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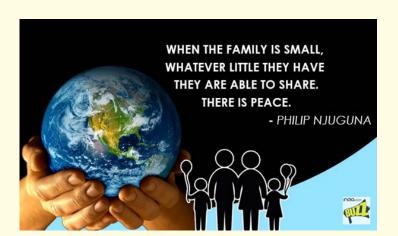
DIRECTOR'S DESK

11th July, 2024 is the World Population Day

The global population continues to grow at a rate of over 80 million people

annually. Currently, the world population stands at 8,115,094,060, i.e 8.1 billion and is increasing by 60 births every second reflecting a rapid increase in population growth across the world. The global population is projected to reach 8.6 billion by 2030, 9.8 billion by 2050, and 11.2 billion by 2100, according to the latest United Nations reports. The rapid population growth poses significant challenges to achieving the Sustainable Development Goals (SDGs). Specifically, it hinders efforts to eradicate hunger and poverty, achieve gender equality, and improve health and education outcomes. Furthermore, the extreme growth of population exacerbates environmental issues such as biodiversity loss, climate change, pollution, deforestation, and shortages of water and food.

Population dynamics is a critical area of study. The impact of human activity on the environment is a function of both our consumption patterns and population size. Therefore, addressing these challenges requires a dual approach, managing resource consumption and controlling population



growth. High mortality rates and limited educational resources contribute to elevated birth rates, which in turn drive migration. Uncontrolled immigration can lead to overcrowding in host countries, straining their resources and infrastructure. This can result in a diminished capacity to provide necessary services and support to both the existing population and new arrivals.

To mitigate these issues, it is imperative to implement comprehensive policies that address both population growth and resource consumption. This includes investing in education, particularly for women and girls, improving healthcare access, and promoting sustainable consumption practices. By doing so, we can work towards a more sustainable and equitable future for all.

A healthy population is a national asset, as healthy individuals are more efficient, productive, and capable of realizing their potential. They play a vital role in social and national development. However, the Effective management of population growth, along with investments in health and education, is key to achieving sustainable development and ensuring the well-being of all citizens.

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



Dr.G. Rameshwar Rao, Director of Engineering Staff College of India met **Sri A.Revanth Reddy**, Hon'ble Chief Minister of Telangana State on 5th May, 2024 in his chambers at the Secretariat and invited him to attend the inaugural Ceremony of Centenary Convention Centre proposed to be held the event shortly.

Centre for Climate Change Division

CPDP on GIS & Remote Sensing for Mapping Change from 19-21 June, 2024

The Centre for Climate Change (CCC) Division conducted CPDP titled "GIS Remote Sensing for Mapping Change" from June 19-21, 2024. This progra covered the basics of Geographic Information System (GIS) and Remc Sensing (RS) techniques, with applications and case studies focusing on clima change, vegetation cover, and carbon stock measurements. The first da featured an introduction to GIS, RS applications in forestry and water resource management, and case studies. Guest speakers included professors from Muffakhram Jah College and scientists from the National Remote Sensin Centre (NRSC), GIS Labs and Osmania University. Notable participants includes Chief Town Planners, a Vice Chairman from the Housing & Urban Developmen Department, and representatives from Aizawl Municipal Corporation. The second day included expert lectures on data processing, land use change, and disaster management. The program concluded on the third day with a visit to NRSC, Shadnagar, Telangana. During the visit, participants became acquainted with the Indian Space Program, toured the IMGEOS facility, and attended a presentation on BHUVAN.



A one day workshop on "Advanced Construction Materials in Concrete Technology and its Applications" sponsored by Devashree Ispat (P) Limited held in Chanakya Seminar Hall on 5-6-2024.

Chief Guest Sri Rajeev Singh Bisth, Head, Technology and Marketing, Sri CH Santosh Kumar, Managing Director, SK Sharma Engineering works, Guest Speaker and Dr. G. Rameshwar Rao, Director, ESCI inaugurated the workshop. Participants from various constructions companies including My Home Construction Private Limited, Aparna Constructions And Estates Pvt. Ltd., Cybercity Builders & Developers Pvt. Ltd., M/s. Ramky

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Estates and Farms Limited, Kapil Engineers & Infrastructure Pvt Ltd, AV Engineering Consultant along with Engineering students from various Engineering Colleges have attended the program. Dr. D. Adinarayana, Sr. Faculty Sri CH Tilak, Faculty and Mrs. L.Swetha, Programme Assistant from CTE division coordinated the event.

The recently conducted "Advanced Construction Materials in Concrete Technology and its Applications" workshop, held at ESCI on June 5, 2024, focused on the pivotal role of technological advancements in the construction sector by emphasizing the need of innovative techniques in concrete technology keeping in view of rapid population growth in the future.

Design Prototyping Centre & Mechanical Division

CPDP on "Coating & Paint Technology"

The Design Prototyping Centre & Mechanical Division (DPC-MD), has conducted a CPDP on "Coating & Paint Technology" from 3rd - 5th June 2024. The programme was intended to provide insights into the various types of coatings and painting techniques and processes in different application scenarios in order to meet good standards of surface preparation consequently to slowdown corrosion. This programme was able to provide awareness on Spray-painting process Industries, Defence, Aeronautical or Aerospace, Ordnance Factories, Public & Private sectors Enterprises along with their International Standard.

Engineers, eminent Scientists, Senior and technical Officers from Directorate General of Aeronautical Quality Assurance (DGAQA), Centre for Fire, Explosive and Environment Safety (CFEES), Quality assurance and evaluation (QAE)



and Session Border Controller (SBC) attended and benefited from the aforesaid program. A field visit was also arranged for the participants gain the state of art exposure in the domain of coating and paint technology at ARCI, Hyderabad. The participants highly appreciated the visit as they could get exposure on different high end coating & painting machine tools and technologies in real-time. As a part of the visit, the division has also interacted with the Director of ARCI to explore the furthering the potential training avenues between ESCI and ARCI.

Information Technology Division

The Information & Technology Division has conducted the following training programs in the month of May and June, 2024 is as follows:

CPDP Program

Network & Security Administration conducted (Online/Offline)from 27- 31 May 2024 at ESCI Campus. The Objective of the Program is to gain the knowledge in Network Administration and to Analyze security threats and protect organization's systems and database. The Participants are from the Directorate General of Quality Assurance (DGQA), Defense Research and Development Organization (DRDO), West Bengal Power Development Corporation Limited (WBPDCL), Southern Region Load Dispatch Center(SRLDC), National Thermal Power Corporation(NTPC) have attended the training program.

STP Program

1)Microsoft Power Platform Fundamentals for Business Applications – MS PL 900 Certification (Offline) Conducted from 10 -14 June 2024 at ESCI Campus. The Objective of



the Program is to gain the knowledge in Understanding Business Value with Power Platform and Using Power Apps with Power BI and Working with Power Virtual Agents.

The Participants are from Naval Dockyard Visakhapatnam having attended the training program.

Management & Technology Division

CPDP on "Industrial bearings Revisited-Maintenance, Condition Monitoring, Analysis and Prevention of Failures" from 18 - 21 June 2024

Industries all over the world use millions of bearings of various types, made of extreme precision and high standardization, working in demanding applications of high sustainability, extreme reliability, and best performance. Unfortunately, bearings fail, and they fail at most inopportune moment, worryingly, after operating only for 5-10% of their rated life. Often the cost of the bearings is much less than the cost of production, down time, and consequent damages. No doubt, modern precision manufacturing practices and maintenance management techniques such as predictive maintenance have reduced premature bearing failure rate. An effective condition-monitoring schedule can improve a machine's operational efficiency, reduce the maintenance/ replacement cost, and prolong the useful lifespan of a machine.

This four-day course begins with a refresher of the bearing knowledge, display and demonstration of several types of rolling element bearings. The course continues with care, lubrication, and prevention of bearing failures. Several actual case histories of bearing failures are presented in the classical failure analysis pattern of observations,

possible reasons for failure, argued analysis of failure, inferences and recommendations.

Bearings do give a tell - tale indication of initiation and imminent failure. Thus the course enables the participants to establish a corrective maintenance plan and increase Mean time between failures (MTBF), reduce Mean time to repair (MTTR), decrease Mean Logistics Delay Time (MLTD), and reduce the demand for resources including spares. Avoiding catastrophic failure obviously reduces the safety and environmental risks, and the possibility of secondary damage.

This course focuses on a deeper insight on condition monitoring techniques with the actual machinery diagnostics instruments, and signature analyses which will help the maintenance engineer to perform better and prevent the machinery from unplanned breakdowns. Around 14 participants attended the above CPDO from DGQA, New Delhi and from Sagar Cements, Hyderabad. Sri KK Murthy attended as Faculty.

Mining Division

"Safety is the Core Principle of Mining"

CPDP -"Emerging Trends in Drilling & Blasting Operations in Mining & Civil Engineering Projects" during 5 - 7 June 2024 at ESCI.

Drilling and Blasting are vital activities in working of any mine. In particular electronics are bringing a level of unprecedented precision to the process of breaking rock and enhancement of drilling and blasting efficiency by use of modern precision drilling, electronic delay detonator



Guest Faculty Dr N Sri Chandrahas,GTS Limited (A C K Birla Group)



Dr Hari Sarvothaman, DDG(Retd), GSI, the Chief Guest along with Er K J Amarnath handing over 'Participation Certificate' to the delegates during the Valedictory Session on 7 June 2024.

system, emulsion explosives which lowers the downstream cost of Mining.

During this programme, the following themes were covered viz., Fundamentals and Optimization of Rock Blasting, Smart Drilling & Blasting, use of Electronic Detonators, Control Blasting Techniques, Software for design, analysis and assessment of blasting performance, Application of IoT, Unmanned Aerial Vehicle & Drones by Industry experts from Birla Group and Defence etc.,. The faculty members invited for the sessions are Er K J Amarnath, Er E Jaya Kumar, Dr P Balamadeswaran, Er B Brahmajee Rao, Dr N Sri Chandrahas, Dr.Sanjeev Kumar Sinha and Dr. Hari Sarvothaman. Delegates from NLC India Limited have participated in the training programme

Power & Energy Division

The Engineering Staff College of India has successfully conducted a 4 Day CPDP on "Substation Automation & Smart Grids" from 11-14 June, 2024, in which 5 Participants from Orissa Power Transmission Corporation Ltd. (OPTCL) participated in it. Mrs. Shyamala Venkataraman, GM(R&D), BHEL imparted the inputs on IEC-61850 Communication Protocol along with the latest trends in Digital Substations. Shri.B.Neelakantham, DE, TGTRANSCO, delivered lecture sessions on "Overview of Substation Automation, Types & Layouts of Substations and various Protection schemes used in substations". Shri. EM Chakravarthy, DE, TGSPGCL provided inputs on "Functions & features of Smart Grids."



As a part this course, a field visit to GIS Substation- 220KV, Erragadda, TG Transco has been arranged. During this visit to Gas Insulated Substation(GIS), working of GIS S/s & Latest Protection schemes have been explained by Shri. Suresh Kumar, DE (MRT) & Smt. Amrita, ADE, TG Transco. Shri. Ch. Chakrapani, CGM, TGSPDCL explained the Earthing Practices in EHV substations. Dr. P. Satyaramesh, former DE, APTransco has explained the "Working of PMU & WAMS" & "Integration of Large Scale Renewable Energy into Grid -Issues & Challenges".

Quality & Productivity Division

Total Quality in Vigilance the program was conducted by QP Division from 10-12 June'24 attended by 12 participants of the rank of Chief Vigilance officers, Vigilance officer, Dy. Chief Vigilance officers and also Indian Army oficer, from difference location. The sessions were taken by Dr. C S Krishna PrasadaRao, Sri KuldipRai, Er. UdayKiran & Mrs.HemaMalini.





The objective of the program is... To understand the emerging Methods, Techniques of conducting investigation and Reporting. Learn the emerging role of Vigilance function is prevention of Fraud & corruption with the application of Modern System, Methods and Tools. To Implement Quality Management tools & Techniques to improve the Vigilance Process.

Laboratory Management System Awareness & Internal Auditing (As per ISO/IEC 17025: 2017 & NABL Requirements) 24 – 27 June, 2024.

The objective of the Training Program is to enabled to interpret ISO / IEC 17025:2017 requirement, to improve confidence in Test results.

The program was attended by Associate Director, Scientists, from Defence Metallurgical Laboratory. The sessions were taken by Dr. C S Krishna Prasada Rao& Sri A. Dhananjaya Rao



Dr. G.Rameshwar Rao, Director is releasing the Broachers on the newly introduced one year PG Certification courses on Arbitration & Cyber Security on 6-6-2024

Medical Camp at ESCI





The Engineering Staff College of India (ESCI) has organised a one day Medical Camp in collaboration with Care Hospital, Gachibowli Unit held on 11th May, 2024. The ESCI staff working in the college along with the participants who came for training in various departments in the college has got the Medical examinations. Dr.G. Rameswara Rao, Director, ESCI welcomed the CARE medical team and started the Medical Camp. On Occasion, he said that no matter how many tasks a man has in his daily life, he should also take care about his health checkups regularly and proper care should be taken by him

He said that medical camps will be a big relief for those who regularly attend duties. Along with Director, ESCI, the Chief S. Lakshmi Kantha Rao, and the Heads and faculties of the Various Departments and many other staff members participated in the medical camp. The normal symptoms like BP, sugar, Temperature, Weight, Ortho and many other health tests were done on occasion and the Medicines were prescribed for those who needed it. Dr. Madhani, the General Physician and Dr. Praveen, the Ortho Specialist along with Hospital staff P.Sridevi, Akanksha from Care Hospital participated in this medical camp.

CELEBRATING WELLNESS ESCI Celebrated the International Yoga Day on 21st June, 2024



The Engineering Staff College of India (ESCI) has celebrated International Yoga Day on 21st June 2024 at the college premises in an enthusiastic environment. Various Participants from across the states who came to ESCI participated in the Yoga along with the ESCI Staff and Faculty. Sri Marri Ram Mohan, a distinguished Yoga Teacher guided the participants through different aspects of yoga by explaining the benefits of each pose offer to the various organs in the human body. He highlighted that yoga encompasses 8.4 million poses and can address major health issues such as liver, kidney, heart, pancreas, back pain, muscle pain and various other health related problems.

Dr. G. Rameshwara Rao, the Director of ESCI has welcomed the Yoga Teacher and stated that this Yoga day marks the tenth year in the ESCI celebrating continuously the Yoga Day for the past nine years. While explaining the theme of Yoga for the 2024 " Yoga for self and Society" has a significance to learn the Yoga by every individual in the society so as to reap its benefits by one and all across the world. The Yoga Day 21st June as the longest day of the year, with 16 hours of daylight and 8 hours of night, and mentioned the traditional belief that the Sun, considered the dispeller of all evils transitions into Dakshinayana on this day. He also emphasized India's pivotal role in introducing International Yoga Day to the global community and now the various countries across worldwide recognized the values of yoga and encouraging their citizens to adopt it for better health. Sri S.Laxmi kantha Rao, the Chief, Sri M.Rajsekhar Reddy, HoD (WRD), K.Manohara Chary, Liaison Officer, Dr.K.Bharat, Faculty of M&T, P.Paramehsha, Programe Assistant and the several participants from various organisations visited to ESCI are participated in the Yoga Day.

Sri Laxmikantha Rao, chief, Sri Rajsekhar Reddy, Hod, WRD, K.Manohara chary, Liaison Officer, dr. Bharat, the faculty of M&T and various others participated in this programme.

Future Programs

TRAINING CALENDAR DURING JULY - AUGUST 2024

SI#	Name of the Course	Dates		
Cen	tre for Climate Change			
1.	Carbon Markets post COP28 - Renewable Energy Transition	10 - 12 Jul 24		
2.	Application of Bio-Engineering Technologies for Wastewater Treatment in Nalas, Drains, and Canals	07 - 09 Aug 24		
Civil / Transportation Engineering				
1.	Safety Management in Construction and Civil Structures	08 - 12 Jul 24		
2.	Advanced Intelligent Transportation System Applications for Highways	22 - 26 Jul 24		
3.	Testing of Civil Engineering Materials	05 - 09 Aug 24		
Des	Design Prototyping Center and Mechanical			
1.	Design & Optimization of UAV's for Industrial Applications (Defense, Mining & Construction)	08 - 11 Jul 24		
2.	Developing Cost-Effective Humanoid Robots	22 - 24 Jul 24		
3.	3D Printing in Manufacturing	05 - 08 Aug 24		
4.	Engineering Design using AutoCAD (Mechanical)	20 - 23 Aug 24		
Env	ironment Management			
1.	O&M of Sewerage network System and treatment plants	01 - 05 Jul 24		
2.	Faecal Sludge and Septage Management	23 - 25 Jul 24		
3.	E-Waste Management-Issues, Collection and Disposal Mechanism	01 - 02 Aug 24		
4.	IT Enabled Applications in Water Supply and Sewerage Projects.	19 - 22 Aug 24		
Faculty Development Programme Cell				
1.	Executive Development Programme in Digital Transformation Strategies: For Future Ready Organizations	15 - 17 May 24		
2.	Integrated Scientific Project Management	28 - 30 May 24		
3.	Skill Enrichment Programme for Technical Officers of Defence, Government and PSU's	11 - 13 Jun 24		
		25 - 27 Jun 24		
4.	Personality Development(An Ordinary to Extraordinary Personality Empowerment)	25 - 27 Jun 24		
	Cortification on Microsoft Dower PL Data Analyst	02 - 05 July 24		
1. 2.	Certification on Microsoft Power BI Data Analyst MS Azure Cloud Administration	15 - 18 July 24		
2. 3.	Web Development using MERN Stack	22 - 26 July 24		
3. 4.	Advance Excel for Report Generation & Analytics	05 - 07 Aug 24		
5.	Linux Server (RHEL8) Administration	05 - 09 Aug 24		
5. 6.	Working with BOSS Linux & Libre Office	26 - 28 Aug 24		
7.	Cyber Security & Digital Forensic Tools	26 - 30 Aug 24		
	nagement & Technology NDT Level II Certification in Dye Penetrant Inspection (DPI) and Magnetic Particle Inspection (MPI)			
1.	(in Accordance with ASNT Document No. SNT-TC-1A 2011)	08 - 12 July 24		
2.	Operation, Maintenance and Performance Monitoring of Centrifugal Pumps, Blowers and Compressors	00 12 July 24		
۷.	(including Reciprocating and Screw Compressors)	22 - 26 July 24		
3.	Conflict Management, Decision Making and Problem Solving Skills	29 Jul - 01 Aug 24		
4.	Maintenance and Troubleshooting of Hydraulics and Pneumatics Systems	06 - 09 Aug 24		
5.	Artificial Intelligence and Machine Learning for Predictive maintenance, and			
	Process automation in Process Industries	12 - 14 Aug 24		
6.	Strategic Management for Scientists and Engineers	20 - 23 Aug 24		
7.	Corrosion Engineering, Advanced Materials for Corrosion Resistance Coatings and Emerging Applications	27 - 30 Aug 24		
Mining				
1.	Smart Mining With Digital Technologies - Application of Internet of Things (IoT), Smart Sensors and			
Δ.	Artificial Intelligence, Robotics, Remote Operations, Men - Tracking	03 - 05 Jul 24		
2.	Occupational Safety & Health Challenges in Coal & Iron Ore Mining	15 - 19 Jul 24		
3.	Energy Security - Exploration & Mining of Critical Minerals & Elements	24 - 26 Jul 24		
4.	Promotion of Electrical Safety, Energy & Safety Audit in Mining Projects	07 - 09 Aug 24		
5.	Trends in Blasting in Opencast Mines to Mitigate Undesirable Effects	19 - 21 Aug 24		
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Future Programs

SI#	Name of the Course	Dates	
Power & Energy			
1.	Cost reduction by Energy Auditing, Management & Design of Solar Energy Systems	02 - 05 July, 24	
2.	Smart Grid & Smart Metering Technologies & Applications	09 - 12 July, 24	
3.	Best Practices in O&M of Industrial Valves & Actuators for Heavy Industries & Power Plants	17 - 19 July, 24	
4.	Gas Insulated Substations - Design features, Construction, Testing, Operation and Maintenance	23 - 26 July, 24	
5.	Operation, Maintenance & Testing of Power Transformers and HT Circuit Breakers	06 - 09 Aug, 24	
6.	Solar Energy Storage Battery Maintenance and Related Issues	21 - 23 Aug, 24	
7.	Distribution Automation & SCADA	28 - 30 Aug, 24	
Quality & Productivity			
1.	Quality Initiatives in Technical and Higher Educational Institutions (In Compliance with NBA & NAAC Accreditat	ion) 17 - 19 Jul 24	
2.	ISO 9001:2015 QMS - Lead Auditor Training (CQI - IRCA - UK Certified)	22 - 26 Jul 24	
3.	Total Quality in Purchase Process (Including ERP & e-Procurement)	12 - 14 Aug 24	
4.	Statistical Quality Control and Statistical Process Control	21 - 23 Aug 24	
Water Resources Development			
1.	Planning, Design & Installation of Community Micro Irrigation System	08 - 11 Jul 24	
2.	Water Conservation, augmentation and Preservation	22 - 24 Jul 24	
3.	Project Management using MS Project and Primavera Software	05 - 09 Aug 24	
4.	Digital Surface Modeling using GIS Techniques-Hands on Practice	19 - 23 Aug 24	



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Last date of Submission: 30th July, 2024

Admission Procedure:

· Written Test · Interview

Sale of Application form: 1" June, 2024 onwards.

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