Kumar Mondal, Indrajit Saha, Sagarika Pal, Kinsuk Giri	02.12.2019	06.12.2019	1	Faculty of all disciplines	After completing the course the participant will be able to • Explain the basic problem solving strategies in classroom • Identify specific problems covering a particular area of learning • Solve problems in various branches of Engineering through PBL • Analyse the benefits associated with PBL compared to conventional learning
16.	ICT16	Indian Electricity Rule and Code of Practices	Prasanta Sarkar	16.12.2019	20.12.2019	1	Faculty of Electrical, Electronics & allied disciplines	After attending the programme, the participants will be able to • Familiarize with Indian Electricity Act and National Electric Code • Understand fundamental principles for electrical installation • Design electrical installation • Enforce safety in electrical work.
17.	ICT17	Theory, Operation and Applications of Transducers & Actuators in Industry	Subrata Chattopadhyay	30.12.2019	03.01.2020	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the course the participants will be able to • Classify the Different types of Transducers & Actuators used in Industry. • Familiar with the overview of measurement system and selection of instruments • Understand fundamental of pressure, flow, temperature, level, velocity, acceleration, vibration, position, displacement measuring transducers used in process industries. • Apply the Transducers Actuators in process Control Systems. • Know the concept of Intrinsic safety instruments
18.	ICT18	Organizational Behaviour	Mithu Dey	20.01.2020	24.01.2020	1	Faculty of all disciplines	After attending the program, participants are expected to be able to • Understand how to behave with the others • Set the goal • Manage the stress at workplace • Communicate with the others person • Work within the group • Learn to appreciate the others opinion • Understand the important of self existence

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
19.	ICT19	Development of Laboratory Instruction and Manual	Subrata Mondal	03.02.2020	07.02.2020	1	Faculty of all disciplines	After attending this programme, participants would be able to: • explore the role of laboratory in student learning • explore development of laboratory exercise • explore writing of laboratory report • explore standard operating procedure (SoP) in laboratory • explore safety management in laboratory etc.
20.	ICT20	Problem Solving and Decision Making	Sukanta Kumar Naskar	17.02.2020	21.02.2020	1	Faculty of all disciplines	After attending the programme, the participants will be able to: • Identify basic steps in problem solving and decision making • Appreciate different factors for effective decision making • Correlate conflict in decision making • Identify basic tools in problem solving • Apply basic tools in problem solving and decision making
21.	ICT21	Commentary on IS: 456-2000 with an Introduction to IS:13920-2016	Santanu Bhanja	02.03.2020	06.03.2020	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme, the participants will be able to • Interpret some of the important clauses of the code in their true letter and spirit • Implement the codal clauses in a better manner for design and construction of Civil Engineering Structures • Identify the steps to be taken for concrete production, quality control and testing • Understand the philosophy and principles Limit State Method in a comprehensive manner • Conceive that this code cannot be considered as a single package for the design of concrete structures and has to be mandatorily read in conjunction with other codes • Identify the limitations of the code • Be introduced to the basic requirements of IS:13920-2016
22.	ICT22	Renewable Energy Sources and Emerging Technologies	Sheela Yadav Rai	23.03.2020	27.03.2020	1	Faculty of Engineering disciplines	After attending the programme the participants will be able to: • Understand Energy Sources and their utilization • Explain Environmental aspects of electric energies generation • Understand the scope of Solar Thermal Conversion and Solar Photovoltaic system • Describe about wind energy, Geothermal energy and Biomass • Apply Non-conventional energies through various agencies viz.WBREDA

PROCEDURE:

The proposed programmes will be hosted in the Institutes' website along with the dates of their commencement. Any technical institute can select any of the programmes for participantion participate and write directly to NITTTR, Kolkata for the programme and its date of commencement. In order to participate in the e-Learning programme an Institute should have the following accessories as given in the next page.

GENERAL INSTRUCTIONS FOR ICT BASED TRAINING PROGRAMME:

1. Participating Institutes should ensure that ICT/e-class room is available and equipped with necessary hardware and software components and inform the status to NITTTR, Kolkata well in advance (minimum 45 days before)
2. Minimum 75% attendance for each session is required for obtaining certificates
3. Attendance sheet has to be certified by the co-ordinator/Head of the Institute
4. After completion of the ICT based programme, all relevant documents (hard copies) such as, registration sheet, attendance sheet, feedback form etc., should be sent to NITTTR, Kolkata for further action
5. Provision of Tea & Snacks and Working Lunch (as per NITTTR, Kolkata norms) will be made to the participants
6. For any further clarification, kindly contact the programme co-ordinator of NITTTR, Kolkata

List of Software and Hardware Requirement to Conduct ICT Mode Programme

Sl. No.	Item	Configuration	Quantity
1.	A-VEW Software	NITTTR, Kolkata will guide in this regard. Please contact	
2.	Workstation / PC	2 GB RAM or higher Intel Core 2 Duo Processor or higher Windows 7 OS or higher Keyboard, Mouse Video capture card, Graphics card (Optional)	1
3.	Display	Desktop monitor / Big LCD TV (42" preferable) and projector must (Dell LCD Projector similar device of same specification	As per the availability (1-4)
4.	Camera	Web Camera / Handy Camera	1
5.	Long cable to connect Camera and PC		1
6.	Audio Mixer	Yamaha MG-102 Mixer or similar device of same specification	1
7.	Microphone	Professional Mike / headphone Mike according to the audience	As per the need
8.	Speakers	Professional speaker / Head Phone	As per the need
9.	Long VGA Cables	Length depends on the distance between PC and displays. VGA should have Male and Female connectors	1-4
10.	Audio Cable & Connectors	According to the input / output ports	As needed
11.	DVI-VGA Convertors (optional)		0-4 (depends on the video card(s) of the PC)
12.	Digital Writing Pad /Notepad (optional)	iBall Take Note Premium A4 or similar device of same specification	1

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C. STATE LEVEL SHORT TERM TRAINING PROGRAMMES AT EXTENSION CENTERS

(i) For participants from Technical Institutions in the State of Odisha only.

Venue: NITTTR Kolkata Extension Centre BHUBANESWAR

Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
1.	BBSR01	Development of Laboratory Instructions	Nirmal Kumar Mandal	08.04.2019	12.04.2019	1	Faculty of all disciplines	• After attending the programme the participants will be able to • Acquire Different types of employable skills. • Assess the performance of learner.
2.	BBSR02	Programming in C++ Methogologies	Rajeev Chatterjee & Samir Roy	22.04.2019	26.04.2019	1	Knowledge of C Programming	• After successful completion of the program, the participants will be able to • Write a Program in C++ to solve a computational problem • Compile, debug and execute a program in C++ • Apply objects, classes, inheritance, polymorphism etc. to implement object oriented programming.
3.	BBSR03	Bio Medical Instrumentation	Subrata Chattopadhyay	29.04.2019	03.05.2019	1	Faculty of Engineering & Pharmacy discipline	• After attending the course the participants will be able to • Understand Cells, Digestive System, Excretory System, Endocrinology • Describe Origins of electro-physiological signal and their characteristics • Design practical clinical sensors and transducers • Understand the ECG, EEG, EMG and their Electrodes • Understand the operation of X-ray, Fluoroscopy and Radiography, Pacemaker, Magnetic Resonance Imaging etc. • Explain Electric shock hazards and safety devices
4.	BBSR04	Skill Assessment in Laboratory and Workshop	Dipankar Bose	13.05.2019	17.05.2019	1	Faculty & Technicians, Workshop instructors	• After attending the programme the participants will be able to • classify various skills involved in laboratory & workshop practices • know various categories of laboratory experiments • write laboratory & workshop instruction sheets by conducting hands on practices • know evaluation techniques
5.	BBSR05	Induction Training	Subrata Chattopadhyay	03.06.2019	08.06.2019	1	Faculty of Engineering & Pharmacy discipline	• After attending the course the participants will be able to understand the • Concept of Teaching Learning • Roll of a Teacher • Instructional Objectives & Lesson Planning • Classroom Motivation • Measurement & Evaluation • Instructional Media & Computer Assisted Instruction(CAI) • Laboratory Development, Instruction & Evaluation • Construction of Test ITEMS • Design and Development of Projects for Students

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
6.	BBSR06	Refresher Course on Computer Aided Analysis, Design and Detailing using STAAD. Pro Software	Santanu Bhanja	10.06.2019	14.06.2019	1	Faculty of Civil, Architecture & allied disciplines	• After attending the programme, the participants will be able to • Understand the role of software in structural analysis and design • Know the basic features of a universally accepted standard software-STAAD. Pro-Latest revised version • Apply IS Codal provisions in analysis, design and detailing IS 456, 1893, 875, 13920 etc. • Analyze, design and detail real-life multi- storeyed RCC buildings • Analyze and design foundations • Participants will be awarded a complete unlimited licenced version of STAAD.Pro Connect with STAAD.Pro Advanced Concrete Design Solution for personal use on their PC's for full one year for academic purpose
7.	BBSR07	Thesis and Research Paper Writing	Rayapati Subbarao	24.06.2019	28.06.2019	1	Faculty of all disciplines	• At the end of the programme, the participants will be to: • describe the steps involved in writing a thesis. • identify the scope of a thesis. • construe the results in a better way. • derive conclusions from the plots and contours made. • discover the ways of writing a research paper.
8.	BBSR08	Instructional Media and CAI	Subrata Chattopadhyay	08.07.2019	12.07.2019	1	Faculty of Engineering & Pharmacy discipline	• After attending the course the participants will be able to • Understand the utility of instructional media • Know the types of instructional media and its advantages • Familiar with the computer to be used as instructional media and its advantages and limitations • Understand the courseware • Classify the Different types of courseware • Application of Computer assisted instruction • Know the feathers of CAI • Explanation of different types of CAI • A model class with CAI
9.	BBSR09	Renewable Energy Sources and Emerging Technologies	Sheela Yadav Rai	22.07.2019	26.07.2019	1	Faculty of Engineering disciplines	• After attending the programme the participants will be able to: • Understand Energy Sources and their utilization • Explain Environmental aspects of electric energies generation • Understand the scope of Solar Thermal Conversion and Solar Photovoltaic system • Describe about wind energy, Geothermal energy and Biomass • Apply Non-conventional energies through various agencies viz. WBREDA
10.	BBSR10	Modeling and Analysis of Electrical Circuits and Networks	Urmila Kar	05.08.2019	09.08.2019	1	Faculty of Electrical & Allied Disciplines	• After attending this programme, the participants will be able to • explain the need for circuit and network analysis • illustrate the techniques of circuit and network analysis • identify the mathematical tools for circuit and network analysis • develop models for analysis using suitable Pspice and MATLAB

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
11.	BBSR11	Control Engineering with MATLAB	Prasanta Sarkar	19.08.2019	23.08.2019	1	Faculty of Electrical, Electronics & Tele-communication, Mechanical, Aerospace and allied disciplines	• After attending the programme, the participants will be able to • Model physical systems • Analyze in time & frequency domain • Determine input – output stability • Design controller • Apply MATLAB Control System Toolbox
12.	BBSR12	Laboratory Safety Management	Subrata Mondal	02.09.2019	06.09.2019	1	Faculty of all disciplines	• After attending this program, participants would be able to: • demonstrate the safety management in the laboratory work areas. • evaluate the risk assessment for the hazardous laboratory works. • identify the emergency and safety equipment for laboratory works. • demonstrate fire safety management in the laboratory work areas. • describe the waste management for the laboratory.
13.	BBSR13	Ecology and Environmental Studies	Uday Chand Kumar	16.09.2019	20.09.2019	1	Faculty of all disciplines	After attending the programme the participants will be able to • estimate the water demand • suggest the treatment required of water • describe the sewerage system • describe the different causes of air, water and soil pollution and effect of pollution • describe low cost sanitation • describe the solid waste management
14.	BBSR14	Problem Solving and Decision Making	Sukanta Kumar Naskar	14.10.2019	18.10.2019	1	Faculty of all disciplines	• After attending the programme, the participants will be able to: • Identify basic steps in problem solving and decision making • Appreciate different factors for effective decision making • Correlate conflict in decision making • Identify basic tools in problem solving • Apply basic tools in problem solving and decision making
15.	BBSR15	MATLAB Applications in Engineering	Sagarika Pal	21.10.2019	25.10.2019	1	Faculty of Electrical, Electronics, Instrumentation & Mechanical	• After completing the course the participant will be able to • Use MATLAB commands • Apply Control System Tool Box Commands • Illustrate Simulink Modelling techniques • Apply Image processing Tool Box Commands • Apply Fuzzy Logic Tool Box • Use GUI to perform interactive task
16.	BBSR16	Numerical Methods : Theories and Applications	Kinsuk Giri	04.11.2019	08.11.2019	1	Faculty of Engineering & Science disciplines	• After completing the course the participant will be able to • get an overview on different numerical methods • get an overview on solution techniques • solve problems on numerical methods using tools
17.	BBSR17	Student Mentorship	Habiba Hussain	18.11.2019	22.11.2019	1	Faculty & Technicians of all disciplines	• After completing the course the participant will be able to • Distinguish between a mentor & a coach • Analyse mentoring skills • Identify styles of mentoring

STTP SCHEDULE 2019-20

Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
18.	BBSR18	Design & Detailing of Reinforced Concrete Structural Elements	Jagat Jyoti Mandal	02.12.2019	06.12.2019	1	Faculty of Civil, Architecture & allied disciplines	• After attending the programme the participants will be able to • Design different reinforced structural elements, such as • Beam • Slab • Columns • Typical isolated footings • Teach the related topics in more efficient manner
19.	BBSR19	Introduction to Environmental Pollution	Sailendra Nath Mandal	16.12.2019	20.12.2019	1	All disciplines	• After attending the programme the participants will be able to acquire – • knowledge of basic idea of Air pollution, , water pollution, noise pollution, light pollution and impact on human health • skill of handling portable equipment, sfielde kit, performing related experiments, interpreting experimental results, preparing related test-reports with remarks/comments • attitude of hand-on working in the mobile laboratory/field (Plant Visit)
20.	BBSR20	NBA Accreditation and SAR preparation	Rayapati Subbarao	30.12.2019	03.01.2020	1	Faculty of all disciplines	• At the end of the programme, the participants will be to: • Find the Impact of NBA Accreditation • Prepare Vision, Mission, Program Educational Objectives • Prepare Outcomes and Program Outcomes • Discover Accreditation Criteria i to x • Learn how to prepare SAR.
21.	BBSR21	Power System Instrumentation	Subrata Chattopadhyay	13.01.2020	17.01.2020	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	• After attending the course the participants will be able to • Understand electrical equipment used in power system • Know instrument transformers [CT & PT] and their applications • Familiar with measurement and instrumentation in power system • 22Classify the Different types of transducers and fundamental of pressure, flow, temperature, level, velocity, acceleration, vibration, position, displacement measuring transducers used in power system. • Application of PLC & DCS in power system • Apply SCADA and power system automation • Design boiler, furnace instrumentation and control • Know hazardous area classification
22.	BBSR22	Introduction of Accreditation Mechanism - NBA Approach	Ranjan Dasgupta	20.01.2020	24.01.2020	1	Faculty of all disciplines	This discussion type special awareness course will provide exposure to the faculty and technical staff members of Engineering College and polytechnics for participating in forthcoming NBA accreditation process. This is not a conventional STTP. Participants of the colleges who are keen to apply or already applied for NBA accreditation will be maximum benefitted. The course will include discussion on need and benefit of accreditation, role of different stakeholders, preparation for accreditation, Washington Accord, mechanism followed by NBA.

STTP SCHEDULE 2019-20

Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
23.	BBSR23	Advanced Process Control & Instrumentation System	Subrata Chattopadhyay	27.01.2020	01.02.2020	1	Faculty of Engineering & Pharmacy discipline	• After attending the course the participants will be able to • Familiar with closed loop control system • Understand the pressure, Temperature, Flow & Level Measurement system • Know hazardous area classification • Utilize the electrical instruments in hazardous area in process plant • Design the conventional complex control system like ratio, cascade, feed forward, selective, override etc. • Apply the control system in distillation column in industry • Know the fundamental of PLC, DCS and SCADA
24.	BBSR24	Commentary on IS: 456-2000 Explanation, Interpretation, Application & Limitations	Santanu Bhanja	03.02.2020	07.02.2020	1	Faculty of Civil, Architecture & allied disciplines	• After attending the programme, the participants will be able to • Interpret some of the important clauses of the code in their true letter and spirit • Implement the codal clauses in a better manner for design and construction of Civil Engineering Structures • Identify the steps to be taken for concrete production, quality control and testing • Understand the philosophy and principles Limit State Method in a comprehensive manner • Conceive that this code cannot be considered as a single package for the design of concrete structures and has to be mandatorily read in conjunction with other codes • Identify the major design and detailing considerations • Identify the limitations of the code • Apply a standard software for designing structures • Participants will be awarded a complete unlimited licenced version of STAAD.Pro Connect with STAAD.Pro Advanced Concrete Design Solution for personal use on their PC's for full one year for academic purpose
25.	BBSR25	Outcome Based Assessment	Urmila Kar	17.02.2020	21.02.2020	1	Faculty of all disciplines	• After attending this programme, the participants will be able to • identify features of Outcome Based Education (OBE) • explain the importance of assessment under OBE • plan assessment under OBE • design assessment tools under OBE
26.	BBSR26	Design of Steel Structures	Mithu Dey	24.02.2020	28.02.2020	1	Faculty of Civil, Architecture & allied disciplines	• After attending the program, participants are expected to be able to • Appreciate the understanding principles on plastic analysis of Steel structures. • Design the different structural elements as per new codes: • Familiar with the new code IS 800 : 2007
27.	BBSR27	Instructional Planning	Samiran Mandal	02.03.2020	06.03.2020	1	Faculty of Engineering discipline	• After attending the programme, the participants will be able to • explain different stages of instruction in a class • explain the major steps in lesson planning • describe the outline of lesson plan • construct test items for evaluation of students performance.

Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
28.	BBSR28	Introduction to Network Security	Indrajit Saha	16.03.2020	20.03.2020	1	Faculty of Computer Application, CSE, IT, Mechanical, Electrical & Electronics	• After attending the program, the participants will be able to • describe the fundamentals of Network Security • demonstrate how to maintain the privacy of computer data • explain network security in classroom
29.	BBSR29	Basics of Welding Processes and CNC Machining	Arpan Kumar Mondal	23.03.2020	27.03.2020	1	Faculty & Technician from Mechanical & allied disciplines	• After attending the programme the participants will be able to • Classify various types of arc welding processes. • Explain the principles of MMW, SAW, TIG, MIG, Pulsed Welding processes, Plasma Welding, and Laser Welding. • Perform independently various arc welding processes. • Understand the basics of CNC programming

(ii) For participants from Technical Institutions in North East States only

Venue: NITTTR Kolkata Extension Centre GUWAHATI

Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
1.	GUW01	Microprocessors & Microcontrollers	Soumitra Kumar Mandal	22.04.2019	26.04.2019	1	Faculty of Electrical, Instrumentation, Electronics & allied disciplines	After attending the programme, the participants will be able to • Describe Architecture and programming of 8085 Microprocessor & 8051 Microcontroller • Design interfacing circuits for Microprocessor & Microcontroller based systems • Write assembly language programs for embedded system
2.	GUW02	Curriculum Development & Implementation	Sukanta Kumar Naskar	06.05.2019	10.05.2019	1	Faculty of all disciplines	After attending the programme, the participants will be able to: • Identify basic steps in developing technical curriculum • Explore various models in developing curriculum • Analyse existing curriculum • Contribute in developing and revising technical curriculum • Appreciate conceptual changes in developing curriculum
3.	GUW03	Membranes for Water Treatment: Challenges and Opportunities	Subrata Mondal	20.05.2019	24.05.2019	1	Faculty of Chemical, Material Sc. & Engg. and Chemistry	After attending this program, participants would be able to: • describe the fundamental concept of membrane separations. • identify various types of membranes. • describe the wastewater treatment using environmental friendly membrane technology. • explain challenges in the membrane technology for water treatment. • explain the membrane fouling and its control for the membrane based water treatment processes etc.

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
4.	GUW04	MATLAB Applications in Engineering	Sagarika Pal	10.06.2019	14.06.2019	1	Faculty of Electrical, Electronics, Instrumentation & Mechanical	After completing the course the participant will be able to • Use MATLAB commands • Apply Control System Tool Box Commands • Illustrate Simulink Modelling techniques • Apply Image processing Tool Box Commands • Apply Fuzzy Logic Tool Box • Use GUI to perform interactive task
5.	GUW05	Theory of Computation	Samir Roy	03.06.2019	08.06.2019	1	Faculty of CSE, IT, ECE & Computer Application	After successful completion the course the participant will be able to • Explain the logical function of Computer Science • Apply the foundational concepts of computation of computation in solving computational problems • Design computational systems
6.	GUW06	Analysis of Nonlinear Control Systems	Urmila Kar	24.06.2019	28.06.2019	1	Faculty of Electrical & allied disciplines	After attending this programme, the participants will be able to • explain fundamentals nonlinear control systems • explain the need for analysis of nonlinear control systems • explain types of commonly available nonlinearities and their representation • identify approaches for analysis of nonlinear control systems • select techniques for analyzing stability of nonlinear control systems • simulate models for analysis of nonlinear control systems using MATLAB programming / SIMULINK • use MATLAB control system tool box for designing experiments on nonlinear control systems
7.	GUW07	Networking Principles	Rajeev Chatterjee	01.07.2019	05.07.2019	1	Faculty of CSE, IT, ECE & Computer Application	After attending the course the participants will be able to • Topologies and Media • Set-up of a LAN • Set-up IP Network with Classless Addressing • Setting up Network with IP v6 Addressing
8.	GUW08	Strategic Management	Sukanta Kumar Naskar	08.07.2019	12.07.2019	1	Faculty of all disciplines	After attending the programme, the participants will be able to: • Explore nature and scope of strategic management • Identify steps in strategic planning • Apply strategic management principles in respective organizations • Initiate strategic planning process
9.	GUW09	Theory, Operation and Applications of Transducers & Actuators in Industry	Subrata Chattopadhyay	15.07.2019	19.07.2019	1	Faculty of Engineering & Pharmacy discipline	After attending the course the participants will be able to • Classify the Different types of Transducers & Actuators used in Industry. • Familiar with the overview of measurement system and selection of instruments • Understand fundamental of pressure, flow, temperature, level, velocity, acceleration, vibration, position, displacement measuring transducers used in process industries. • Apply the Transducers Actuators in process Control Systems. • Know the concept of Intrinsic safety instruments

STTP SCHEDULE 2019-20

Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
10.	GUW10	Environmental Pollution - An Overview	Sailendra Nath Mandal	29.07.2019	02.08.2019	1	All disciplines	After attending the programme the participants will be able to gain and develop– • knowledge of basic concept of Air pollution, water pollution, noise pollution, light pollution and impact on human health, • skill of handling conventional and modern sophisticated equipment, preparation of laboratory instruction sheets, interpreting experimental results, providing laboratory instruction such as to develop in enquiring attitude among students, preparing related test reports, • attitude of hands-on-working in the laboratory/field. (Plant Visit)
11.	GUW11	Concept Mapping in Teaching Learning	Samiran Mandal	19.08.2019	23.08.2019	1	Faculty of Engineering discipline	After attending the course the participants will be able to • explain discrimination and equivalence • define generalization and concept • analyse a concept • construct a concept map • use concept map in teaching and learning
12.	GUW12	Fundamental Concepts of Geotechnical Engineering	Jagat Jyoti Mandal	02.09.2019	06.09.2019	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme the participants will be able to • Explain basic concepts of Geotechnical Engineering and its applicability in Civil engineering • Apply these concepts to solve practical problems • Impart acquired knowledge to students in a systematic manner
13.	GUW13	Control Engineering with MATLAB	Prasanta Sarkar	16.09.2019	20.09.2019	1	Faculty of Electrical, Electronics & Tele-communication, Mechanical, Aerospace and allied disciplines	After attending the programme, the participants will be able to • Model physical systems • Analyze in time & frequency domain • Determine input – output stability • Design controller • Apply MATLAB Control System Toolbox
14.	GUW14	Evaluating Students' Performance & Designing Question Papers	Habiba Hussain	14.10.2019	18.10.2019	1	Faculty & Technicians of all disciplines	After attending the programme the participants will be able to • Distinguish between different types of evaluation • Prepare TOS • Develop questions to assess learning
15.	GUW15	Machine Learning and It's Applications	Indrajit Saha	28.10.2019	01.11.2019	1	Faculty of Computer Application, Computer Science, IT, Mechanical, Electrical & Electronics	After attending the program, the participants will be able to • describe the fundamentals of Machine Learning (ML) • apply ML for clustering, classification and regression • explain machine learning in classroom
16.	GUW16	Application of Software in Engineering Drawing	Mithu Dey	04.11.2019	08.11.2019	1	Faculty & Technician of all disciplines	After attending the program, participants are expected to be able to • Know the different software for drawing • Familiar with the different command of those software • Draw 2D and 3D drawing using the software.
17.	GUW17	Stores Management & Purchase Procedures	Sukanta Kumar Naskar	18.11.2019	22.11.2019	1	Faculty of all disciplines	After attending the programme, the participants will be able to: • Be acquainted with store management and operations • Classify material based on materials management principles • Identify material handling system • Develop knowledge in purchase • Follow purchase procedure

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
18.	GUW18	Estimating & Costing of Non-Conventional Energies	Sheela Yadav Rai	02.12.2019	06.12.2019	1	Faculty of Engineering disciplines	After attending the programme the participants will be able to : • Describe various type of Non-conventional Energies Sources • Understand the scope of Solar energy, Solar Thermal Conversion, Solar Collector, Wind Energy • Estimating & costing of various energies
19.	GUW19	Modelling of Engineering Systems	Nirmal Kumar Mandal	16.12.2019	20.12.2019	1	Faculty of all disciplines	After attending the programme the participants will be able to • Model a system. • Analyse the system
20.	GUW20	Designing Assessment Tools for Effective Implementation of Technical Curriculum	Urmila Kar	06.01.2020	10.01.2020	1	Faculty of all disciplines	After attending the programme, participants will be able to • explain the need for assessment and evaluation • identify Course Outcomes • write Intended Learning Outcomes • identify types of test and test items • prepare specification table • decide tests for skill assessment • design assessment tools
21.	GUW21	Introduction of Accreditation Mechanism - NBA Approach	Ranjan Dasgupta	13.01.2020	17.01.2020	1	Faculty of all disciplines	This discussion type special awareness course will provide exposure to the faculty and technical staff members of Engineering College and polytechnics for participating in forthcoming NBA accreditation process. This is not a conventional STTP. Participants of the colleges who are keen to apply or already applied for NBA accreditation will be maximum benefitted. The course will include discussion on need and benefit of accreditation, role of different stakeholders, preparation for accreditation, Washington Accord, mechanism followed by NBA.
22.	GUW22	Arc Welding Processes	Arpan Kumar Mondal	20.01.2020	24.01.2020	1	Faculty & Technician from Mechanical & allied disciplines	After attending the programme the participants will be able to • Explain the principles of arc welding processes. • Perform independently various arc welding processes. • Understand the physics of welding
23.	GUW23	Skill Assessment in Laboratory and Workshop	Dipankar Bose	03.02.2020	07.02.2020	1	Faculty & Technicians, Workshop instructors	After attending the programme the participants will be able to • classify various skills involved in laboratory & workshop practices • know various categories of laboratory experiments • write laboratory & workshop instruction sheets by conducting hands on practices • know evaluation techniques
24.	GUW24	Ecology and Environmental Studies	Uday Chand Kumar	10.02.2020	14.02.2020	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme the participants will be able to • estimate the water demand • suggest the treatment required of water • describe the sewerage system • describe the different causes of air, water and soil pollution and effect of pollution • describe low cost sanitation • describe the solid waste management

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Sl. No.	Prog. Code	Programme Title	Programme Co-ordinator(s)	Date		Week	Target Discipline	Programme Objectives
				From	To			
25.	GUW25	How to write Thesis or Research paper	Rayapati Subbarao	17.02.2020	21.02.2020	1	Faculty of all disciplines	At the end of the programme, the participants will be to: • describe the steps involved in writing a thesis. • identify the scope of a thesis. • construe the results in a better way. • derive conclusions from the plots and contours made. • discover the ways of writing a research paper.
26.	GUW26	Bio Medical Instrumentation	Subrata Chattopadhyay	02.03.2020	06.03.2020	1	Faculty of Engineering & Pharmacy discipline	After attending the course the participants will be able to • Understand Cells, Digestive System, Excretory System, Endocrinology • Describe Origins of electro-physiological signal and their characteristics • Design practical clinical sensors and transducers • Understand the ECG, EEG, EMG and their Electrodes • Understand the operation of X-ray, Fluoroscopy and Radiography, Pacemaker, Magnetic Resonance Imaging etc. • Explain Electric shock hazards and safety devices
27.	GUW27	Modeling, Analysis, Design & Detailing of Structures as per latest Indian Standards using a new Generation Software	Santanu Bhanja	16.03.2020	20.03.2020	1	Faculty of Civil, Architecture & allied disciplines	After attending the programme, the participants will be able to • Understand the role of software in structural analysis and design • Know the basic features of a universally accepted standard software-STAAD. Pro-Latest revised version • Apply IS Codal provisions in analysis, design and detailing - IS 456, 1893, 875, 13920 etc. • Analyze, design and detailing real-life multi- storeyed building • Analyze and design foundations • Appreciate the effect of earthquake on Structures Participants will be awarded a complete unlimited licenced version of STAAD.Pro Connect with STAAD.Pro Advanced Concrete Design Solution for personal use on their PC's for full one year for academic purpose
28.	GUW28	Statistical Methods : Theories and Applications	Kinsuk Giri	23.03.2020	27.03.2020	1	Faculty of Engineering & Science disciplines	On successful completion of the programme the participants will be able to • get an overview on different statistical methods • get an overview on correlation, regression, curve fitting etc. • solve problems on statistical methods using tools

STTP SCHEDULE 2019-20

NORMS OF THE PROGRAMMES

i). In-House Programmes

Demand based training programmes/workshop will be organized in the campus of the client institutes with flexible duration according to the convenience of the clients. The expenditure for programmes conducted at Govt./Govt. aided technical institutions, excluding those institutions covered under TEQIP-III, will be borne by NITTTR, Kolkata according to the norms of the Institute. Course fee will be charged for conducting such programmes in Self-Finance Technical Institutions. Following topics are being offered on a regular basis.

Areas of Civil Engineering Branch

Sl. No.	Topics
1.	Disaster Management
2.	Drinking Water & Ambient Air Quality
3.	Environmental Awareness
4.	Fundamental Concepts of Geotechnical Engineering
5.	Introduction to Finite Element Method in Engineering
6.	Repair and Rehabilitation of Structures
7.	Rural Development and Solid Waste Management
8.	Testing Drinking Water for Domestic Use
9.	Water for Drinking and Impact on Public Health

Areas of Computer Science & Engg. Branch

Sl. No.	Topics
1.	Database Design
2.	Design and Development of e-Learning System
3.	Fundamental of Computer Application for Engineering and Basic Science
4.	Image Processing using MATLAB
5.	Internetworking: Principles, Concepts and Applications
6.	Iterative Presentation using Multimedia Tools and Document Creation with LaTeX
7.	Network Principles
8.	Office Management using Information and Communication Technology
9.	Soft Computing, Artificial Intelligence
10.	Use of ICT for Teaching - Learning System

Areas of Electrical Engineering Branch

Sl. No.	Topics
1.	Application of MATLAB Control System, Image Processing and Fuzzy Logic Tool Box
2.	Exposure on MATLAB
3.	Introduction to MATLAB, SIMULINK, Control System and Image Processing Toolbox
4.	Laboratory & Workshop Manual for Electrical, Electronic and Instrumentation Engineering
5.	LABVIEW & MATLAB Applications in Engineering
6.	Modelling & Simulation of Mechatronics System
7.	PLC and its Applications
8.	Power System Protection and Safety
9.	Preparation of Materials and Processes
10.	Process Control & Automation
11.	Renewable Energy and Emerging Technology
12.	Sensors, Measurement and Signal Conditioning
13.	Teaching Control Systems

Areas of Mechanical Engineering Branch

Sl. No.	Topics
1.	Advanced Computer Aided Drafting
2.	CAD/CAM
3.	Computations and Optimization with MATLAB
4.	Concept Teaching in Fluid Mechanics
5.	Control Systems – Analysis & Design using MATLAB
6.	Fundamentals and Applications of Nanomaterials
7.	How to Write Thesis / Research Paper
8.	Manufacturing Technology
9.	Preparation of Laboratory Manual
10.	Preparation of Materials and Processes
11.	Process Control & Automation
12.	Skill Development in Workshop
13.	Thermal Engineering Systems / Thermodynamics

Areas of Education & Management

Sl. No.	Topics
1.	Design and Implementation of Outcome Based Curriculum /Technical Curriculum
2.	Development of Laboratory Instruction and Manual
3.	Development of Soft Skill
4.	Effective Teaching
5.	Essentials of Educational Technology / Outcome Based Education
6.	Evaluating Students' Performance
7.	Faculty Induction Training
8.	Faculty Orientation Programme on Institutional Improvement
9.	Human Resource Management
10.	Institutional Development & Management
11.	Micro-teaching
12.	NBA Accreditation
13.	Outcome based Education and Accreditation
14.	Pedagogical aspects of Laboratory Experiments and Students Project
15.	Pedagogy
16.	Quality Improvement in Classroom Teaching / Initiatives in Technical Institutions
17.	Quality Management in Teaching - Learning System
18.	Quality Management System / Quality Control Tools
19.	Research Methodology in Technical Education
20.	Role of Pedagogy in Engineering Education and Curriculum Development
21.	Teaching Techniques and Student Evaluation

ii). Special Programmes

Tailor-made training Programmes/Workshops will be conducted at the main campus or any one of the Extension Centres of the Institute at Bhubaneswar/Guwahati to cater to the special needs felt by the Directorates of Technical Education or organizations/Industry. Interested participants are invited to send their proposals to the Director, NITTTR, Kolkata.

iii). Collaborative Programmes

Such programmes will be conducted in collaboration with technical institutions / industries by sharing of resources on chargeable basis. The Institute has organized such programmes in collaboration with national and international organizations like Colombo Plan Staff College, United Nations Educational, Scientific & Cultural Organization (UNESCO), United Nations International Children's Emergency Fund (UNICEF), United Nations Development Programme, Department of Science & Technology, Govt. of West Bengal and Industries like Indian Oil Corporation and various reputed technical institutions. Special courses were offered for personnel of Indian Railways Institute of Mechanical and Electrical Engineering and State Resource Centre for Adult Education, West Bengal. Interested organizations/ institutions are invited to contact Director, NITTTR, Kolkata.

PARTICIPANTS' PROFILE

The training programmes are open to sponsored in service teachers and staff of degree and diploma level technical institutions of the country and also to the sponsored serving professionals from field / industry.

However, the programmes organized at Extension Centers are open to participants, only from technical institutions of respective State/ Region, as specified.

Financial Norms

a) Course Fees:

Participants from Institute covered under TEQIP-III shall be charged of Rs. 7,000/- (Rupees Seven Thousand only) per participants / per week for each STTP conducted at NITTTR, Kolkata and its Extension Centres only.

The fee has to be paid through a demand draft in favour of "Director, NITTTR, Kolkata" payable at any branch of any bank at Kolkata. prior to commencement of programme. Further, TA/DA will not be paid to the participants from our Institution and hostel charges have to be paid by the participants, if availing hostel accommodation.

However, there is No Course Fee for the participants from Govt./Govt.-Aided/Self-Financed institutions, but not covered under TEQIP-III.

b) Facilities:

The participants from Govt./Govt.-aided technical institutions, excluding those from institutions covered under TEQIP-III, are entitled for reimbursement of TA/DA by NITTTR, Kolkata as per Institute norms.

TA will be reimbursed as per entitlement (Govt. of India Rules).

Air fare, if elegible will only be reimbursed only if travelled by Air India and Air Ticket(s) are purchased directly from Air India/from the Official Website of Air India. However, Air Ticket may be purchased from Authorized travel agent of Govt. of India as announced from time to time. As of now, authorized travel agents of Govt. of India are M/s Ashoke Tours & Travels, M/s Balmer Lawrie and IRCTC.

However, TA/DA for other participants are to be borne by the sponsoring authority or self. However, working Lunch and training materials would be provided to all participants attending training programmes.

c) Hostel:

Accommodation is available in the Institute Hostel on first-come-first-served basis from Sunday to Saturday during training days but family accommodation would not be available.

Hostel Charge for STTPs conducted at NITTTR, Kolkata and its Extension Centres are given below for participants from Institutions covered under TEQIP-III, Self Finance Institute and Industry.

Sl. No.	Types of Boarder	Rate (INR)
1	TEQIP/Self Finance Institute/Industry Participants	500/- per day per Bed / Per Night
2	Self-Finance Institute/Industry Participants	300/- per day per Bed / Per Night
3	Meal Charges of TEQIP / Private Self Finance Institute/Industry Participants	250/- per day per participant

How to Apply

Intending participants may use photocopy of the Application Form given on Page No. 54 for registration to each STTP. The filled-in-form should be sent through proper channel/appropriate sponsoring authority. Application Form should be sent to the Academic Co-ordinator at NITTTR, Kolkata and to the Consultant in respective Extension Centre.

How to Reach NITTTR, Kolkata

The Institute is located in FC Block, Sector-III in Salt Lake City.

It is well communicated by road with Howrah Railway Station (about 8.1 km via Maniktala Main Road), Sealdah Railway (7.4 km) via Beliaghata Main Road and Broadway Road), Kolkata Railway Station (4.8 km) via Canal Circular Road, Shalimar Station (18.8 km) via Parama Island Flyover, Netaji Subhas Chandra Bose International Airport (11.5 km) via Kazi Nazrul Islam Sarani/VIP Road.

GENERAL INSTRUCTIONS

1) Please send your application preferably 15 days before the commencement of the programme.
2) Normally course will commence at 10:00 a.m. as per venue. Participants are advised to complete the registration formalities before 10:00 a.m. on the first day of the programme.
3) Outstation participants are advised to avail the Hostel facility one day before the commencement of their programme.
4) In all cases, the selection letters will be despatched before the date of commencement of the course.
5) All applications should be forwarded through proper channel. Applications without the recommendation of the sponsoring authority will not be entertained.
6) All participants should have to produce the release letter at the time of the joining in the course. Separate release order should be produced against each course.
7) Applicants may send their applications by Post/Fax or the same can be directly submitted in the Despatch Section of NITTTR, Kolkata.
8) In case the date of commencement of course happens to be a holiday, the course may be held as announced.
9) Participants are requested to submit only one application for a particular Short-Term Training Programme.
10) The selection list for each STTP will be available on the Website 1 (One) week before the commencement of the Programme. We can also get this information over phone (No. 91-33-2358-7442 / 91-33-66251901).
11) Air Travel, if eligible, will be allowed in Economy Class by Air India only.
12) Participants eligible to travel by air, need to submit the boarding pass of the onward journey along with TA bills.

APPLICATION FORM

1. Prog. Code

2. (a) Programme Title :

   (b) Date : From To

   (c) Programme Coordinator(s) :

3. (a) Name (in CAPS) : First | Middle | Last

   (b) Designation :

   (c) Department :

   (d) Institution :

   (e) Contact Address (Office) : Pin:

   State

   (f) Contact Number : Mobile | Phone | Fax

   Email

4. Highest Academic Qualification:

Degree/Diploma	University/Others	Year of Passing	Class Obtained

5. (a) Experience (in years) : Teaching Industry/Field

I promise to attend the above mentioned training programme, if selected.

Date: Signature of the Applicant

This is to certify that the applicant will be released to attend the training programme, if selected, without any financial liability on part of the sponsoring authority.

Date: Signature of the Sponsoring Authority with Seal

Faculty Profile

Dr. Phalguni Gupta
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Phalguni Gupta who is a Professor in the Department of Computer Science & Engineering, Indian Institute of Technology Kanpur (IITK), Kanpur, India, has joined this Institute (on Deputation) as the Director with effect from 25 April 2014. He received the Doctoral degree from Indian Institute of Technology Kharagpur, India in 1986. He works in the field of biometrics, data structures, sequential algorithms, parallel algorithms, image processing. He is an author of 3 books and 14 book chapters. He has published more than 300 papers in International Journals and International Conferences. He was the Principal Investigator of several research projects in the area of Biometric Systems, Image Processing, Graph Theory and Network Flow. Prior to joining IITK in 1987, he worked in Space Applications Centre Ahmedabad, Indian Space Research Organization, India.

"A teacher can never truly teach unless he is still learning himself. A lamp can never light another lamp unless it continues to burn its own flame."

- Rabindra Nath Tagore

STTP SCHEDULE 2019-20

Dr. Arpan Kumar Mondal
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Shri Arpan Kumar Mondal is a faculty member in the Department of Mechanical Engineering, National Institute of Technical Teachers' Training & Research Kolkata. He is currently pursuing his doctoral study in Mechanical Engineering at Indian Institute of Technology Guwahati. He did M. Tech from National Institute of Technology Rourkela and B. Tech from Haldia Institute of Technology under WBUT. He has 14+ publications in reputed International Journals and Conferences. He has been a reviewer of more than 5 international journals. Apart from Teaching and R&D, he has also been involved in several projects, organizing workshops/conferences, installation of labs, preparation of course materials etc.

His areas of interests include Welding Technology, Fusion welding processes, Submerged Arc Welding, Computational Welding Mechanics, Heat transfer in welding, Residual stress and distortion, Application of optimization in manufacturing, Production Engineering, Manufacturing Technology, Plastics Technology, Composites and Bio-materials for artificial implants.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU27	Mechanical Workshop	10.06.2019	21.06.2019
2.	CU45	Basics of Computer, IT and ITes for Faculty and Staffs	15.07.2019	26.07.2019
3.	ICT09	Advanced Manufacturing Processes	05.08.2019	09.08.2019
4.	CU64	Theory and Practices of CNC Machining Operations	26.08.2019	06.09.2019
5.	MGT07	Office Management using IT and ITes	09.12.2019	20.12.2019
6.	GUW22	Arc Welding Processes	20.01.2020	24.01.2020
7.	CU116	Advanced Manufacturing Processes	03.02.2020	07.02.2020
8.	BBSR29	Basics of Welding Processes and CNC Machining	23.03.2020	27.03.2020
9.	ICT03	Problem Based Learning	20.05.2019	31.05.2019
10.	ICT15	Problem Based Learning	02.12.2019	06.12.2019

"Education is the most powerful weapon which you can use to change the world."

- Nelson Mandela

Dr. Dipankar Bose
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Dr. Dipankar Bose is a faculty member in the Department of Mechanical Engineering and his present research area includes Non-traditional Engineering, Reliability Engineering, Welding Technology, Fluid Power Engineering etc. He graduated from the University of Calcutta, India in Mechanical Engineering and received his post graduate and doctoral degrees in the area of Mechanical Engineering from Jadavpur University, Kolkata.
Since joining at the Institute from NERIST, Deemed University, Arunachal Pradesh in 2003, Dr. Bose has offered several STTPs in the areas of Non-Traditional Machining, Fluid Power Technologies, Various Welding Processes, Fabrication Techniques, Metrology and Measurement. He has published more than 40 papers in various international and National Journals and Proceedings and is a life member of ISTE. At present, he is the Chairman, Purchase Committee of the Institute. Beside this, he is also a member of other external academic bodies of WBUT.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	BBSR04	Skill Assessment in Laboratory and Workshop	13.05.2019	17.05.2019
2.	CU18	Engineering Metrology	27.05.2019	31.05.2019
3.	CU29	Fluid Mechanics & Machinery	17.06.2019	21.06.2019
4.	CU38	Fluid Power	08.07.2019	12.07.2019
5.	ICT13	Management Issues of Laboratory and Workshop Class	04.11.2019	08.11.2019
6.	CU94	Oil Hydraulics & Pneumatics	09.12.2019	13.12.2019
7.	GUW23	Skill Assessment in Laboratory and Workshop	03.02.2020	07.02.2020
8.	CU118	Concept Teaching in Engineering Mechanics	10.02.2020	21.02.2020

"An investment in knowledge pays the best interest."

- Benjamin Franklin

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Dr. Habiba Hussain is a faculty member in the Department of Education and Management. A post-graduate in Bio-Sciences (Spl. Biotechnology) & in Education, she earned her Doctorate Degree in Education from GGDU, Bilaspur, M.P.
She joined this Institute in January, 2002. She has teaching and training experience of more than 15 years. She has been actively involved in the long-term as well as short-term training programmes since 2002. She has also contributed towards the world-bank research projects under Tech-Ed II. Since her joining in this Institute, she has offered training programmes in several themes under the broader areas of Educational Technology, Educational Psychology, Management in Education, HRM, Soft Skills, Research Methodology, Educational Measurement & Evaluation.

List of Short-Term Training Programme

Sl. No	Prog. Code	Programme Title	Date	
			From	To
1.	PS02	Leadership & Management for Teachers	10.06.2019	21.06.2019
2.	PS04	Outcome Based Education for Accreditation	01.07.2019	05.07.2019
3.	ICT07	Effective Teaching	15.07.2019	19.07.2019
4.	PS06	Microteaching for Teaching Improvement	29.07.2019	02.08.2019
5.	PS07	Effective Communication	19.08.2019	23.08.2019
6.	GUW14	Evaluating Students' Performance & Designing Question Papers	14.10.2019	18.10.2019
7.	BBSR17	Student Mentorship	18.11.2019	22.11.2019
8.	PS10	Designing Outcome Based Learning Framework	02.12.2019	06.12.2019
9.	PS12	Writing Research Proposals	16.12.2019	20.12.2019
10.	PS13	Induction Training	06.01.2020	10.01.2020

"Education is not preparation for life, education is life itself."

- John Dewey

Dr. Indrajit Saha
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Dr. Saha is a faculty member in the department of Computer Science and Engineering, NITTTR, Kolkata. He has done his postdoctoral research at the National Research Council, Italy and University of Wroclaw, Poland. He was the visiting research scientist at CWI, Netherlands, INRIA France, IIT-CNR, Italy, ICM and CeNT in University of Warsaw (UW), Poland. He obtained his Ph.D degrees in Computer Science and Engineering and Bioinformatics from Jadavpur University, India and Polish Academy of Sciences, Poland. He has co-authored of more than 50 research papers in various International Journals and Conferences. Dr. Saha is an active member of the board of reviewers for several International Journals. Currently, he is a Principal Investigator of a bilateral project between India and Poland funded by DST, India on Breast Cancer research. His research interest includes Education Technology, Computational Intelligence, Computational Biology, Machine Learning, Image Processing and Pattern Recognition.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	ICT03	Problem Based Learning	20.05.2019	31.05.2019
2.	ICT05	Introduction to Network Security	24.06.2019	28.06.2019
3.	CU40	Multimedia Tools and It's Applications	08.07.2019	19.07.2019
4.	CU62	Data Analysis using MATLAB	26.08.2019	30/08/2019
5.	CU73	Image Processing using MATLAB	16.09.2019	27.09.2019
6.	GUW15	Machine Learning and It's Applications	28.10.2019	01.11.2019
7.	ICT15	Problem Based Learning	02.12.2019	06.12.2019
8.	PS11	Research Methodology in Engineering and Technical Writing using LaTeX	09.12.2019	20.12.2019
9.	CU113	Introduction to Soft Computing	20.01.2020	31.01.2020
10.	BBSR28	Introduction to Network Security	16.03.2020	20.03.2020

"The roots of education are bitter, but the fruit is sweet."

- Aristotle

Dr. Jagat Jyoti Mandal
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Dr. Jagat Jyoti Mandal is attached to the Department of Civil Engineering of National Institute of Technical Teachers' Training and Research (NITTTR), Kolkata, as a faculty member since 2008. After graduating with Honours in Civil Engineering from IIT Kharagpur, he obtained his M.Tech in Civil Engineering (with Specialization in Soil Mechanics and Foundation Engineering) and Ph.D in Civil Engineering from IIT Kharagpur. He has taught various subjects of Civil Engineering at Graduate and Post-Graduate level at various institutes for the past 30 years. He has around sixteen articles in International and National journals and conference proceedings. His areas of interest include Numerical Geo-technique, Soil and Structural Dynamics and their applications in Earth quake Engineering, Ground Improvement Techniques. He has conducted Short Term Training Programmes on various topics including Geotechnical Investigation and Testing, Analysis and Design of Foundations, Ground Improvement Techniques, Testing of Civil Engineering Materials, Introductory Courses on Applications of FEM in Civil Engineering, Introductory courses on Soil and Structural dynamics, Design of Reinforced Concrete structural Elements, Surveying by Total Station and so on.

List of Short-Term Training Programme				
SL. No	**Prog. Code**	**Programme Title**	**Date**	
			From	**To**
1.	CU36	Geotechnical Investigation & Testing	01.07.2019	12.07.2019
2.	CU53	Testing of Concrete material & Design and Testing of Concrete Mixes	29.07.2019	09.08.2019
3.	ICT10	Analysis and Design of Shallow Foundations	26.08.2019	30.08.2019
4.	GUW12	Fundamental Concepts of Geotechnical Engineering	02.09.2019	06.09.2019
5.	BBSR18	Design & Detailing of Reinforced Concrete Structural Elements	02.12.2019	06.12.2019
6.	CU103	Testing of Bituminous Material and Design of Bituminous Mixes	06.01.2020	10.01.2020
7.	CU118	Concept Teaching in Engineering Mechanics	10.02.2020	21.02.2020

"Education's purpose is to replace an empty mind with an open one."

- Malcolm S. Forbes

STTP SCHEDULE 2019-20

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Dr. Kinsuk Giri is an Assistant Professor in the Department of Computer Science and Engineering, NITTTR, Kolkata. His main research area is Numerical Simulations, Computational Astrophysics which includes Hydrodynamics, Accretion and Outflows around compact objects, Shocks in Accretion, Viscous Flows, Two Component Accretion Flow (TCAF), Magneto Hydrodynamics, etc. He received both his graduation and post graduation in Mathematics from Visva-Bharati Central University and was awarded NET-JRF and LS in Mathematical Sciences in 2008/2007 by CSIR-UGC. Dr. Giri was awarded Ph.D. (Science) in 2013 in Numerical and Computational Astrophysics, with an emphasis on computational fluid dynamics and accretion flows in astrophysics from S. N. Bose National Centre for Basic Sciences, India (Degree awarded by Jadavpur University, Kolkata). Subsequently he joined as a MOST Postdoctoral Fellow at National Tsing Hua University, Taiwan. After completing his two years postdoc tenure, he joined at NITTTR, Kolkata as an Assistant Professor on September, 2015.

The work developed in his Ph.D thesis addresses very important and relevant issues of accretion processes around black holes. His thesis received the "Outstanding Ph.D Thesis Award" by Springer-Verlag, Berlin and was published as a Book in 2014. During his research and academic career, he delivered few invited lectures and several contributed talks within India as well as abroad during his academic visits to various countries, e.g., Italy, Sweden, Russia, Japan, France, Taiwan, China, Turkey, Nepal etc. He is in the editorial and reviewer board of few international and national journals.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU04	Numerical Methods : Theories and Applications	29.04.2019	03.05.2019
2.	ICT03	Problem Based Learning	20.05.2019	31.05.2019
3.	CU32	Problem Solving with SCILAB	24.06.2019	05.07.2019
4.	CU57	Statistical Methods : Theories and Applications	19.08.2019	23.08.2019
5.	CU66	Recent Trends in Optimization : Theory and Applications	02.09.2019	06.09.2019
6.	BBSR16	Numerical Methods : Theories and Applications	04.11.2019	08.11.2019
7.	CU88	Introduction to PYTHON Programming	18.11.2019	22.11.2019
8.	ICT15	Problem Based Learning	02.12.2019	06.12.2019
9.	PS11	Research Methodology in Engineering and Technical Writing using LaTeX	09.12.2019	20.12.2019
10.	CU101	Mathematical Foundation of Computer Science	23.12.2019	03.01.2020
11.	CU109	Discrete Mathematics and Its Applications	13.01.2020	17.01.2020
12.	GUW28	Statistical Methods : Theories and Applications	23.03.2020	27.03.2020

"A true education is an ornament in times of prosperity and it is a refuge in times of adversity."

- Aristotle

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Mrs. Mithu Dey is a faculty member in the Department of Civil Engineering and her present research area include Numerical analysis, FRP composite plate, Software Application in Structural Engineering etc. She graduated from Jadavpur University and completed M. Tech. degree from BESU in the field of Structural Engineering.
She served this Institute for more than six years teaching in this institute. She has taught various topics of Civil Engineering at Graduate and Post-Graduate level. She has conducted Short Term Training Programmes on various topics including Design of Steel Structures using latest code(IS 800-2007), advanced Structural analysis, Drawing using software, Lab oriented programme and so on.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU16	Laboratory Practice on Concrete Materials	27.05.2019	31.05.2019
2.	CU42	Limit State Design of Steel Structures	15.07.2019	19.07.2019
3.	CU54	Application of Soft Tools in Civil Engineering	05.08.2019	09.08.2019
4.	CU65	Drawing, Analysis and Design of Structures by Limit State Method using Software	02.09.2019	06.09.2019
5.	GUW16	Application of Software in Engineering Drawing	04.11.2019	08.11.2019
6.	CU100	Introduction to IS 800-2007	23.12.2019	28.12.2019
7.	CU104	AutoCAD for Engineers	06.01.2020	10.01.2020
8.	ICT18	Organizational Behaviour	20.01.2020	24.01.2020
9.	BBSR26	Design of Steel Structures	24.02.2020	28.02.2020
10.	CU125	Laboratory Tests on Civil Engineering Material	16.03.2020	20.03.2020

"The aim of education is the knowledge not the facts but of values."

- William Ralph Inge

STTP SCHEDULE 2019-20

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Shri Nirmal Kumar Mandal is a member of faculty in the Dept. of Mechanical Engineering and his present areas of interest include Computer Graphics, CAD/CAM, CNC Machines, FEM, and Mechanical Vibrations etc.. He had graduated from Bengal Engineering College (now IIEST) and received his post graduate degree in the area of Production Engineering from the Jadavpur University.
Since his joining at NITTTR, Kolkata in October 1994, he offered several STTPs in the areas of Computer Graphics, Automated Manufacturing System, Automation, FEM, CAD/CAM and it's allied areas. He has also served the Institute with several administrative responsibilities like Senior Administrative Officer, member, Board of Governors etc.
He has about 20 publications in various National and International journals and conferences.

List of Short-Term Training Programme

Sl. No	Prog. Code	Programme Title	Date	
			From	To
1.	BBSR01	Development of Laboratory Instructions	08.04.2019	12.04.2019
2.	CU12	Programming and Operations on CNC Machines	13.05.2019	17.05.2019
3.	CU21	Three Dimensional Modelling with AUTOCAD and SOLIDWORKS	03.06.2019	14.06.2019
4.	ICT06	Automated Manufacturing Systems	01.07.2019	05.07.2019
5.	CU44	Computer Numerical Controlled Machines: Constructional Features and Programming	15.07.2019	19.07.2019
6.	CU90	CAD/CAM	18.11.2019	22.11.2019
7.	GUW19	Modelling of Engineering Systems	16.12.2019	20.12.2019
8.	CU99	Engineering Optimization with MATLAB	23.12.2019	03.01.2020
9.	CU108	Inferential Statistics for Engineering Research	06.01.2020	10.01.2020
10.	CU126	Computer Aided Design with Ansys	16.03.2020	20.03.2020

"Education is a progressive discovery of our ignorance."

- Richard Cecil

STTP SCHEDULE 2019-20

Dr. Prasanta Sarkar
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Dr. Prasanta Sarkar is a faculty member in the Department of Electrical Engineering since 2005. He received B.Sc degree from Calcutta University in 1978, Graduate degree in Electrical Engineering from The Institution of Engineers (India) in 1985, ME degree in Electrical Engineering from Allahabad University in 1991 and Ph.D. degree in Electrical Engineering from Indian Institute of Technology, Kharagpur, in 2001.

From 1982 to 1992, he served Northern Railway, Allahabad as Electrical supervisor and from 1992 to 2005 as faculty in North Eastern Regional Institute of Science and Technology, Nirjuli, Arunachal Pradesh. He has about 34 years of working experience in academics and Industry in the field of Electrical Engineering. His present areas of interest include Control Systems, System Identification, Model Order Reduction and Intelligent Control. He is a life member of Indian Society for Technical Education, System Society of India and member, The Institution of Engineers (India) and Institute of Electrical and Electronics Engineers.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU06	Indian Electricity Rule and Code of Practices	06.05.2019	10.05.2019
2.	CU26	Control Engineering with MATLAB	10.06.2019	21.06.2019
3.	CU37	Laboratory Experiment on Electrical Machine and Power System	08.07.2019	12.07.2019
4.	CU51	Exposure on MATLAB	29.07.2019	02.08.2019
5.	BBSR11	Control Engineering with MATLAB	19.08.2019	23.08.2019
6.	CU67	Application of MATLAB in Engineering	02.09.2019	06.09.2019
7.	GUW13	Control Engineering with MATLAB	16.09.2019	20.09.2019
8.	CU84	Advanced Control System with MATLAB Simulation	11.11.2019	16.11.2019
9.	ICT16	Indian Electricity Rule and Code of Practices	16.12.2019	20.12.2019

"Education is training the mind and not stuffing the brain."

- Swami Ranganathananda

Shri Rajeev Chatterjee
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Shri Rajeev Chatterjee is working as a faculty member in the Dept. of Computer Science & Engineering of National Institute of Technical Teachers' Training and Research, Kolkata, since January 2001. Previously he was working as a Lecturer in an Engineering College. He obtained his Bachelor's Degree in Engineering from Karnataka University, Dharwad in the field of Computer Science. He obtained his Master of Technology degree in Multimedia and Software Systems from West Bengal University of Technology, Kolkata. He has more than 15 years of teaching experience at Graduate and Post-Graduate levels. He has around seven articles in International and National conference proceedings.
Rajeev Chatterjee has conducted a number of Training Programmes for the teachers of various institutes including Polytechnics, Engineering Colleges, NITs and Universities in the area of Fundamentals of Computer Systems, Computer Networking, Mobile and Personal Area Networking, Programming in C/C++, e-Learning and related areas. He has also conducted teachers training for Vocational Education System. His areas of interest include IP based Networks, Design and Development of IT Infrastructure, e-Learning, Confidence Based Learning, Human Computer Interaction, ICT in Education, IT and ITES in Vocational Education System. He is also a member of National Syllabus Committee of NEILET in the area of Multimedia.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU01	Advance Programming in C	01.04.2019	05.04.2019
2.	BBSR02	Programming in C++ Methogologies	22.04.2019	26.04.2019
3.	CU14	Networking Principles, Management and Administration	20.05.2019	31.05.2019
4.	CU25	IP Networking	10.06.2019	21.06.2019
5.	GUW07	Networking Principles	01.07.2019	05.07.2019
6.	CU55	Fundamentals of Computer and Internet (Especially Designed for Office Staff)	05.08.2019	09.08.2019
7.	CU93	Network Infrastructure & Cloud Security	02.12.2019	06.12.2019
8.	CU106	Design and Development of Content for E-learning	06.01.2020	10.01.2020
9.	CU122	Mobile & Wireless Networking	24.02.2020	28.02.2020

"Education is the Kindling of a Flame, not the filling of a vessel."

- Socrates

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Dr. Dasgupta is a member of faculty in the Dept. of Computer Science & Engineering and his present research area includes E-Learning, Software Engineering, Cloud Computing etc. He had graduated from the University of Calcutta, India in Electronics and received his post graduate and doctoral degrees in the area of Computer Science from the same University.
Since his joining at NITTTR, Kolkata from Jadavpur University in 1993 he offered several STTPs in the areas of DBMS, Software Engineering, C Programming and Networking. He had also served the Institute with several other responsibilities like Chairman, Purchase Committee, Chairman, Library Committee, member, Board of Governors etc. At present he has the responsibility of the Secretary, Academic Council. He is also connected with several other external academic bodies like AICTE, NBA.
He had more than 50 publications in various conferences and journals and is a member of IEEE Computer Society.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU10	Database Design Theory and Practice	13.05.2019	17.05.2019
2.	CU49	Software Engineering Fundamentals & Application Development	22.07.2019	02.08.2019
3.	CU86	Design of Payroll Systems using ORACLE	11.11.2019	22.11.2019
4.	CU93	Network Infrastructure & Cloud Security	02.12.2019	06.12.2019
5.	GUW21	Introduction of Accreditation Mechanism - NBA Approach	13.01.2020	17.01.2020
6.	BBSR22	Introduction of Accreditation Mechanism - NBA Approach	20.01.2020	24.01.2020
7.	CU117	Introduction to DBMS	03.02.2020	14.02.2020
8.	CU124	Design and Development of MOOC based e-content	02.03.2020	13.03.2020
9.	CU127	Topics on Computer Architecture & Organization (Theoretical Discussion)	23.03.2020	27.03.2020

"Education has to produce the perfect man – sound in character, active in mind and strong in body."

- Plato

STTP SCHEDULE 2019-20

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Dr. Rayapati Subbarao is a faculty member in Mechanical Engineering Department at NITTTR Kolkata. He obtained his doctoral degree from IIT Madras and M.Tech from IIT Delhi. Dr. Subbarao has more than 13 years of experience in Teaching, Research & Development and Training. His previous employers include IIT Delhi, VIT University, Vellore, BIT and KL University, Vijayawada. He has 52+ publications in reputed International Journals and Conferences. Apart from Teaching and R&D, he has also been involved in participating/organizing workshops/conferences/STTPs, installation of labs and preparation of course materials/lab handouts. He is recipient of National and State Merit Scholarships. He is a Member of Institution of Engineers (India) (MIE) and ASME. Also, he is a life member of Indian Society of Heat and Mass Transfer (ISHMT), Fluid Mechanics and Fluid Power (FMFP), Combustion Institute (India) and Indian Society of Technical Education (ISTE). He has been a reviewer of projects/publications at various levels for the last few years. Reviewer for International Journal of Turbo & Jet Engines, Proceedings of the Instn of Mech Engrs, Part A: Journal of Power and Energy, Journal of Mechanical Engineering and Sciences (JMES) and Science China Technological Sciences. Also, he has been the reviewer for reputed conferences like ASME GT India and FMFP. He is also involved in setting question papers for UG and PG course in other Universities/autonomous colleges. He was involved in works like EU-Asialink program, ABET, USA and NBA accreditations. Earlier, he had worked USA and visited Korea for presenting a paper on Counter Rotating Turbines. His areas of research are Turbomachinery, CFD of Turbomachinery, Counter Rotating Turbines, Axial Flow Turbines, Combined cycle power plants, SOFC-GT, Alternative fuels, Steam and gas turbines. He wishes to guide interested faculty/scholars for their Ph.D.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU02	Engineering Thermodynamics	08.04.2019	12.04.2019
2.	ICT01	NBA Accreditation	22.04.2019	26.04.2019
3.	PS01	How to Write Thesis and Research paper	13.05.2019	24.05.2019
4.	CU23	Computational Techniques for Mechanical Engineers	10.06.2019	14.06.2019
5.	BBSR07	Thesis and Research Paper Writing	24.06.2019	28.06.2019
6.	CU48	Applied Thermodynamics	22.07.2019	26.07.2019
7.	CU81	Power Plant Engineering	28.10.2019	01.11.2019
8.	CU92	Engineering Thermodynamics and its Applications	25.11.2019	29-11-2019
9.	BBSR20	NBA Accreditation and SAR preparation	30.12.2019	03.01.2020
10.	GUW25	How to write Thesis or Research paper	17.02.2020	21.02.2020

"Educating the mind without educating the heart is no education at all."

- Aristotle

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Dr. Sagarika Pal is a faculty member in the Department of Electrical Engineering and his present research area includes Sensors, Measurement, Process Control and Mechatronics. She graduated in Instrumentation Engineering and received her post graduate degree with specialization in Measurement and Instrumentation from the University of Calcutta. She was awarded doctoral degree in the area of Robotics from Jadavpur University, Kolkata.
Since joining at the Institute Dr. Pal has offered several Short Term Training Programmes (STTP) in the areas of Sensors and Transducers, Measurement, Advanced Process Control, PLC and Automation, Mechatronics, MATLAB and its Application in Engineering etc. She has published more than 40 papers in various National, International Journals and Conference Proceedings and is a life member of Institution of Engineers (India) and Forum of Scientists, Engineers and Technologists (FOSET). At present, she is involved in various Institutional activities apart from teaching.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU03	Laboratory and Workshop manual for Electrical, Electronics and Instrumentation Engineering	22.04.2019	26.04.2019
2.	ICT03	Problem Based Learning	20.05.2019	31.05.2019
3.	CU17	Sensors, Transducers and Signal Conditioning	27.05.2019	31.05.2019
4.	GUW04	MATLAB Applications in Engineering	10.06.2019	14.06.2019
5.	CU31	PLC Programming and Applications	24.06.2019	05.07.2019
6.	CU43	Application of MATLAB Control System, Image Processing, Fuzzy Logic Tool box and GUI	15.07.2019	19.07.2019
7.	CU59	Industrial Automation using PLC, DCS & SCADA	19.08.2019	23.08.2019
8.	CU71	Laboratory Experiment and Students' Project	16.09.2019	20.09.2019
9.	BBSR15	MATLAB Applications in Engineering	21.10.2019	25.10.2019
10.	ICT14	Control and Automation	18.11.2019	22.11.2019
11.	ICT15	Problem Based Learning	02.12.2019	06.12.2019
12.	CU107	LABVIEW Applications in Engineering	06.01.2020	10.01.2020

"To succeed in your mission you must have single minded devotion to your goal."

- Dr. A. P. J. Abdul Kalam

STTP SCHEDULE 2019-20

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Dr. Sailendra Nath Mandal is a faculty member in the Department of Civil Engineering and his present research area includes Environmental Science & Engineering. He graduated from the University of Calcutta, India in Chemical Engineering and received his post graduate and doctoral degrees in the area of Chemical Engineering from the same University. Since joining at the Institute from University of Calcutta in 1997, Dr. Mandal has offered several STTPs in the areas of Drinking Water Quality, Ambient Air Quality, Wastewater Treatment, Solid Waste Management, Applied Chemistry, Environmental Science & Engineering etc. He has published more than 75 papers in various conferences and journals and is member IIChE, ISEC, ICCE, MIEE, FOSET.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU08	Testing of Drinking Water and Health	06.05.2019	17.05.2019
2.	CU24	Domestic Water Purifier and Health	10.06.2019	21.06.2019
3.	CU34	Laboratory Experiments on Engineering Chemistry	01.07.2019	05.07.2019
4.	GUW10	Environmental Pollution - An Overview	29.07.2019	02.08.2019
5.	CU60	Testing Drinking Water for Domestic Use	19.08.2019	30.08.2019
6.	CU70	Environmental Awareness	16.09.2019	20.09.2019
7.	ICT12	Water Pollution and Health	21.10.2019	25.10.2019
8.	CU87	Solid and Liquid Waste Management	18.11.2019	29.11.2019
9.	BBSR19	Introduction to Environmental Pollution	16.12.2019	20.12.2019
10.	CU121	Environmental Pollution Testing	17.02.2020	28.02.2020

"He who opens a school door, closes a prison."

- Victor Hugo

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Dr. Samir Roy is attached to the Dept. of Computer Science & Engineering of National Institute of Technical Teachers' Training and Research (NITTTR), Kolkata, as a faculty member since 2005. After graduating with Honours in Physics from the Presidency College, Kolkata, he obtained his B.Tech, M.E and Ph.D degrees, all in the field of Computer Science & Engineering. He has taught various topics of Computer Science at Graduate and Post-Graduate level at various institutes for the past 23 years. He has around fifty articles in International and National journals and conference proceedings. He has authored a text book entitled Introduction to Soft Computing: Neuro-Fuzzy and Genetic Algorithms with a co-author which has been published by Pearson. His areas of interest include Educational Informatics, Artificial Intelligence, Soft Computing, Theory of Computation. He has conducted Short Term Training Programmes on various topics including Artificial Intelligence, Formal Languages & Automata, Design and Analysis of Algorithms, Object Oriented Software Design, Unified Modeling Language, Data Structures, Computer Aided Technical Presentation and so on.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	BBSR02	Programming in C++ Methogologies	22.04.2019	26.04.2019
2.	ICT02	Introduction to Artificial Intelligence	06.05.2019	10.05.2019
3.	CU20	Formal Languages and Automata	17.06.2019	21.06.2019
4.	GUW05	Theory of Computation	03.06.2019	08.06.2019
5.	CU68	Mathematics and Logic	09.09.2019	14.09.2019
6.	CU78	Topics in Data Structures and Algorithms	14.10.2019	25.10.2019
7.	CU91	Object Oriented Software Design and Modeling	25.11.2019	29.11.2019
8.	CU101	Mathematical Foundation of Computer Science	23.12.2019	03.01.2020
9.	CU113	Introduction to Soft Computing	20.01.2020	31.01.2020

"The highest education is that which does not merely give us information but makes our life in harmony with all existence."

- Rabindra Nath Tagore

STTP SCHEDULE 2019-20

Dr. Samiran Mandal
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Dr. Samiran Mandal is a faculty member in the Department of Mechanical Engineering and his present research area includes Robotics, Machining Science, Powder Metallurgy. He graduated from the University of Burdwan, in Mechanical Engineering and had his post graduate degree in the area of Mechanical Engineering from IIT Kharagpur.
After completion of M. Tech, he worked in Telco Jamshedpur as design engineer. He did his Ph. D from IIT Kanpur, and joined NITTTR, Kolkata in 1994. Dr. Mandal has offered several STTPs in the areas of Robotics, Automobile Engineering, Welding Processes, Product Design, Fabrication Techniques, Metrology and Measurement. He has published number of papers in various National Journals and Proceedings and was a member of IEEE. Beside this, he is also a member of the external academic body of IIEST.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU05	Introduction to Robotics	29.04.2019	03.05.2019
2.	CU52	Development of Mechanical Engineering Laboratory Experiments and Laboratory Instruction Sheets	29.07.2019	02.08.2019
3.	GUW11	Concept Mapping in Teaching Learning	19.08.2019	23.08.2019
4.	CU69	Introduction to Concepts of Machining Science	09.09.2019	14.09.2019
5.	CU80	Product Design	21.10.2019	25.10.2019
6.	CU85	Mechanical Measurements and Control	11.11.2019	16.11.2019
7.	CU95	Automobile Engineering	09.12.2019	13.12.2019
8.	CU111	Production and Operations Management	13.01.2020	17.01.2020
9.	CU119	Machine Design	10.02.2020	14.02.2020
10.	BBSR27	Instructional Planning	02.03.2020	06.03.2020

"Education has for its object the formation of character."

- Herbert Spencer

STTP SCHEDULE 2019-20

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Dr. Santanu Bhanja is a faculty member in the Department of Civil Engineering and his present research area includes High Performance Concrete, Reinforced Concrete Design, Earthquake Resistant Design, Software Application in Structural Engineering etc. He graduated with Honours from Jadavpur University, completed M Tech from IIT, Kharagpur and Ph.D from Jadavpur University in the field of Structural Engineering.

He served the industry for seven years both in the private and Government sectors before joining the Civil Engineering Department of the Bengal Engineering College (Deemed University) in 1996 where he served about a decade before taking up the present assignment. He has guided several students at Master Degree level and one student has been awarded Ph.D degree in 2013 under his guidance. He has successfully completed a Research Project sponsored by the Fly Ash Unit of DST, Govt. of India in 2012. He has published number of papers in reputed Journals like Cement and Concrete Research, ACI Materials Journal, Indian Concrete Journal, Journal of the Institution of Engineers etc. and contributed a number of technical papers in National and International Seminars and Conferences. He has chaired technical sessions in International Conferences. He as acted as a key technical speakers in a number of Seminars/ Engineers' Meets/Skill and Technology transfer programmes organized by reputed cement manufacturers and in an awareness programme on Earthquakes aired live by DD Bangla.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	BBSR06	Refresher Course on Computer Aided Analysis, Design and Detailing using STAAD. Pro Software	10.06.2019	14.06.2019
2.	CU30	Commentary on IS: 456-2000 - Explanation, Interpretation, Application & Limitations	24.06.2019	28.06.2019
3.	ICT11	Principles of RCC Design up to & beyond Limit States, Applications and Limitations of IS:456-2000	16.09.2019	20.09.2019
4.	CU79	Earthquake Resistant Design of RC Buildings with an Introduction to Shake Table	21.10.2019	25.10.2019
5.	CU83	Health Assessment and Rehabilitation of RCC Structures	04.11.2019	08.11.2019
6.	CU96	Introduction to Structural Analysis and Design Software for Buildings - ETABS	16.12.2019	20.12.2019
7.	CU102	Application of Total Station in Present day Surveying	30.12.2019	03.01.2020
8.	BBSR24	Commentary on IS: 456-2000 Explanation, Interpretation, Application & Limitations	03.02.2020	07.02.2020
9.	ICT21	Commentary on IS: 456-2000 with an Introduction to IS:13920-2016	02.03.2020	06.03.2020
10.	GUW27	Modeling, Analysis, Design & Detailing of Structures as per latest Indian Standards using a new Generation Software	16.03.2020	20.03.2020

"All knowledge that the world has ever received comes from the mind, the infinite library of the universe is in our own mind."

- Swami Vivekananda

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Mrs. Sheela Yadav Rai is a faculty member in the Department of Electrical Engineering, NITTTR Kolkata. She did her graduation Electrical & Electronics Engineering from Andhra University, Visakhapatnam and Master of Engineering in Power System from Birla Institute of Technology, Mesra, Ranchi. She has published papers in seminars/conferences. Her areas of interest are Rural development, Non-conventional Energy, Power System & Power Electronics.

She has taken active participation in developing various training packages on 'Textile, Clothing & Footwear' during 2003-2005 under National Vocational Education Qualification and Certification Framework (NVEQCF) programme of MHRD and various curricula on 'Organized Retail Sector' during 2009-2011 under National Skill Development Mission (NSDM) of MHRD, Government of India.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU22	Renewable Energy Sources and Emerging Technologies	10.06.2019	14.06.2019
2.	CU35	Power Generation from Energy Resources	01.07.2019	05.07.2019
3.	BBSR09	Renewable Energy Sources and Emerging Technologies	22.07.2019	26.07.2019
4.	CU58	Estimating & Costing of Non-Conventional Energies	19.08.2019	23.08.2019
5.	GUW18	Estimating & Costing of Non-Conventional Energies	02.12.2019	06.12.2019
6.	CU97	Power Generation from Energy Resources	16.12.2019	20.12.2019
7.	CU110	Power System Protection	13.01.2020	17.01.2020
8.	CU114	Transmission Line Parameters	03.02.2020	07.02.2020
9.	CU123	Transmission Lines Faults	02.03.2020	06.03.2020
10.	ICT22	Renewable Energy Sources and Emerging Technologies	23.03.2020	27.03.2020

"A teacher who is attempting to teach without inspiring the pupil is hammering on cold iron."

- Horace Mann

STTP SCHEDULE 2019-20

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Dr. Soumitra Kumar Mandal is a faculty member in the Department of Electrical Engineering, National Institute of Technical Teachers' Training and Research (NITTTR), Kolkata since 2004. He obtained B.E. degree in Electrical Engineering from Bengal Engineering College, Shibpur, Calcutta University and M.Tech in Electrical Engineering with specialization in Power Electronics from Institute of Technology, Banaras Hindu University, Varanasi. He obtained Ph.D degree from Punjab University, Chandigarh. He has taught various subjects of Electrical Engineering at Undergraduate and Post Graduate level for the past 20 years. He has published about fifty papers in International and National Journals and Conferences. His research interests are in the field of Computer Control Drives, Microprocessor and Microcontroller based system design, embedded system design and Neuro-fuzzy computing.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	GUW01	Microprocessors & Microcontrollers	22.04.2019	26.04.2019
2.	CU11	Solar PV System & Smart Grid	13.05.2019	17.05.2019
3.	CU15	LABVIEW & MATLAB Applications in Engineering	20.05.2019	31.05.2019
4.	CU33	Laboratory Instructions in Electrical and Electronics Engineering	24.06.2019	05.07.2019
5.	CU47	PLC Applications in Automations	22.07.2019	26.07.2019
6.	CU63	Microprocessors & Microcontrollers	26.08.2019	30.08.2019
7.	CU75	LABVIEW & VHDL Applications	23.09.2019	27.09.2019
8.	CU77	Power Electronics	14.10.2019	18.10.2019
9.	CU89	Solar PV System	18.11.2019	22.11.2019
10.	CU115	8086 Microprocessor	03.02.2020	07.02.2020

"You have to dream before your dreams come true."

- Dr. A. P. J. Abdul Kalam

STTP SCHEDULE 2019-20

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Dr. Subrata Chattopadhyay is a faculty member in Electrical Engineering Department and In – Charge of Extension Center, Bhubaneswar. He received his Ph. D (Tech) in Instrumentation Engineering from the University of Calcutta, India in 2006, preceded by M. Tech [Instrumentation], B. Tech. [Electrical] and B. Sc in Physics, in 1993, 1991 and 1987 respectively.
He served as a Deputy Manager [Projects & Maintenance] in Electrical and Instrumentation Engineering of Chemical and Manufacturing Industries in India and then joined as an Assistant Professor in Electrical Engineering Department at this Institute in 2003. At present he is working as a Professor in Electrical Engineering and In-charge of NITTTR Kolkata Extension Centre, Bhubaneshwar. He introduced, as head of Electrical Engineering Department, a new Post Graduate Programme [M. Tech. in Mechatronics Engineering], the first of its kind in Eastern India at NITTTR Kolkata, with required development of the Department to accommodate the same. He is highly involved in Teaching and Research and his present investigation is on innovation of noble techniques of measurement & control based on Sensor and Transducer development, Process Automation, PLC and Distributed Control System, Mechatronics, Robotics etc. He has nearly 70 publications in various International and National journals and conferences to his name.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	BBSR03	Bio Medical Instrumentation	29.04.2019	03.05.2019
2.	CU13	Theory and Operation of DC Machines & Transformers	20.05.2019	24.07.2019
3.	BBSR05	Induction Training	03.06.2019	08.06.2019
4.	CU28	Power System Instrumentation	17.06.2019	21.06.2019
5.	BBSR08	Instructional Media and CAI	08.07.2019	12.07.2019
6.	GUW09	Theory, Operation and Applications of Transducers & Actuators in Industry	15.07.2019	19.07.2019
7.	CU46	Industrial Process Control	22.07.2019	26.07.2019
8.	CU56	Mechatronics and Automation	05.08.2019	09.08.2019
9.	CU72	Electrical Measurement and Instrumentation	16.09.2019	20.09.2019
10.	CU76	Bio Medical Instrumentation	14.10.2019	18.10.2019
11.	ICT17	Theory, Operation and Applications of Transducers & Actuators in Industry	30.12.2019	03.01.2020
12.	BBSR21	Power System Instrumentation	13.01.2020	17.01.2020
13.	BBSR23	Advanced Process Control & Instrumentation System	27.01.2020	01.02.2020
14.	GUW26	Bio Medical Instrumentation	02.03.2020	06.03.2020

"If you can't explain it simply, you don't understand it well enough."

- Albert Einstein

STTP SCHEDULE 2019-20

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Dr. Subrata Mondal is an Assistant Professor, Department of Mechanical Engineering of National Institute of Technical Teachers' Training & Research (NITTTR), Salt Lake City, Kolkata, West Bengal, India. Prior to this assignment, Dr. Mondal has worked at The Petroleum Institute, Abu Dhabi, United Arab Emirates. Earlier, he was employed with various universities such as National University of Singapore, Singapore; Colorado State University, USA; Monash University, Australia; and The University of Queensland, Australia. He got his doctoral degree in Polymer Science from The Hong Kong Polytechnic University, Hong Kong SAR, M.Tech in Fiber Sc. & Tech. from the Indian Institute of Technology, Delhi and B.Tech. in Textile Technology from the University of Calcutta. Dr. Subrata Mondal has immense interest in the field of interdisciplinary research and teaching relating to polymeric biomaterial for soft tissue engineering, novel membrane separation, polymer composite, nanocomposite and bio composite, smart polymeric materials, functional textiles, and laboratory safety management.
As of now he has 42 referred international journal publications, 2 USA patents, 4 book chapters, 6 non-referred journal papers and 18 conferences with citation over 1400, h-index 17 and i-10 index of 24. Currently, Dr. Mondal is an editorial board member of International Journal of Chemical Engineering, International Journal of Polymer Science, Journal of Membrane Science and Technology, Journal of Chemistry, Journal of Chemical Engineering and Material Science, and International Journal of Membrane Science and Technology. So far, he has reviewed over 150 manuscripts from over 75 different referred journals. Based on his research performances, he has received several international awards. Dr. Mondal's researches have been featured in Australian Broadcasting Corporation (ABC) television channel, Queensland Business Review and Australia's Anthill (Australia's largest online communities for entrepreneurs). Dr. Mondal has also reviewed research proposal from USA-Israel BARD fund (www.bard-isus.com).

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU07	Waste Water Treatment: Pollution Control and Reuse	06.05.2019	10.05.2019
2.	GUW03	Membranes for Water Treatment: Challenges and Opportunities	20.05.2019	24.05.2019
3.	MGT02	Laboratory Safety Management	17.06.2019	28.06.2019
4.	CU39	Development of Laboratory Instruction and Manual	08.07.2019	12.07.2019
5.	CU50	Fundamental and Applications of Nanomaterials	22.07.2019	02.08.2019
6.	BBSR12	Laboratory Safety Management	02.09.2019	06.09.2019
7.	CU98	Polymer Composites and Nanocomposites	16.12.2019	20.12.2019
8.	CU112	Functional Textiles and Protections	20.01.2020	24.01.2020
9.	ICT19	Development of Laboratory Instruction and Manual	03.02.2020	07.02.2020
10.	CU120	Advanced Materials Science and Engineering	17.02.2020	21.02.2020

"Live as if you were to die tomorrow, Learn as if you were to live forever."

- Mahatma Gandhi

STTP SCHEDULE 2019-20

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Shri Sukanta Kumar Naskar is a faculty in the department of Education and Management of National Institute of Technical Teachers Training and Research (NITTTR)-Kolkata since 2008. He joined NITTTR-Kolkata in the year of 1997 as faculty member of Educational Planning and Management. He did his B.Tech. with honours from Jadavpur University and M.Tech from IIT-Kharagpur. He taught subjects related to Production Engineering and Mechanical Engineering at undergraduate and post graduate levels. He is having experience in handling various education project related to Technical Education System including World Bank Assisted Technician Education (Tech. Ed.) Project. He has around twenty publications in national and international journals and conference proceedings. He also contributed as presenter in developing five Educational Video films. His areas of interest include Total Quality Management, Project Management, Human Resource Management, Industrial Management and has conducted short term training programmes in the related fields.

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	MGT01	Institutional Management	22.04.2019	26.04.2019
2.	GUW02	Curriculum Development & Implementation	06.05.2019	10.05.2019
3.	PS03	Effective Training	17.06.2019	21.06.2019
4.	GUW08	Strategic Management	08.07.2019	12.07.2019
5.	MGT03	Human Resource Management	29.07.2019	02.08.2019
6.	MGT04	Strategic Management	19.08.2019	23.8.2019
7.	MGT05	Office Management	16.09.2019	20.9.2019
8.	BBSR14	Problem Solving and Decision Making	14.10.2019	18.10.2019
9.	GUW17	Stores Management & Purchase Procedures	18.11.2019	22.11.2019
10.	ICT20	Problem Solving and Decision Making	17.02.2020	21.02.2020

"The function of education is to teach one to think intensively and to think critically, intelligence plus character – that is the goal of true education."

- Martin Luther King, Jr.

STTP SCHEDULE 2019-20

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Dr. Uday Chand Kumar is a faculty member in the department of Civil Engineering and his area of Interest is in Rural Development. He graduated from the University of North Bengal in Civil Engineering and obtained his post graduate degree in the area of Civil Engineering from M.I.T. Muzaffarpur.

He worked in Ghosh & Ghosh as a Consultancy Officer, Architectural Design Cell, Cuttack and Bhattacharya & Associate then R.K. Mission Shilpamandir, Belur as Lecturer. He did his Ph. D from ISM, Dhanbad and he also completed Master Degree in Science (Ecology & Environment), Master of Arts (Rural Development). Dr. Kumar joined NITTTR, Kolkata in 1994.

Dr. U. C. Kumar has offered several STTPs in the areas of Rural Development, Disaster Management, Rural Water Supply and Sanitation, West Management etc., He has published a number of papers in various National & International Journals.

List of Short-Term Training Programme				
SL. No	**Prog. Code**	**Programme Title**	**Date**	
			From	**To**
1.	CU09	Testing of Brick, Cement, Aggregates and Concrete	13.05.2019	17.05.2019
2.	PS05	Induction Training	15.07.2019	19.07.2019
3.	ICT08	Rural Development through Technical Institution	29.07.2019	02.08.2019
4.	CU61	Structural Audit	26.08.2019	30.08.2019
5.	BBSR13	Ecology and Environmental Studies	16.09.2019	20.09.2019
6.	CU82	Construction and Disaster Management	04.11.2019	08.11.2019
7.	CU105	Ecology and Environmental Studies	06.01.2020	10.01.2020
8.	GUW24	Ecology and Environmental Studies	10.02.2020	14.02.2020

"Education is not the learning of facts, but the training of the mind to think."

- Albert Einstein

STTP SCHEDULE 2019-20

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Dr. Urmila Kar is a faculty member in the department of Education and Management of NITTTR, Kolkata since 2008 and has more than 25 years of teaching experience at Graduate and Post-Graduate levels. Her present research area includes Nonlinear System Dynamics and Control, Fuzzy Logic Control, Engineering Education, Competency Based Curriculum Design, Design and Implementation of Outcome Based Curriculum. She obtained her BE degree in Electrical Engineering from Regional Engineering College, Silchar and MEE degree with specialization in Control System from Jadavpur University. She obtained her doctoral degree in the area of Fuzzy Logic Control from Jadavpur University, Kolkata.
Since joining at the Institute, Dr. Kar has offered several Short Term Training Programmes (STTP) in the areas of Electric Circuits, Linear and Nonlinear Control, Fuzzy Logic Control, MATLAB and its Application in Engineering, Exposure to Scilab, Design and Implementation of Technical Curriculum, Competency Based Curriculum Design, Design and Implementation of Outcome Based Curriculum, Effective Teaching and Students' performance Evaluation etc. She has published more than 20 papers in various National, International Journals and Conference Proceedings and is a member of the Institution of Electrical Engineers (IEE) and life member of Indian Society of Technical Education (ISTE) and All India Association for Educational Research (AIAER).

List of Short-Term Training Programme

SL. No	Prog. Code	Programme Title	Date	
			From	To
1.	CU19	Analysis of Nonlinear Control Systems	03.06.2019	08.06.2019
2.	ICT04	Assessment and Evaluation under Outcome Based Education	10.06.2019	14.06.2019
3.	GUW06	Analysis of Nonlinear Control Systems	24.06.2019	28.06.2019
4.	CU41	Active Learning under Engineering Education	08.07.2019	19.07.2019
5.	BBSR10	Modeling and Analysis of Electrical Circuits and Networks	05.08.2019	09.08.2019
6.	CU74	Electrical Circuit Analysis	23.09.2019	27.09.2019
7.	PS09	Outcome Based Accreditation	18.11.2019	22.11.2019
8.	MGT06	Research Methodology	02.12.2019	13.12.2019
9.	GUW20	Designing Assessment Tools for Effective Implementation of Technical Curriculum	06.01.2020	10.01.2020
10.	BBSR25	Outcome Based Assessment	17.02.2020	21.02.2020

"The Principal goal of education is to create individuals who are capable of doing new things, not simply of repeating what other generations have done."

- Jean Piaget

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PHOTO : IFL,NITTTR,Kolkata

Programme Co-ordinator, Expert and Participants of STTP on " Training of Trainers in Construction Sector under CSS-VSHSE Scheme of NSQF in West Bengal" at NITTTR, Kolkata from March 25-29, 2019

STTP SCHEDULE 2019-20
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