LSP CPE Security Certified Personnel

LSP 8300 Distributed Energy Resources (der) in the Electrical Grid (2-0) **2 crs.**
Introduces the concept of Distributed Energy Resources (DER) in the electrical grid and the standards that inform DER deployment. Requires no prior knowledge of the topic and is intended for students who are interested in exploring technical (e.g. engineering, chemistry, software), professional (e.g. architecture, marketing, finance), and operational (e.g. accounting, logistics) careers in the rapidly growing distributed energy industry. Gains a foundation in the basic electrical concepts that are needed to understand the more detailed considerations associated with DER in the grid. Provides detailed insights into topics concerning DER interconnection standards and regulations, DER networking standards like IEEE 2030.5, and cybersecurity. Key DER technologies such as solar, wind, energy storage, and electric vehicles are also covered in more depth.

LSP 8301 Cybersecurity in the Smart Energy Environment (2-0) **2 crs.**
Teaches that with increasing numbers of IoT devices being connected to the Internet, cybersecurity has become a vital requirement for the safe, reliable, and secure operation of those devices. Introduces cybersecurity topics in general: what is the purpose cybersecurity, what are the cybersecurity threats, and how to protect against them. Examines in detail some key components of cybersecurity like encryption and the Public Key Infrastructure (PKI). Analyzes and applies cybersecurity specifically in the Smart Energy DER use case and the IEEE 2030.5 communication standard.

LSP 8302 Solar Energy and Networking Basics (2-0) **2 crs.**
Provides overview of data communication technologies, deployment techniques, and regulatory considerations associated with photovoltaic (PV) module rapid shutdown solutions. Gives a foundation in data communication concepts associated with PV module communication solutions and their regulated operating environments. Examines the evolution of DER networks based on the IEEE 2030.5 standard, how this evolution introduces cybersecurity risks, and how these risks can be mitigated. Students will acquire a foundation in the basic cybersecurity concepts that are needed to understand the more detailed considerations associated with securing DER in the grid.

LSP 8500 Certified Information Systems Security Professional (2-1) **2.5 crs.**
Teaches all eight CISSP Common Body of Knowledge (CBK) domains. Validates knowledge by meeting the necessary preparation requirements to qualify to sit for the CISSP certification exam. Additional CISSP certification requirements include a minimum of five years of direct professional work experience in two or more fields related to the eight CBK security domains, or a college degree and four years of experience.
Recommended: CompTIA Network+, Security+, or equivalent experience.