DIRECTOR'S DESK

GIS: THE WORLD AT YOUR FINGERTIPS

In 1963, the world's first true operational Geographic Information System (GIS) was developed in Ottawa, Ontario, Canada, by the federal Department of Forestry and Rural Development. Created by Roger Tomlinson, this pioneering system, known as the Canada Geographic Information System (CGIS), was designed to store, analyze, and manipulate data for the Canada Land Inventory. This project aimed to assess the land capability for rural Canada by mapping detailed information on soils, agriculture, recreation, wildlife, waterfowl, forestry, and land use at a scale of 1:50,000. Tomlinson, often referred to as the "father of GIS," is celebrated for his innovative use of overlays to facilitate spatial analysis of convergent geographic data.

In India, GIS technology has seen rapid evolution and offers promising career prospects. The integration of artificial intelligence and machine learning with GIS systems has created a need for advanced knowledge and skills to stay competitive.

The telecom industry in India is a major user of GIS technology, employing it for tasks such as mapping, inventory management, tracking maintenance, and monitoring regulatory compliance. Other sectors, including insurance, forestry, urban planning, banking, and health services, also rely heavily on GIS systems.

A significant trend of the 21st century is the integration of GIS with other information technologies and internet infrastructure, such as relational databases, cloud computing, software as a service (SaaS), and mobile computing.

The advantages of GIS include effective planning, efficient design, improved information management, enhanced mapping capabilities, better communication, resource management, and streamlined services and logistics.

The Engineering Staff College of India offers a six-week GIS Certification course, available both online and offline. This program provides comprehensive training in GIS, equipping participants with specialized skills in spatial data analysis and mapping. ESCI aims to empower individuals with the expertise needed to excel in GIS, promoting self-employment and entrepreneurship.

With best regards,
Dr. G. Rameshwar Rao, FIE

Sri A.Revanth Reddy, Hon'ble Chief Minister along with Sri Bhatti Vikramarka, Dy.Chief Minister, Sri D.SridharBabu, Hon'ble Minister for IT&C and Sri Jayesh Ranjan, IAS, Principal Secretary, IT&C, Sri B.Venkatesham, IAS, Principal Secretary, Education and others are visited to ESCI on 8-7-2024 and reviewed on IEI-ESCI Skill University proposals

Engineering is the art of transforming ideas into reality.

Events at ESCI

CIVIL & TRANSPORTATION WING

Engineering Staff College of India, Civil & Transportation Engineering Division organized Five Days Training program on" Maintenance of Rural Roads - Road Asset Management and Budgeting "Sponsored by NRIDA, Ministry of Rural Development, Government of India, New Delhi from 15 - 19 July, 2024 at ESCI Campus, Hyderabad.

Total 43 Engineers attended this Training Program from various states like Andhra Pradesh, Arunachal Pradesh, Chhattisgarh, Jammu & Kashmir, Karnataka, Kerala etc..

Environment Management Division

GIS Certification Course

The six-week "GIS Certification Course" was successfully conducted in Hybrid Mode at ESCI, Gachibowli, Hyderabad, from June 10 to July 19, 2024. This course was designed to benefit both GIS practitioners and non-GIS professionals, including administrators, developers, and anyone seeking to integrate GIS tools into their workflows.

Editorial Team:

Shri K. J. Amarnath

Shri K.Manohara Chary

Mrs. S. Rajeshwari

Shri Vamsi Krishna

The program provided in-depth knowledge on using ArcGIS and ArcGIS Urban, complemented by practical, hands-on exercises. Participants gained essential skills to enhance projects with geographic context and generate valuable information for improved decision-making.

GIS technology offers a robust geospatial infrastructure that enables organizations to leverage advanced tools and rich content for mapping and analytics. It facilitates holistic problem-solving, enhances planning and decision-making processes, and supports digital transformation in urban, regional, and scenario planning. Through web-based 3D applications, GIS fosters collaboration with community stakeholders, promoting a more sustainable future.

Operation & Maintenance (O&M) of Sewerage Network Systems and Treatment Plants

The Continuing Professional Development Programme on "Operation & Maintenance (O&M) of Sewerage Network Systems and Treatment Plants" took place from July 1 to 5, 2024. This five-day course was designed to enhance the knowledge, skills, and attitudes of engineers involved in the design, operation, and maintenance of underground sewerage systems.

The program covered both fundamental and advanced topics, including emerging technologies and recent advancements in the field. Key subjects included were Basic principles of Sanitation, biological Wastewater Treatment Technologies, CPHEEO Manual Guidelines ,Underground Sewerage Network System PPP Models and STP etc., Technical visit to Remodeling of a sewage lane and the extension of Nala, Decentralized Waste Water Sewage Treatment Plant, Waste Water Treatment Facility Unit-UASB based Technology etc were arranged as a part of the program curriculum. Participants benefited from technical visits, which provided practical insights into real-world applications.

Engineers are the architects of the future.

Information Technology Division

"Web Development using MERN Stack" was conducted from 22 to 26 July 24 at ESCI , Campus. The primary objectives of this program are to Create Interactive User Interfaces, Gain Hands-On Experience with MERN Stack, Develop Web Application Knowledge, and Explore Web Security & Secure Coding.

Executives from Indian Oil Corporation Limited, Defence Research and Development organisation - DRDO, Ministry of Defence, Government of Indian Kochi and Ship Building Centre(SBC) Visakhapatnam have attended the training program.

- A Management Development Programme "Big Data Analytics & Financial Management" was organized from 01 to 05 July 2024 Batch 2 at ESCI Campus for NHM organization in Odisha

    Objective of the Program is to gain the knowledge in Data Management Cycle ,Documentation, Data

Participants from Defence and Power Utilities have attended the program

process, Auditing of Formula and graphical presentation of Statistics.

- Certification program on "Microsoft Power BI Data Analyst" was organized from 29 July - 01 Aug 24 at ESCI Campus. The primary goal of this program is to enhance participants' expertise in Microsoft Power BI, enabling them to become proficient users and master essential skills such as data cleansing, data modeling, visualization, and the Power BI service. By the end of the course, participants will be equipped to excel as Microsoft Power BI Data Analysts.

Mining Division

FEEDBACK CULTURE: GREAT LEARNING DESIGN AS A BRIDGE TO CULTURE BUILDING

Feedback takes courage, commitment, and time. Teaching and reinforcing feedback skills in the flow of work can accelerate a culture of growth and performance. Feedback is the fuel of a thriving development and performance culture. We grow when we get specific, actionable insights about how to build our capabilities. Feedback takes courage, commitment, and time—but it matters, especially in a culture like McKinsey, where accelerated growth is the norm.

Sustaining the habit of frequent feedback takes work. It is hard to deliver—and hard to hear—difficult messages, which is why people tend to shy away from these conversations altogether. With many generations of colleagues, we had relied on informal apprenticeship to reinforce the skill of exchanging feedback. But as we looked more closely at our learning approach, we felt we could do more to teach and reinforce the skills of giving and receiving feedback in the flow of colleagues' day-to-day experience.

For further reading please visit: https://www.mckinsey.com/featured-insights/people-in-progress/feedback-culture-great-learning-design-as-a-bridge-to-culture-building

Events at ESCI

Power & Energy Division

P&E Division, ESCI has successfully conducted a 4-Day CPDP on Gas Insulated Substations-Design features, Construction, Testing, Operation, Maintenance from 23-26 July, 2024 in which 18 participants from CEA, NMDC WBSETCL &-SAIL etc have participated.

Faculty Shri. T.Jagat Reddy, Director (Transmission), TGTRANSCO addressed the participants on the occasion and shared his experiences of augmenting Power Transmission infrastructure including planning the GIS Substations in Telangana State in record time of 16-18 months. Other Faculty members are Sri. S K Padhee, Ex.GM[R&;D], BHEL, Sri. P. Ramprasad, Chairman, PGCIL, Sri. D. Suresh, DE, TG TRANSCO, Sri Ch.Chakrapani, CE, TGSPDCL, Sri John Srinivas, frpm TGTRANSCO,Ms Shyamala Venkatrman, GM (R&;D), BHEL, Sri J. Santosh, Ex. Addl. Director, CPRI

For the benefit of the participants , a field visit to a state of art GIS Substation-Rayadurgam (TSTRANSCO), has been arranged.

Power; Energy Division has successfully conducted a 4-Day CPDP on "Smart Grids Smart Metering Technologies & Applications"; from 09- 12 July, 2024 in which participants from TGSPDCL, NTPC & CEA have attended the training.

Dr.Pradeep Yamula, Associate Professor, IIT, Hyderabad, Sri RV Chalapathi, Mohd. Asgar, S.Sunilkumar, DE, TGSPDCL, EM Chakravarthy, DE, TGSPDCL have delivered lectures in this Training program. As a part of this training, a field visit to Smart Grid Simulator & Smart Meter Lab has been conducted to the participants.

Quality & Productivity Division

Quality & Productivity: Program on "Quality Aspects 4.0"

From July 10 to 12, 2024, a 3-day off-campus in-house training program on "Quality Aspects 4.0" was held for the executives of Ordinance Factory, Medak. Twenty employees from the executive cadre have participated in the program. The primary objective of the training was to provide insights into the evolution of quality aspects from 1.0 to 4.0, focusing on key areas such as Automation, Total Quality Management, Root Cause Analysis, and Benchmarking relevant to Quality 4.0. Additionally, the program covered emerging technologies and concepts including Cloud Computing, Cyber Security, Virtual Reality, and Augmented Reality.

Water Resources Division

As a Key Resource Center, Engineering Staff College of India (ESCI) organized Two One Day Refresher training

Group Photo - One Day Refresher Training Programme under Jal Jeevan Mission on 8th July,2024@Rudraksha Marriage Garden Hotel, Shujalpur , Madhya Pradesh

Engineers are the world's problem solvers.

Fig: One Day Refresher Training Programme under Jal Jeevan Mission on 9thJuly,2024 Rudraksha Marriage Garden Hotel, Shujalpur , Madhya Pradesh -Group Presentation by Participants

programmes for Community Level Stakeholders (Level-3) of Public Health Engineering Department and other stakeholders involved in implementation of Jal Jeevan Mission at Rudraksha Marriage Garden Hotel, Shujalpur, Madhya Pradesh on 8th and 9thJuly, 2024. Overall, 105 Participants registered for both refresher training programmes. Er. Rajendra Kumar Sharma, Senior Engineer inaugurated the programme and addressed about the importance of Operation and Maintenance of the Water Supply Schemes under Jal Jeevan Mission. Further, he advised the participants to involve actively and share their experiences and grassroots realities of JJM in their respective villages. In the inaugural session PHED Officials, JJM Team-Shujalpur, Senior Gram Panchayat officials along with Er.G.Naresh,Course Director and Faculty Member of ESCI and guest faculty Members Participated.

SKILL DEVELOPMENT PROGRAMME

RETIREMENT

Sri Nampally Narasimha, who has served with dedication and distinction as Supervisor (HK) at ESCI since November 6, 1991, retired on July 31, 2024 in the cadre of Dy.Manager upon reaching the age of superannuation.

Dr.G.RamehswarRao, Director has inaugurated the new SPGS city centre at IEI Office, Khairatabad on 4-7-2024 and released the SPGS Admissions broacher. The IEI Council Member along Dr.A.Jagan Mohan Reddy, Principal SPGS are in picture

An engineer's job is to make the impossible possible.

Future Programs

TRAINING CALENDAR DURING AUGUST - SEPTEMBER 2024

Sl#	Name of the Course	Dates
Centre for Climate Change		
1.	Application of Bio-Engineering Technologies for Wastewater Treatment in Nalas, Drains, & Canals	07 - 09 Aug 24
2.	Climate-Resilient Regenerative Agricultural Practices for Conservation of Natural Resources	03 - 05 Sep 24
3	Climate Change Adaptation through Agroecology and Organic Farming	25 - 27 Sep 24
Civil / Transportation Engineering		
1.	Testing of Civil Engineering Materials	05 - 09 Aug 24
2.	Concepts on Design, Construction & Maintenance of Bridges	9 - 13 Sep 24
3.	Recent Trends in Design, Construction & Maintenance of Rigid Pavements	23 - 27 Sep 24
Design Prototyping Center and Mechanical		
1.	3D Printing in Manufacturing	05 - 08 Aug 24
2.	Engineering Design using AutoCAD (Mechanical)	20 - 23 Aug 24
3.	Engineering Simulation using ANSYS & CFD - With Hands-on Approach	02 - 05 Sep 24
4.	Engineering Simulation using LS-DYNA	16 - 19 Sep 24
Environment Management		
1.	E-Waste Management - Issues, Collection, and Disposal Mechanism	01 - 02 Aug 24
2.	IT Enabled Applications in Water Supply and Sewerage Projects.	19 - 22 Aug 24
3.	Solid Waste Management System and Sustainable Sanitation	16 - 18 Sep 24
4.	Wet Lands Management	25 - 27 Sep 24
Faculty Development Programme Cell		
1.	Executive Development Programme on Strategic Management for Critical	28 - 30 Aug 24
2.	Decision Making in the Digital Era.	10 - 12 Sep 24
3.	Effective Trade Union Management	24 - 26 Sep 24
Information Technology		
1.	Advanced Excel for Report Generation & Analytics	05 - 07 Aug 24
2.	Linux Server (RHEL8) Administration	05 - 09 Aug 24
3.	Working with BOSS Linux & Libre Office	26 - 28 Aug 24
4.	Cyber Security & Digital Forensic Tools	26 - 30 Aug 24
5.	Information Security Policies & Security Audit	18 - 20 Sep 24
6.	Network Administration: Configuring & Securing LANs and WANs	23 - 27 Sep 24
7.	Big Data Analytics for Business Decisions (Hands-on on MS Excel & Tableau)	25 - 27 Sep 24
Management & Technology		
1.	Maintenance and Troubleshooting of Hydraulics and Pneumatics Systems	06 - 09 Aug 24
2.	Artificial Intelligence and Machine Learning for Predictive maintenance, and Process automation in Process Industries	12 - 14 Aug 24
3.	Strategic Management for Scientists and Engineers	20 - 23 Aug 24
4.	Corrosion Engineering, Advanced Materials for Corrosion Resistance Coatings and Emerging Applications	27 - 30 Aug 24
5.	Non-Destructive Testing and Failure Analysis of Castings, Forgings, Weldments, and Tubes	09 - 13 Sep 24
6.	Creativity and Innovation Techniques for Technical Officers, Scientists and Engineers	17 - 20 Sep 24
7.	NDT Level II Certification in Ultrasonic Technique (in Accordance with ASNT Document No. SNT-TC-1A 2011)	23 Sep 24. - 01 Oct 24

Engineering is all about problem-solving and turning ideas into reality.

Sl# Name of the Course	Dates
Mining	
1. Promotion of Electrical Safety, Energy & Safety Audit in Mining Projects	07 - 09 Aug 24
2. Trends in Blasting in Opencast Mines to Mitigate Undesirable Effects	19 - 21 Aug 24
3. Condition-Based Monitoring & Maintenance for Effective Utilization of Mining Machinery	4 - 6 Sep 24
4. Social Impacts of Mining Projects-Social Impact Assessment, Land Acquisition, Rehabilitation & Resettlement, Pollution Control Measures, Water and Soil Management, Controlled Blasting, Skill Development of Affected Persons	18 - 20 Sep 24
Power & Energy	
1. Operation, Maintenance & Testing of Power Transformers and HT Circuit Breakers	06 - 09 Aug, 24
2. Solar Energy Storage Battery Maintenance and Related Issues	21 - 23 Aug, 24
3. Distribution Automation & SCADA	28 - 30 Aug, 24
4. Flexibilization of Thermal Power Plants	03 - 05 Sep 24
5. Power System Protection - Principles, Protection Relays and Fault Analysis	10 - 13 Sep 24
6. Penetration of Renewables - Technical Challenges and Regulatory Framework	18 - 20 Sep 24
7. Pilferage of Electricity - Detection & Prevention - Issues & Challenges	25 - 27 Sep 24
Quality & Productivity	
1. Total Quality in Purchase Process (Including ERP & e-Procurement)	12 - 14 Aug 24
2. Statistical Quality Control and Statistical Process Control	21 - 23 Aug 24
3. Disciplinary Proceedings	05 - 06 Sep 24
4. Industry 5.0, Quality Aspects	25 - 27 Sep 24
Water Resources Development	
1. Project Management using MS Project and Primavera Software	05 - 09 Aug 24
2. Digital Surface Modeling using GIS Techniques-Hands on Practice	19 - 23 Aug 24
3. Flood analysis using HEC-RAS Software	09 - 13 Sep 24
4. Planning, Design, Construction, and O&M of Lift Irrigation Schemes	23 - 26 Sep 24

RECEIVED ISO CERTIFICATES VARIOUS DIVISION OF ENGINEERING STAFF COLLEGE OF INDIA

Contact:
The Director
Engineering Staff College of India
Old Mumbai Road, Gachibowli,
Hyderabad 500 032. Telangana State
Tel: 040-66304102
Visit: www.escihyd.org | www.esci.edu.in
Email: director@escihyd.org | ic@escihyd.org