

	Module	Description	Host	Presentation dates
Overview	Smart Grid Technology Overview	Introduction to the key concepts of the Smart Grid, including information and communication technologies and their application and integration.	SU	26 Feb - 01 Mar 2024
	Power System Analysis	The fundamentals, models and applications of power system load flow, short-circuit analysis, stability and control.	WITS	To be confirmed
	Overview of the Power Plant Industry	The course establishes a balanced understanding of the global energy domain.	UCT	25 - 29 Mar 2024
	Hydrogen in the Energy System	A systemic view of energy systems with a specific focus on hydrogen.	SU	08 - 12 April 2024
Technology	Advanced Photovoltaic Systems	Fundamentals, financial modelling, technical design, installation and maintenance of PV systems.	SU	22 - 26 Jul 2024
	Wind Energy	Fundamentals, resource and feasibility modelling, technical design, project development and grid-integration of Wind Energy systems.	SU	1 - 5 Jul 2024
	Energy Storage Systems	Fundamentals, applications, technologies, modelling and design, and economics of Energy Storage systems.	SU	29 Jul - 2 Aug 2024
	Solar Thermal Energy Systems	Fundamentals of solar thermal energy systems, specifically CSP, including concentrator principles and thermal storage applications.	SU	4 - 8 Mar 2024
	Smart Grid Communications	Communications fundamentals, applications and technologies within the context of the power system.	SU	12 - 16 Aug 2024
	Bioenergy	The practical and commercial application of various technologies for biomass conversion into bio-energy, ranging from bio-fuels to electricity.	SU	3 - 7 Jun 2024
	Hydro and Ocean Energy	Ocean and hydro energy associated with the elevation or movement of water, including resources, conversion technologies, and implementation.	SU	10 - 14 Jun 2024
	Renewable Energy Systems	The scientific, engineering, resource and integration aspects of various types of renewable energy systems at introductory level.	SU	26 Feb - 01 Mar 2024
	Green Hydrogen Technology	The available and developing technologies used for green hydrogen production, distribution, storage and end-use.	SU	13 - 17 May 2024
	Power System Data Analytics	The data analytics life cycle applied to solve power system problems, with special focus on demand and renewable energy short-term forecasting.	SU	27 - 31 May 2024
Implementation & Integration	Long-term Power System Planning	The principles and techniques informing optimised long-term generation capacity planning, and transmission expansion planning.	SU	15 - 19 Jul 2024
	Distribution Customer Concepts	Understanding the concepts inherent in the end use of electricity, including load modelling, pricing, technologies, and mini- and microgrids.	SU	6 - 10 May 2024
	Distribution Network Planning and Operations	Distribution network technical planning fundamentals, codes and regulations, and applications, and protection and technical operations.	NWU	To be confirmed
	Power System Operations	The fundamentals of power system operations in a future with high shares of VRE, and the processes and technologies that support such operations.	SU	11 - 15 Mar 2024
	Power System Flexible Operations	Operational power system flexibility optimisation where technical systems and electricity markets interact, and flexibly operating power plants.	UCT	To be presented in 2025
	Green Hydrogen Project Engineering	A course focussed on the principles of designing, funding and successfully implementing fit-for-purpose projects based on green hydrogen.	SU	9 - 13 September 2024

Week start (Monday)	Week end (Friday)	Module	CPD registration deadlines
12/Feb/2024	16/Feb/2024		
19/Feb/2024	23/Feb/2024		
26/Feb/2024	01/Mar/2024	Smart Grid Technology Overview	12/Feb/2024
26/Feb/2024	01/Mar/2024	Renewable Energy Systems	12/Feb/2024
04/Mar/2024	08/Mar/2024	Solar Thermal Energy Systems	19/Feb/2024
11/Mar/2024	15/Mar/2024	Power System Operations	26/Feb/2024
18/Mar/2024	22/Mar/2024	Week with public holiday	
25/Mar/2024	29/Mar/2024	Week with public holiday Overview of the Power Plant Industry (UCT)	11/Mar/2024
01/Apr/2024	05/Apr/2024	Week with public holiday	
08/Apr/2024	12/Apr/2024	Hydrogen in the Energy System	25/Mar/2024
15/Apr/2024	19/Apr/2024		
22/Apr/2024	26/Apr/2024		
29/Apr/2024	03/May/2024	Week with public holiday	
06/May/2024	10/May/2024	Distribution Customer Concepts	22/Apr/2024
13/May/2024	17/May/2024	Green Hydrogen Technology	29/Apr/2024
20/May/2024	24/May/2024		
27/May/2024	31/May/2024	Power System Data Analytics	13/May/2024
03/Jun/2024	07/Jun/2024	Bioenergy	20/May/2024
10/Jun/2024	14/Jun/2024	Hydro and Ocean Energy	27/May/2024
17/Jun/2024	21/Jun/2024	Week with public holiday	
24/Jun/2024	28/Jun/2024		
01/Jul/2024	05/Jul/2024	Wind Energy	17/Jun/2024
08/Jul/2024	12/Jul/2024		
15/Jul/2024	19/Jul/2024	Long-term Power System Planning	01/Jul/2024
22/Jul/2024	26/Jul/2024	Advanced Photovoltaic Systems	08/Jul/2024
29/Jul/2024	02/Aug/2024	Energy Storage Systems	15/Jul/2024
05/Aug/2024	09/Aug/2024	Week with public holiday	
12/Aug/2024	16/Aug/2024	Smart Grid Communications	29/Jul/2024
19/Aug/2024	23/Aug/2024		
26/Aug/2024	30/Aug/2024		
02/Sep/2024	06/Sep/2024		
09/Sep/2024	13/Sep/2024	Green Hydrogen Project Engineering	26/Aug/2024