



# Credit Transfer Matrix

## APT Electric Power System Program Transfer Matrix

AS Degree Program		Proficiency Certification Program	
<b>CORE</b> PWR100 Electric Power Systems Operations PWR102 DC & AC Circuits with Print Reading PWR104 Power Plants PWR105 Substations PWR115 Distribution Systems	<b>BASE</b> PC100 Electric Power System Fundamentals (24 hrs) PC101 Power System Equipment (16) PC102 Distribution Systems (24) PC103 Safety Grounding and Switching (16) PC104 Protection Principles (16) PC105 Monitoring & Control (16)		
<b>ELECTIVES</b> PWR106 Transmission Lines PWR110 Industrial Safety and Grounding PWR120 Electric Metering PWR125 Advanced Metering PWR130 System Protection PWR135 Energy Management and SCADA PWR200 Power System Planning Reliability and Security PWR205 Generation and Interconnected Systems Operations PWR230 Emergency Operations and Restoration PWR240 Telecommunications for Electric Utilities PWR250 High Voltage Protection for Telecommunications PWR270 Solar Photovoltaic Systems PWR272 Adv Solar PV-Thermal Indust Commi & Grid Systems PWR275 Wind Power Systems EXP280 Independent Study EXP290 Internship	<b>ELECTIVES</b> PC110 Power Calculations (16) PC115 Electrical Print Reading (16) PC120 Power Plants (16) PC130 Power Quality (16) PC140 Maintenance Test Instruments & Procedures (16) PC150 Communications & Telecommunications (8) PC200 Principles of Generation Operations (24) PC205 Monitoring & Control - II (16) PC210 Power System Planning (16) PC215 Inter-connected Systems (16) PC220 Reliability & Security (including Cyber Security) (16) PC230 Voltage Control & Collapse (16) PC240 Emergency Operations (16) PC245 Emergency Operations - II (16) PC250 Situational Awareness (8) PC255 Situational Awareness - II (8) PC260 Utility Telecommunications Systems (16) PC265 High Voltage Protection for Telecommunications (16) PC370 Solar PV Systems (40) PC373 Solar PV for Industrial and Commercial Systems (24) PC375 Wind Power Systems (40) PC382 Net Zero for Green Energy Buildings (24) PC290 NERC System Operator Certification Exam Preparation (40)		

AS DEGREE COURSES		Transfer Credit Equivalents	
PWR100 Electric Power System Operations Special Project	PC100 Electric Power System Fundamentals (24), and Special Project	PC COURSES (hrs)	
PWR104 Power Plants Special Project	PC120 Power Plants (16), and Special Project		
PWR105 Substations	PC101 Power System Equipment (16), and PC140 Maintenance Test Instruments & Procedures (16), and PC110 Power Calculations (16) or Special Project		
PWR106 Transmission Lines	PC101 Power System Equipment (16), and PC230 Voltage Control & Collapse (16)		
PWR110 Industrial Safety and Grounding	PC103 Safety Grounding and Switching (16), and Special Project		
PWR115 Distribution Systems	PC102 Distribution Systems (24), and PC130 Power Quality (16) or Special Project		
PWR120 Electric Metering	PC140 Maintenance Test Instruments & Procedures (16), and PC110 Power Calculations (16) or Special Project		
PWR130 System Protection	PC104 Protection Principles (16), and Special Project		
PWR135 Energy Management and SCADA	PC105 Monitoring & Control (16), and PC205 Monitoring & Control - II (8)		
PWR200 Power System Planning Reliability and Security	PC210 Power System Planning (16), and PC220 Reliability & Security (including Cyber Security) (16)		
PWR205 Generation and Interconnected Systems Operations	Two out of Three PC200 Principles of Generation Operations (24) PC115 Inter-connected Systems (16) PC230 Voltage Control & Collapse (16)		
PWR230 Emergency Operations and Restoration	PC240 Emergency Operations (with restoration) (16), and PC245 Emergency Operations - II (with restoration) (16), and PC250 Situational Awareness (8), and PC255 Situational Awareness - II (8)		
PWR 270 Solar Photovoltaic Systems Special Project	PC370 Solar PV Systems (40), and Special Project		
PWR 275 Wind Power Systems Special Project	PC275 Wind Power Systems (40), and Special Project		
PWR240 Telecommunications for Electric Utilities	Two out of Three PC260 Utility Telecommunications Systems (16) PC265 High Voltage Protection for Telecommunications (16) PC150 Communications & Telecommunications (8)		