



YEARS OF
IIT ROORKEE
Estd. 1847



CONTINUING EDUCATION CENTRE INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

News Letter (2021-22)

First Edition



Welcome to CEC IIT Roorkee (CEC IITR)

Continuing Education Centre, IIT Roorkee was established in 1955 for the promotion of knowledge up-gradation by organizing refresher/specialist courses for executives, working professionals, and aspiring individuals. In addition to the knowledge up-gradation, CEC IIT Roorkee courses also offer a launchpad to learners in the domains that are most sought after by the industry. CEC conducts sponsored and open participation programs in various disciplines of engineering, science, technology, and management for learners both nationally and globally. Through these courses, CEC also provides the opportunity to visit and study at IIT Roorkee for a short duration. Apart from the technical expertise available in the Departments and Centres of the Institute, wherever necessary, experts from industries and R&D organizations are also invited to deliver talks/lectures.

With the world rapidly progressing towards a digital economy and ushering into industry 4.0, skills in the latest technologies including artificial intelligence, machine learning, 5G technology, IoE, robotics, biotechnology, quantum computing are required to enhance India's workforce employability and competence. Thus, keeping in mind the need for training and upskilling of professionals/ individuals, CEC IIT Roorkee has launched PG/advanced certificate courses in data science, AI/ML, cloud computing, 5G as well as other areas of interest to both industry and individuals seeking to build a career in the emerging technologies. The courses are curated and delivered through the collaboration of experts from IIT Roorkee, other academic institutions, and industry. Further, in the year 2022-23, a number of new programs have also been planned. Our courses are not only conducted in physical classroom modes in Roorkee, Saharanpur, and Greater Noida campuses but also in online and hybrid modes.



Message from the CEC Coordinator

Prof. Sanjeev Manhas

<https://iitr.ac.in/cec/Coordinator.html>

I am glad to present this edition of the newsletter of the Continuing Education Centre, IIT Roorkee (CEC IITR) for 2021-22. Through this newsletter, we would like to highlight the activities, accomplishments, and contributions of CEC IIT Roorkee towards IIT Roorkee and country. At CEC IIT Roorkee, we are committed to making high-quality and transformational education accessible to executives, professionals, and aspiring individuals. In addition to sponsored short-term courses, CEC IITR has launched new major initiatives to offer the longer duration programs (up to a year) offering PG and advanced certifications. These courses are designed to provide learners a specialization, which will enable them to master in-demand skills needed to work on the latest problems in industry and research. Through these open participation programs, we aim to reach out to aspiring individuals and professionals to develop cutting-edge competencies in their professional careers.

Despite many challenges posed by covid-19, CEC IITR has quickly responded by switching to online digital delivery mode offering open participation long-duration online courses in specialized domains and allied technologies. Online open learning is

also promoted by National Education Policy (NEP) encouraging the institutes to create a pool of learning content accessible to everyone. CEC has signed partnership MoUs with many organizations to offer courses and training programs in diverse areas.

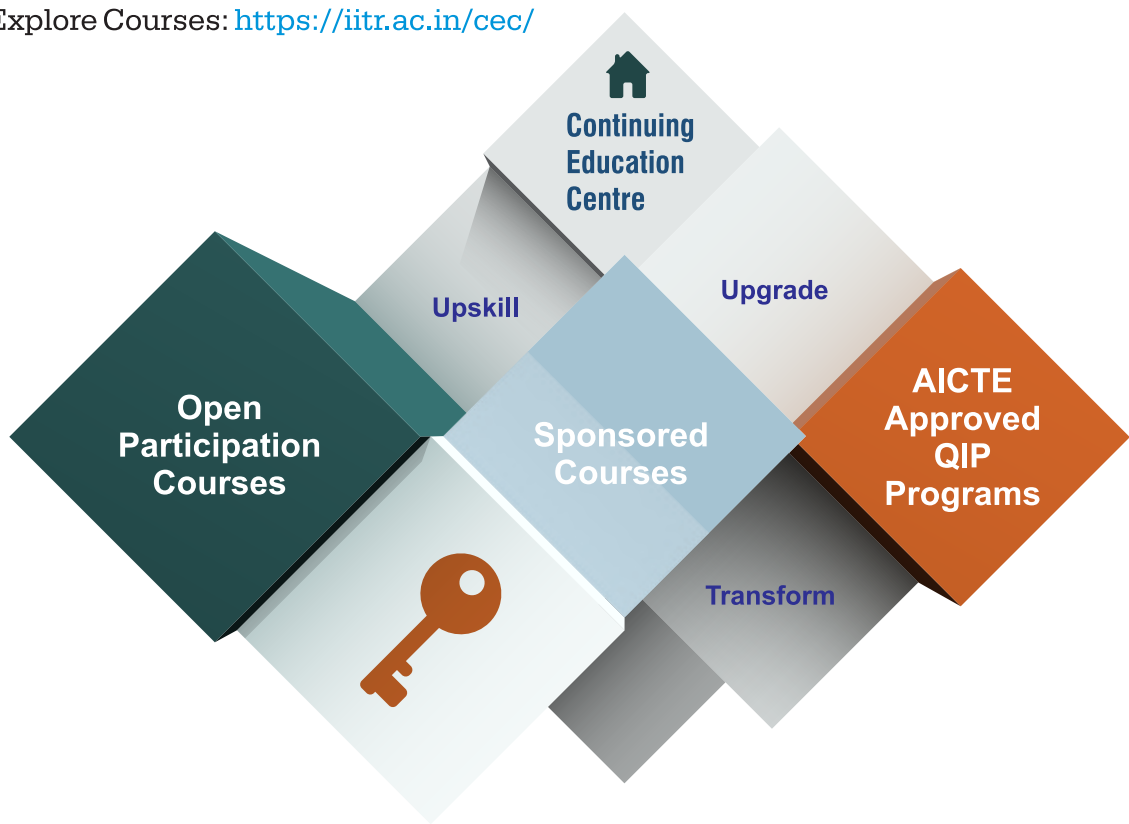
Our courses are also taken by participants worldwide and allow IITR to showcase expertise to a broader audience and open opportunities of collaborations. I am pleased to share that we have conducted more than 50 sponsored courses and around 20 open participation courses out of which, 15 open participation courses have been successfully completed. All these activities have been made possible by the active support and cooperation of the IITR faculty and staff. In addition to this, we have also successfully conducted 18 short-term courses through QIP. We believe that our programs would help in shaping the young talent rightly as per industry requirements. In days to come CEC plan to expand its outreach by offering quality programs in both asynchronous and hybrid modes. To conclude, we would like to thank IITR administration, faculty, as well as staff for supporting us in achieving our objectives.

What CEC Do

Continuing Education Centre, IIT Roorkee offers many programs/courses of both short (up to 2 weeks) and long durations (up to a year) in sponsored as well as open participation mode. Some of our major partners for sponsored courses are SAIL, TATA Steel, NTPC, BEL, Deloitte, SAARC, NIC, etc. Further, during the lockdown period, many courses (in open learning space) were also launched in online/digital delivery mode in association with EdTechs. The engagement with EdTech is expected to support in delivery using optimized LMS, involvement of industry experts, and career guidance for learners. Some of our partners are Wiley, Coursera, CouldxLab, TSW, Simplilearn, etc.

Our courses are also taken by participants worldwide and allow IITR to showcase expertise to a broader audience and open opportunities of collaboration. We also conduct the AICTE approved courses through QIP.

Explore Courses: <https://iitr.ac.in/cec/>



Campus Immersion for Advanced Data Science and Machine Learning course

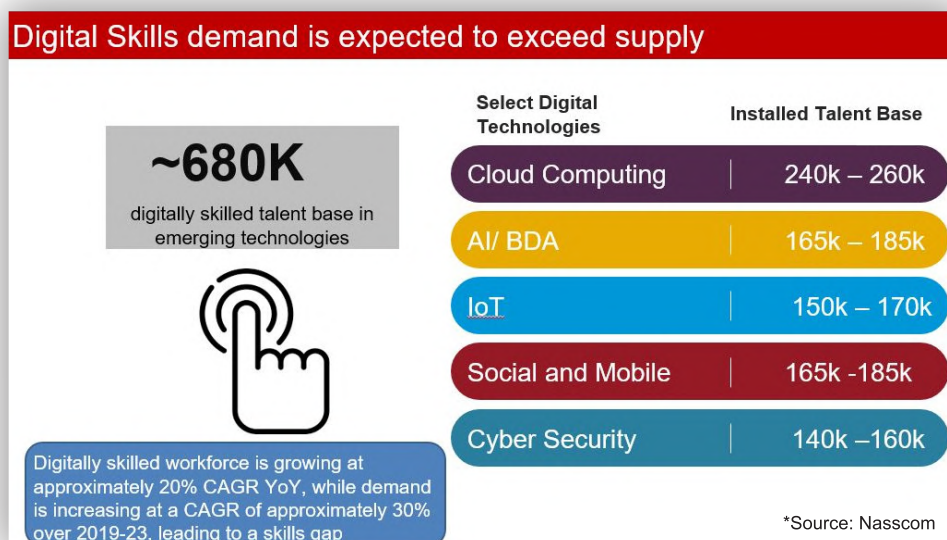
Democratizing Education through Digital Learning

In today's technology and data-driven world, we are seeing a paradigm change in the medium of education from conventional to digital. To be successful in the workplace of the future, workforce will need to have the right digital education and skills. Whether in school, at university, or on the job – the digital transformation that is underway is making IT enabled skills more important every day. The latest technologies in this field have led to more active and meaningful learning experiences. Classroom teaching has taken a new face and is made interactive with the use of learning management systems to implement and effectively manage video presentations, practical demonstrations, online training, projects, etc. Institutions have adopted digital education as a solution in the current prevailing covid-19 scenario. Hence it has become crucial for all to accept and acknowledge the advantages of the digital education system.

According to the report from NASCOM, about 30% of tech jobs were vacant in 2021 owing to the unavailability of relevant talent in digital skills. Also, the Capgemini study revealed that 55% of organizations acknowledged that not only was there a huge gap for STEM skills but it is widening. The digital learning approach leads to expanded learning opportunities for the participants, carried out at the time of their convenience, and from any place, which can help close this gap.

For this digital transformation, CEC IITR has taken new initiatives to provide the courses in fully digital mode in addition to the conventional classroom mode. Our programs in this domain also align well with one of the mandates set by NEP, requirements of industry 4.0, as well as Govt of India's announcement to set up Digital University, calling for the creation of open accessible, high-quality courses for greater outreach, breaking seat limits, and training as per industry need. These courses provide PG, executive, and advanced certifications in online, self-paced, and hybrid modes to participants around the globe.

Digital learning tools and technology fill the gaps where traditional classroom teaching falls behind. The environmental impact is also reduced by the need for less paper for handouts, reduce transportation, books, and save time with quick access to information and ease of research. Digital learning provides an effective way to cut costs, maximize resources and enhance both reach and impact for students and educators alike.



Achievements/Highlights

50+

Sponsored Courses

3000+

Participants

20+

Open Participation Courses

1500+

Participants

18+

AICTE Approved QIP Programs

500+

Participants

200+

International participants

National and International Sponsors



A Maharatna Company



सर्वसमय ऊर्जा
Ministry of Water Resources
Government of India



सर्वसमय ऊर्जा
Ministry of Power
Government of India



सर्वसमय ऊर्जा
Ministry of Home Affairs
(Government of India)



Asian Development Bank



Japan International
Cooperation Agency



सर्वसमय ऊर्जा
Department of Science and Technology (DST)



BHARAT ELECTRONICS



सेल SAIL

Ed-Tech Partners



Open Participation Courses

Data Science and Machine Learning

The Post Graduate Certificate Program in Data Science & Machine Learning is an online program in partnership with TSW. The duration of the course is 11 months during which the learners are taught about the various aspects of Artificial Intelligence (AI) and Machine Learning (ML). The course that has been designed after several rounds of discussions with academicians and industry experts is a careful blend of the different topics of AI and ML and the necessary theory behind these concepts. The course is for working professionals and is well suited for fresher as well as for seasoned professionals. The course content includes topics like Python for DS, Statistical thinking Exploratory Data Analysis and Data Visualization, Essential Mathematics for DS and ML, Machine Learning Algorithms, Text Analytics, Programming with TensorFlow.



Coordinator
Prof. Millie Pant

Program Partner: TSW

Artificial Intelligence - Digital Business

This course is designed to Learn deep AI techniques that are transforming eCommerce industry for high transformation in a post covid world. Through this program, participants are able to practice multiple hours of lab exercises in a lab environment that integrates real-world datasets and business problems in digital Business context. After completing the course participants will learn to understand the impact of the latest emerging AI trends such as chatbots, image and speech recognition, and intelligent automation.



Coordinator
Prof. Gaurav Dixit

Program Partner: Wiley

Cybersecurity

In the Advanced certification program in cybersecurity, the participants will be able to deal with complex projects that will be related to the real world and that will demand a minute understanding of concepts and gain experience and capability in assessing the skills.



Coordinator
Prof. Peddoju Sateesh Kumar

Program Partner: Eckovation

Artificial Intelligence & Deep Learning

This advanced certificate program is specially designed for students and working professionals who are looking to gain expertise in Artificial Intelligence and Machine Learning concepts. This course will cover TensorFlow, Regression, Classification, SVM, Random Forests, CNNs, RNNs, Reinforcement Learning, GANs, and more.



Coordinator
Prof. Gaurav Dixit

Program Partner: CloudxLab

Machine Learning and Deep Learning

This PG Certificate Program is designed for those who want to gain hands-on experience in solving real-life problems using machine learning and deep learning. After finishing this specialization, participants will find creative ways to apply their learnings to your work. For example, they would like to build a robot that can recognize faces or change the path after discovering obstacles on the path, or maybe you would like to unearth hidden gems (like predicting next year's revenue or fraudulent transactions or building a recommendation engine etc) in your company's tons of data (logs, financial records, HR reports or e-commerce transactions reports).



Coordinator
Prof. Raksha Sharma

Program Partner: CloudxLab

Artificial Intelligence, Financial Services, and Insurance

The program gives an opportunity to gain expertise in tech skills that are high on-demand, such as Deep Learning, Machine Learning, AI techniques, Neural Networks, and NLP skills. The industry immersions through real-world cases and capstone projects as a part of the course enables end-to-end problem-solving skills. To have in-depth knowledge and gain practical exposure, the course offers various lab exercises with BFSI industry-focused data sets and intense application concentrated learning with demonstration alongside concepts.



Coordinator
Prof. Durga Toshniwal

Program Partner: Wiley

Supply Chain Management & Analytics

The Professional Certification in Supply Chain Management and Analytics has been designed to provide a cutting-edge experience to candidates who wish to enter the operations and supply chain industry. Supply Chain Analytics enables management to make data-driven decisions at strategic, operational, and tactical levels. In the Supply Chain Management field, there is a shortage of professionals with process and analytics talents. This certification gets the participants ready for high-demand job roles such as Demand Planner, Data Scientist, Supply Planner, and Supply and Operations Planner.



Coordinator
Prof. Rajat Agarwal

Program Partner: Eckovation

Machine Learning Operations

This course deep-dives into machine learning and deep learning algorithms along with building expertise in DevOps technologies. By the end of this program, participants will be ready to design a machine learning system end-to-end starting from project scoping, data needs, modeling, and deployment. Also, they will be able to build pipelines for optimizing the model training process. Moreover, they will Apply various machine learning and deep learning algorithms to solve their business problems and Deploy your machine learning models to production using CI/CD pipelines through this course they will gain practical knowledge in TensorFlow, Keras, Linux, Git, Python, Docker, Kubernetes, Ansible, Terraform, Graffana, Prometheus and Jenkins.



Coordinator
Prof. Raksha Sharma

Program Partner: CloudxLab

Data Science and Machine Learning

This course provides all conceptual knowledge from Linear Algebra required in the domain of Data Science and Machine Learning. First, participants will be introduced to real vector spaces and then to the linear transformations and their representations in terms of matrices. Participants will learn the importance of Eigen pairs in machine learning and various concepts such as orthogonality and projection. This course provides all conceptual knowledge from Linear Algebra required in the domain of Data Science and Machine Learning.



Coordinator
Prof. Gaurav Dixit

Program Partner: Coursera

Accelerators for Deep Learning

This course aims to inform students, practitioners, and researchers in deep-learning algorithms about the potential and limitations of various processor architectures for accelerating deep-learning algorithms. At the same time, it seeks to motivate and even challenge the engineers and professionals in the architecture domain to optimize the processors according to the needs of deep-learning algorithms. Apart from performance and energy metrics, this course also discusses hardware reliability and security techniques for deep-learning algorithms and accelerators. A few real-life applications that benefit from AI-accelerators are reviewed, such as autonomous driving and brain implants. The course draws from recent research papers to showcase the state-of-art in these fields. To make the course self-sufficient, a reasonable amount of background is presented on both computer architecture and CNNs.



Coordinator
Prof. Sparsh Mittal

Program Partner: CloudxLab

Data Science

This PG Certificate Program in Data Science is an online course. This course covers some of the most trending and latest technologies in the market. The cutting-edge content provided through this course will help participants launch a career in the field of Data Science. Additionally, this course comes with our exclusive lab access to gain the much-needed hands-on experience to solve real-world problems.



Coordinator
Prof. Raksha Sharma

Program Partner: CloudxLab

Cloud Computing & DevOps

IIT Roorkee and Wiley present, the most comprehensive PG certification program that will build strong skills to manage and maintain cloud infrastructure and deploy cloud applications. After completing the course participants will become confident in the foundational concept of virtualization, networking, and the cloud ecosystem and outline their role in enabling cloud models and will be able to apply fundamental concepts in cloud infrastructures to understand the tradeoffs in power, efficiency and cost to build and deploy cloud applications.



Coordinator
Prof. Peddoju Sateesh Kumar

Program Partner: Wiley

5G Technology & IoT

With the Post Graduate Certificate in 5G Technology and IoT, participants will build a comprehensive understanding of the underlying principles of advanced communication as they pertain to fifth-generation (5G) wireless communication in the 3rd Generation Partnership Project (3GPP). They will focus on key aspects of 5G and beyond while exploring 5G challenges for software-defined radios, optical communication for IoT applications, mining techniques for IoT and smart cities, and advanced signal processing aspects such as compressive sensing and sparse recovery. This program is ideal for communication industry professionals who want to understand various aspects of advanced communication systems and develop the software and hardware skills necessary to implement them.



Coordinator
Prof. Meenakshi Rawat

Program Partner: : Coursera

VLSI Design

The Post Graduate Certificate in VLSI Design enables professionals to develop VLSI chip designing capabilities that can power new-age technologies like AI, IoT, VR, mobility, cloud, and analytics. In this course, participants will focus on reinforcing their fundamental understanding of MOS technology. Participants will explore band diagrams as an approach to device physics, build their understanding of MOS capacitors as two-terminal devices, and gain an in-depth introduction to advanced FETs and their applications. The program is ideal for VLSI industry professionals who want to leverage the expertise of modern tools and technologies.



Coordinator
Prof. Sudeb Dasgupta

Program Partner: Coursera

Advanced ML and AI

In this six-month comprehensive program, participants will enhance their expertise of deep learning techniques and its applications in AI. This course contains reading material and lectures on selected topics bridging the gap between advanced knowledge and the minimum level required to understand and use machine learning algorithms; however, learners with prior experience will find course content more accessible.



Coordinator
Prof. Partha Pratim Roy

Program Partner: Coursera

Supply Chain Management in the Digitalized Ecosystem

The program majorly assists participants with learnings in Supply Chain right from basics to implementation. It covers a first-class industry-led curriculum comprising Supply Chain techniques delivered directly by experienced professionals from IIT. The program is enriched with face-to-face interaction, customise learning with hands-on learning pedagogies, and projects delivered by very competent faculty.



Coordinator
Prof. Rajat Agarwal

Program Partner: : ImagineXP

Machine Learning

This Certification in Machine Learning program is specially designed for working professionals with weekend classes to impart knowledge in Machine Learning and other related technologies. Through this course, participants will be able to explore the huge avenue of opportunities by understanding advanced concepts of ML that include foundations of Machine Learning, ML Algorithms, Text Analytics, Neural Networks Deep Learning & Computer Vision. One can go for this exclusively designed course to experience the interactive live sessions, sharpen their domain expertise, and there will be no looking back.



Coordinator
Prof. Partha Pratim Roy

Program Partner: Times Group

Advanced Finite Element Modelling of Geotechnical Constructions (Lecture series)

The lecture series comprised 12 online lectures, of which 9.5 lectures were delivered by Prof. Lee Fook Hou, Professor, Civil and Environmental Engineering, National University of Singapore, and Distinguished Visiting Professor, Civil Engineering Department, IIT Roorkee. The remaining 2.5 lectures were delivered by Prof. Akanksha Tyagi, Assistant Professor, Civil Engineering Department, IIT Roorkee. Topics like “Finite Element Modelling (FEM) Basics, Constitutive Models, Tips on FE Analysis Using Abaqus, Case studies – 3D modeling of Nicoll Highway Collapse and Fort canning Tunnel Singapore and Modelling Spatial variability using Random FEM” as well as Hands-on-sessions were covered in approx. 24 hours duration course. A total of 101 participants including 8 International participants from Australia, the United States, Sri Lanka, and Indonesia attended the course.



Coordinator
Prof. Akanksha Tyagi

Open course offered by IITR

Sponsored Courses

01 Internet of Things (IoT) for Smart Cities and Industries

July 5 - 20, 2021



Coordinator
Prof. Rahul Thakur

06 Data Mining and Machine Learning for IoT Applications in Industry

July 26 - August 10, 2021



Coordinator
Prof. Dheeraj Kumar

02 Artificial Intelligence for Computer Vision (Elementary)

July 12 - 16, 2021



Coordinator
Prof. Partha Pratim Roy

07 International training on Water, Sanitation and Hygiene (WASH)

August 24-26, 2021



Coordinator
Prof. M. L. Kansal

03 Road Safety Auditors Certification Course

July 19 - Aug 02, 2021



Coordinator
Prof. Amit Agarwal

08 Online Capacity Building of Professionals from member State Bhutan on Commercial Scale Biogas Plants

Aug. 23- 27, 2021



Coordinator
Prof. Arun Kumar

04 Artificial Intelligence for Computer Vision (Advanced)

July 26 - 30, 2021



Coordinator
Prof. Partha Pratim Roy

09 International training on Application of Remote Sensing and GIS in Agriculture

Sept. 1 - 3, 2021



Coordinator
Prof. Ashish Pandey

05 Introduction to Geo-Spatial Tools and Technology

July 26 - 30, 2021



Coordinator
Prof. P. K. Garg

10 International training on Disaster Management (Floods and Droughts)

Sept. 13- 15, 2021



Coordinator
Prof. Ashish Pandey

11

RLA Services for Hydro Turbine and Hydro Generator, RLA Techniques, Laboratory Evaluation Services, Trouble Shooting Services for Hydro Plants and Uprating Studies

Sept. 01 - 03, 2021



Coordinator
Prof. Arun Kumar

16

Hydraulic Turbine Testing

Oct. 04 - 08, 2021



Coordinator
Prof. Arun Kumar

12

Renewable Energy - Emerging Technology

Sept. 13 -17, 2021



Coordinator
Prof. R. P. Saini



Coordinator
Prof. S. K. Singal

17

Control of Time & Cost Overrun of Projects, Project Time & Cost Management

Oct. 11 - 13, 2021



Coordinator
Prof. S. K. Singhal

13

Online Training of SAARC Professional on Small & Micro Hydro Power Generation

Sept. 13 - 17, 2021



Coordinator
Prof. Arun Kumar

18

Online Training of Stakeholders on Power Purchase Agreement of Renewable Energy Projects

Oct. 04 - 08, 2021



Coordinator
Prof. Arun Kumar

14

Carbon Financing Program Administration, Management Monitoring & Coordination

Sept. 20 - 30, 2021



Coordinator
Prof. Arun Kumar

19

Basic of IPR and Patent Search

Oct. 08 - 23, 2021



Coordinator
Prof. Rajat Agarwal

15

Advanced and Disruptive Technology Trends in Energy Sector

Sept. 27 - 29, 2021



Coordinator
Prof. Arun Kumar



Coordinator
Prof. Pratham Arora

20

Application of Simulation Modelling in Water Resources Management

Oct. 11 - 15, 2021



Coordinator
Prof. Kasiviswanathan K. S.

21 Power System Protection Advanced



Coordinator
Prof. Manoj Tripathy

Nov. 15 - 17, 2021

26 Cloud Computing



Coordinator
Prof. Neetesh Kumar

Nov. 16 - 18, 2021

22 Renovation and Modernization of Power Plants Technical Challenges, regulation of CEA/CERC etc.



Coordinator
Prof. Arun Kumar

Nov. 15 - 17, 2021

27 WMO Myanmar Hydrology Training Programme



Coordinator
Prof. Sumit Sen

Nov. 16, 2020 - Feb. 23, 2021

23 Pump storage Design, Operation & Integration with Renewable Energy



Coordinator
Prof. Arun Kumar

Nov. 22 - 26, 2021

28 Road Safety Auditors Certification Course



Coordinator
Prof. Pushpa Choudary

Nov. 22 - Dec. 06, 2021

24 Deep Learning Image Processing with Computer Vision



Coordinator
Prof. Partha Pratim Roy

Nov. 10 - 13, 2021

29 Regulatory Framework and Operation of Power Station



Coordinator
Prof. Arun Kumar

Dec. 06 - 10, 2021

25 Hydrogen Energy



Coordinator
Prof. Amit C. Bhosale

Nov. 02 - 03, 2021

30 Latest Technologies in Water Sector



Coordinator
Prof. Ashish Pandey

Dec. 20 - 24, 2021

31 Project Management



Coordinator
Prof. Ramesh A

Dec. 20 - 24, 2021

36 Application of Remote Sensing and GIS for Geo logical Investigations



Coordinator
Prof. Ravi Sharma

Jan 10 - 14, 2022

32 Assessment of Soil Erosion & Sedimentation Control in Hydro Power Projects



Coordinator
Prof. Arun Kumar

Dec. 13 - 17, 2021

37 Concept of Commissioning of Hydroelectric Power Plant



Coordinator
Prof. Arun Kumar

Jan. 17 - 19, 2022

33 Latest Trends in Energy Sector including Battery Energy Storage Systems, Hybrid Power Plant Solutions for Providing balancing Electricity and Ancillary Services



Coordinator
Prof. R. P. Saini

Coordinator
Prof. S. K. Singal

Dec. 01 - 03, 2021



38 Development of Intelligent Power Monitoring System for Reliable Operational Strategy in Upcoming evolving market Dynamics



Coordinator
Prof. Dheeraj K Khatod

Coordinator
Prof. Deep Kiran

Jan. 17 - 19, 2022



34 Fundamentals and Applications of Polymers, Polymer Composites and Adhesives



Coordinator
Prof. Gaurav Manik

Dec. 13 - 22, 2021

39 Advanced Technologies in Informatics: Network Technologies and Programming



Coordinator
Prof. Sandeep Kumar

Jan. 17 - 21, 2022`

35 Safety & Operational Risk for Hydraulic Structures of Hydro Power Station



Coordinator
Prof. M. K. Singhal

Jan. 03 - 05, 2022

40 Advanced Technologies in Informatics: Software Design & Development



Coordinator
Prof. Sandeep Kumar`

Jan. 04 - 08, 2022`

41 Advanced Technologies in Informatics: AI and Machine Learning

Feb. 28 - Mar. 04, 2022



Coordinator
Prof. Sandeep Kumar`

42 Advanced Technologies in Informatics: Cloud Computing Technology - E Program

Feb. 21 - 25, 2022`



Coordinator
Prof. Sandeep Kumar`

43 Regulatory Framework and Operation of Power Station

Feb. 07 - 11, 2022



Coordinator
Prof. Arun Kumar

44 Drone Survey

Feb. 28 - March 04, 2022



Coordinator
Prof. Kamal Jain

45 Geological Aspects and Geophysical Aspects

March 07 - 11, 2022



Coordinator
Prof. Ravi Sharma`

46 Soil Pollutants Impact Assessment and Remediation of Contamination Sites

March 07 - 09, 2022



Coordinator
Prof. Brijesh Kumar Yadav

47 Advanced Technologies in Informatics: Network Security – Basics

March 07 - 11, 2022



Coordinator
Prof. Sandeep Kumar`

48 Technical Issues of Hydropower

March 21 - 25, 2022



Coordinator
Prof. Ashish Pandey

49 Accelerators for Deep Learning

March 22 - 28, 2022



Coordinator
Prof. Sparsh Mittal

50 Immersive Deep-dive on Machine Learning and Algorithms

March 03 - 10, 2022



Coordinator
Prof. Kusum Deep



Coordinator
Prof. Millie Pant

Faculty in Focus



Prof. Arun Kumar

Department of Hydro and Renewable
Energy, IIT Roorkee

He is a Professor at department of Hydro and Renewable energy, IIT Roorkee. He is holding NEEPCO chair Professor and headed the department of Hydro and Renewable energy at IIT Roorkee from 1998 to 2011. He held MNRE Chair Professor from 2013 to 18 and served on Board of NHPC Ltd, Govt of India PSU for hydropower during 2015-2019 as an independent director. His research areas are Hydropower Development, Environmental Management of Water Bodies, Energy Economics, and Policy. Prof. Kumar has over 40 years of experience in the field of Hydropower and environmental management of rivers and lakes.

He served CLA for Hydropower on SRREN for IPCC. Prof. Kumar

had received various awards and recognitions from CBIP, Institution of Engineers, and Hydro Power Association including the prestigious HRED Hydro and Renewable Energy Research award from 2020 IIT Roorkee. Currently, he is a board member of International Hydropower Association and Vice President of Federation of Indian small hydropower. He holds a bachelor in civil engineering and PhD in hydropower from IIT Roorkee, Masters in Civil Engineering from IISc Bengaluru, and Hydropower Diploma studies from NTH, Trondheim. He is a fellow of ASCE, Institute of Engineers (India), IWRS, IWWA, and HIS. He conducts training programmes for national and international power and water utilities, financial and regulatory institutions in the field of hydropower, and environmental management of rivers and lakes.

Prof. Raksha, Ph.D. (Indian Institute of Technology, Bombay) M.Tech (Indian Institute of Information Technology, Gwalior), has been working as Assistant Professor in the Computer Science department of Indian Institute of Technology Roorkee (IITR) since January 2019. Before joining IIT Roorkee, she served as a research scientist at Tata Research Center, Pune, India, from October 2017 to December 2019. She has been actively working in natural language processing, computational linguistics, and computer vision for the last ten years. Dr. Sharma is in charge of the Intelligent Systems Laboratory at IIT Roorkee, and having around 20 researchers, including PhDs, M.Techs, B.Techs, and research interns from other top IITs. Her research is published in top-notch conferences like ACL, EMNLP, IJCNLP, CICLing, GWC, etc. Dr. Sharma has taken courses on Natural Language Processing, Artificial Intelligence, and Machine Learning at IIT Roorkee. She is an active speaker in executive courses from IITR in collaboration with industry partners like CloudXLab, UpGrad, etc. Dr. Sharma has conducted many faculty development programs under Electronics & ICT Academy IIT Roorkee. She is a reviewer/area chair in top NLP conferences; a few are ACL, EMNLP, ICON. She has collaborated for NLP related research projects with Emory University, Atlanta, US, and the University of Tartu, Estonia. She received travel grants from Google in 2018 and Microsoft in 2017 to visit ACL 2018 and EMNLP 2017.



Prof. Raksha Sharma

Department of Computer Science
IIT Roorkee

CEC Staff



Prof. Sanjeev Manhas

Coordinator CEC

<https://iitr.ac.in/cec/Coordinator.html>



Mr. Subhash Chand



Mr. Vipin Kumar



Ms. Shakti Sahni



Mr. Sharad Sharma



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