## 2025 Education Topics and Sub-topics Ideas

| Broadband | Emerg Tech | Enterprise IT | Fiber |
|---|---|---|---|
| Legal/Regulatory | AI | Ransomware & Incident Response | Best Practices Fiber Connectivity |
| Access to State/Federal Funding | AI - Latest Technology Advancements | Enterprise Risk Management | Fiber Lifecyle |
| Utility Middle Mile Opportunities | Grid Mod next 5 years | Core Essentials for Ent IT | 1a.30 years fiber cable use BPA |
| Broadband Systems in 1,3,5 years | Use of Drones (fiber & towers) | 1. Budgeting | Emergency Storm Restoration |
| | High Speed Real-time data systems | 2. Technology Strategic Basics | Fiber Resiliantcy |
| | | 3. Monitoring | Fiber Leasing |
| | | 4. Manage | New Fiber Trends 1,3,5 years out |
| | | 5. Maintain | Fiber Standards |
| | | Customer Inform Systems | SM Fiber Acceptance testing for customer leases |
| | | 1. CRM Customer Record Manage | Fiber to the meter - Advanced AMI |
| | | 2. Customer Marketing | Underground construction considerations for building out fiber |
| | | Vegetation Management | |
| | | Enterprise Resource Manage | |
| | | Digital Enablement | |
| | | Network Management | |
| | | Data Analytics | |
| | | Hybrid Cloud Modern -- IBM | |
| | | Cloud Base Data/Computing | |

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| OT | PLTE | Security | Telecom Sys |
|---|---|---|---|
| DER Interoperability | 3GPP | NERC Reliability Standards | Limited data rates of legacy systems |
| DER & new grid devices require | PLTE Security | NERC CIP Standards | Consolidate disparate comm networks |
| Substation SCADA & Relaying Network Requirements | Standards | Emerging Threats and Mitigation Strategies | Juggling Capacity & latency needs of |
| Protection & Control | PLTE 101 | Integrated Security | different applications across one network |
| Protective Relaying | PLTE Outdside the Core | Security Innovations and Technologies | Business versus Operation Networks |
| Distributive Tech & Solutions | Private PLTE vs Commercial | Incident Response and Management | Rising Costs - labor & materials, leased lines |
| Where are Substation networks headed 1,3,5 years | PLTE Spectrum for Utilities | Data Privacy and Protection | Satellite Tech & Applications |
| Protecting OT Networks (Reliablity & | PLTE: Start to Finish | | Packet Transition -- MPLS |
| OT Network Switch/Router Patch Update Program | Utility PLTE use cases | NERC where are they going | Securing Telecom Backbone networks |
| AMI 2.0 and Grid Edge Intelligence | Penetration security testing PLTE | 1. 6 GHz wireless | Backbone Resilientcy |
| Substation-Substation communications | Capacity planning of PLTE networks | 2. Cloud based apps | MPLS 101 |
| | | Cybersecurity integration with OT | Connectivity Solutions |
| | | physical security | Communication Modeling |
| | | | Real Time Monitoring |
| | | | Network Management Systems training |
| | | | Common system level design mistakes |
| | | | MPLS Networking |
| | | | Contingency communications post-disaster response |
| | | | Network/NOC Management systems |

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| UtiliSite | Wireless | Other |
|---|---|---|
| Mutual Aid for Communications | Challenge to Secure Spectrum | Rotational Loadshedding |
| Tower Standards & Changes | Geographic available & cost | Distributed Generation |
| Pole Attachment Future | Lack of spectrum Bandwidth | MicroNukes |
| Telco & User Agreements- Fiber & Wireless | Microwave long haul spectrum bands | Renewables |
| Utility Technology & Sustainability | 1a. Pluses and Minuses of each | Quantum Computing |
| TIA inspections on antenna structures | Resilience of cell networks | Venture Capital Investments in utility for UTelco opportunities |
| | Spectrum of uses for Satellite networks for Utilities | Virtual Power Plants/Companies |
| | 450 MHz Availability and uses | Project Management for Utility Industry |
| | Future: Wireless 1,3,5 years out | Information about electric storage |
| | 5G Telecom Ecosystem | Management |
| | Advanced LMR information | |
| | Microwave design in high noise environment | |
| | Basic radio communications for beginning or new radio technicians. | |
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