Yearly Calendar by PEBs

<table>
<tr><td colspan="7">CPD Activities Calendar for the year 2024</td></tr>
<tr><td colspan="1">PEB Name:</td><td colspan="6">Mirpur University of Science and Technology, Mirpur A.K.</td></tr>
<tr><td colspan="1">PEB Reg. #</td><td colspan="6">PEB-A-MUSTAK-0070</td></tr>
<tr><td colspan="1">Name of PEB Coordinator:</td><td colspan="6">Dr. Zafar Ali Khan</td></tr>
<tr><td>Sr. #</td><td>CPD Title</td><td>CPD Category - Type</td><td>Location</td><td>Date</td><td>Collaboration</td><td>Recourse Person</td><td>CPD Credit Points</td></tr>
<tr><td>1</td><td>Construction industry and climate change</td><td>Seminar</td><td>MUST Mirpur</td><td>22 April 2024</td><td>MUST Mirpur</td><td>Engr. Dr. Anwar Khitab</td><td>0.5</td></tr>
<tr><td>2</td><td>Combined Heat and Power (CHP), Types, Applications and Optimum Sizing</td><td>Seminar</td><td>NTC Hall CS&IT Building</td><td>3 May, 2024</td><td>MUST Mirpur</td><td>Engr. Dr. Khuram Pervez Amber</td><td>0.5</td></tr>
<tr><td>3</td><td>Face image retrieval: new trends & techniques</td><td>Seminar</td><td>NTC Hall CS&IT Building</td><td>03 June 2024</td><td>MUST Mirpur</td><td>Engr. Dr. Muhammad Sajid</td><td>0.5</td></tr>
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4	Industrial 4.0 & IOT	Seminar	NTC Hall CS&IT Building	24 Juna 2024	MUST Mirpur	Engr. Dr. Saeed Ahmed	0.5
5	Understanding Optimization and Protocols Evaluation in Wi-Fi Networks		NTC Hall CS&IT Building	15 July 2024	MUST Mirpur	Engr. Dr. Sohaib Manzoor	0.5
6	Investigating Alzheimer's Disease (AD) diagnosis using Natural Dialogues	Seminar	NTC Hall CS&IT Building	9 September 2024	MUST Mirpur	Engr. Dr. Shamila Nasreen	0.5
7	Climate change and Sustainable Energy; Case study of Pakistan	Seminar	NTC Hall CS&IT Building	9 December 2024	MUST Mirpur	Engr. Dr. Zafar Ali Khan	0.5

Note: Please refer to Annexure-A of PDE Bye-laws 2008 for the CPD category and CPD credit points for each activity.

Contents of CPD Activities as per Calendar-2024

	PAKISTAN ENGINEERING COUNCIL	

<table>
<tr><td colspan="2" align="center">Activity No.1 (as per CPD Calendar-2024)</td></tr>
<tr><td>CPD Title:</td><td>Construction industry and climate change</td></tr>
<tr><td>Objectives:</td><td>Construction industry is one of the main contributors to global greenhouse gases emission. There is a need to explore alternate materials and techniques, which are eco-friendly.</td></tr>
<tr><td>Main Contents:</td><td>a. Impact of construction materials and techniques on environment
b. Waste generated from construction activities
c. Waste generated from agricultural and industrial processes
d. Recycling of waste as an alternate building material
e. Effect of recycling on performance of structures
f. Conclusions and Recommendations
e. References</td></tr>
<tr><td>Target Participants:</td><td>Construction industry, academia and policy makers</td></tr>
<tr><td>Duration:</td><td>2 hours</td></tr>
<tr><td colspan="2" align="center">Activity No.2 (as per CPD Calendar-2024</td></tr>
<tr><td>CPD Title:</td><td>Combined Heat and Power (CHP), Types, Applications and Optimum Sizing for a building</td></tr>
<tr><td>Objectives:</td><td>Gain a foundational understanding of CHP (Combined Heat and Power) technology. Explore the significance of optimum sizing of a CHP plant in a building context.</td></tr>
<tr><td>Main Contents:</td><td>a. What is CHP?
b. Types of CHP technologies and applications.</td></tr>
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	c. CHP for the buildings Sector. d. Why optimum Sizing of CHP is necessary? e. A Case Study of optimum sizing of CHP. f. Scope of CHP technology in Pakistan
Target Participants:	All Engineers registered with PEC Graduates pursuing higher education in the field of sustainable technologies
Duration:	2 hours

<p align="center" style="color:red">Activity No.3 (as per CPD Calendar-2024)</p>

CPD Title:	**Face image retrieval: new trends & techniques**
Objectives:	1. New techniques to extract features suitable for Face image retrieval 2. To understand the unsolved problems in face image retrieval 2. How to short the search space 3. How to use the concept of re-ranking effectively to retrieve face images
Main Contents:	a. Evolution of face recognition b. Deep models suitable for feature extraction c. Multistage re-ranking d. Face generation for underlying task(s)
Target Participants:	Faculty/scholars interested in exploring latest trends in artificial intelligence, machine learning, deep learning, image processing, computer vision.
Duration:	2 hours
CPD Title:	Face image retrieval: new trends & techniques

<p align="center" style="color:red">Activity No.4 (as per CPD Calendar-2024)</p>

CPD Title:	**Industrial 4.0 & IOT**
Objectives:	• Define and explain general concept of industrial internet of things. • Explain the Smart Physical Systems and Their Security • Recognize the basic differences between IoT and IoT applications with examples
Main Contents:	a. Introduction: Sensing & actuation, Communication & Networking

	b. Industry 4.0: Globalization and Emerging Issues, 4th Revolution c. Industry 4.0: Cyber Physical Systems and Next Generation Sensors, d. Collaborative Platform and Product Lifecycle Management, Augmented Reality and Virtual Reality, Artificial Intelligence, Big Data and Advanced Analysis e. Cybersecurity in Industry 4.0, Basics of Industrial IoT: Industrial Processes, Industrial Sensing & Actuation, Industrial Internet Systems. f. Industrial IoT: Business Models and Reference Architecture: g. Industrial IoT: Big Data Analytics and Software Defined Networks h. Industrial IoT- Application Domains
Target Participants:	Engineers, industrial professionals, Computer Science
Duration:	2 Hours

Activity No.5 (as per CPD Calendar-2024)	
CPD Title:	**Understanding Optimization and Protocols Evaluation in Wi-Fi Networks**
Objectives:	• To understand the working of traditional Wi-Fi networks. • How modern Wi-Fi networks differ from traditional Wi-Fi networks. • How programmability be induced in traditional Wi-Fi Networks. • How we see the future of Wi-Fi Networks.
Main Contents:	i. Background of IEEE 802.11 (Wi-Fi) Networks j. Motivation to Improve the traditional Wi-Fi Networks k. How software defined networks are better than traditional Wi-Fi networks l. How optimization in traditional Wi-Fi networks is achieved. m. What simulation, emulation and testbed solutions are available? n. What performance evaluation is achieved. o. Concluding remarks and future research directions

Target Participants:	Participants having background knowledge of Electronics, Telecommunications, Computer Systems Engineering, Software Engineering and Computer Science and IT.
Duration:	1:30 HRS

Activity No.6 (as per CPD Calendar-2024	
CPD Title:	Investigating Alzheimer's Disease (AD) diagnosis using Natural Dialogues
Objectives:	• Examine the effectiveness of utilizing natural dialogues for the diagnosis of Alzheimer's Disease (AD). • Analyse interaction patterns within dialogues to identify potential indicators or patterns associated with AD diagnosis. • Develop computational models (less invasive, less expensive) for processing natural dialogues to assist in the diagnosis of Alzheimer's Disease.
Main Contents:	a. Introduction b. Medical diagnosis c. State of the art NLP methods d. Conversation Analysis e. Machine learning and Deep learning-based AD diagnosis f. Future directions
Target Participants:	Scientists, Researchers and Faculty
Duration:	2 Hour

Activity No.7 (as per CPD Calendar-2024	
CPD Title:	Climate change and Sustainable Energy
Objectives:	To discuss the changing dynamics of power generation with climate change and how it has impacted Pakistan.
Main Contents:	a. Climate change and factors causing climate change b. Carbon emissions due to power generation c. Impacts of climate change on Pakistan's energy policy d. Impacts of climate change on National Grid Operations in Pakistan e. Future of energy; Sustainable solutions

Target Participants:	Professional Engineers, academics and researchers
Duration:	2 hours