



MARCH 13-16, 2017 | HOUSTON, TEXAS

Automation & Power World

Connect. Collaborate. Outperform.

Curriculum programs and tracks

Curriculum programs and tracks for APW 2017 have been released. Thousands of engineers, managers, executives and ABB technical experts will converge in Houston, Texas, for this premiere event, March 13 – 16, 2017. Save the date now!

Program name	Track name	Track abstract
Plenary Sessions	Chemical, Oil & Gas	Operating conditions today evolve at an ever-increasing pace. Tight capital budgets, digitalization and other technology advances, shifts in workforce demographics, and the need to manage project schedules are just a few of the challenges facing companies in the oil, gas and chemical industries. Experts from operating companies, analysts, consultants, EPC companies and technology providers will discuss how to manage cost, schedule and risk in order to stay competitive in any market cycle.
	Food & Beverage	Food and beverage manufacturers manage many complexities in parallel: Uncompromising safety, hygiene and traceability as well as a proliferation of new products and packaging options. Simultaneously, changing demographics and increasing consumer awareness about sustainability and nutrition mean companies must continually find ways to meet customer expectations while improving efficiency. Join these plenary sessions to hear from industry experts on how to improve food safety, traceability and asset intensity to produce safe, high quality goods in a sustainable and cost efficient way.
	Infrastructure	Urbanization, big data, and energy efficiency initiatives are all playing a role in the development of smarter cities. From mission critical facilities to public transportation and building design, expectations for reliable, efficient and sustainable operations are greater than ever. Join these sessions to discuss industry trends and gain insights on the future of smart cities.
	Manufacturing Industry	Being a manufacturer is a source of pride for many companies and their employees. However, there are many challenges to being an efficient producer, including regulatory compliance, aging workforces and assets, automation and technology options, and global competition. Learn from industry experts on how to become a more productive manufacturer in a sea of ever changing opportunities and requirements.
	Process Industry	Automation is the key to our industrial future. The next generation will rely on improvements and enhancements being made now to plant processes, manufacturing sites, mills and production facilities. Join us as we discuss how the latest capabilities are being implemented today by forward-thinking process industry leaders.
	Power Generation	Power producers develop deep ties with suppliers who help them operate their power plants more efficiently, reduce costs, ensure plant/operator safety, secure their systems and adhere to tightening environmental regulations. These sessions feature power generators and industry experts discussing these issues along with best practices in developing well-integrated partnerships with suppliers. Sessions begin with a presentation, followed by a panel discussion and conclude with questions taken from the audience.
	Renewables	Wind, solar and other renewable energy sources increasingly are being used across the US to provide a cleaner, more economical source of energy. Today, renewable energy sources make up 10% of the energy consumption in the US and that percentage will continue to rise. However, renewable energy is not without challenges. Join these plenary sessions for discussions on how we can overcome these challenges to enable greater adoption of renewables.
	Transmission & Distribution	A technological revolution has begun in an industry that traditionally has been content with slow and steady growth. Utilities are searching for answers on how to deal with a new energy landscape that encompasses comprehensive regulation, climate change, rapidly growing distributed energy resources, aging infrastructure, physical and cyber threats, and a changing workforce. Join this three-part series of presentations and panel discussions for insights on the most critical issues facing the electrical transmission and distribution business.

Business Forum	Business Trends & Professional Development	This track covers a wide range of issues, from how the global economy affects our business to public speaking with passion to get buy-in. If you're concerned about understanding cyber security, managing workforce retirements or leading change successfully, you'll find answers in these twelve rich and exciting sessions that will inspire new thinking and action.
	Cyber Security: manage changing risks successfully	Recent advancements in power and automation technology such as the Internet of Things, Services and People promise great operational benefits through enhanced data collection and increased connectivity beyond the current boundary of industrial control systems. However, these benefits also come with higher exposure to cyber security threats, making cyber security measures a vital necessity. In this track we will show how you can successfully manage cyber security risks while still taking full advantage of technological advancements.
	Effective Project Management	Many companies have learned that investing time, money and resources to build organizational project management expertise results in lower costs, greater efficiencies, improved customer and stakeholder satisfaction, and greater competitive advantage. This track features a compilation of case studies, trends and methodologies illustrating best practices in project management.
	Peer-to-Peer Discussions	Join us to talk about hot topics in your industry. You won't want to miss these lively discussions moderated by ABB staff and independent experts. Make new contacts and talk with your peers during these special educational and networking sessions. Be sure to arrive early as seating is limited.
	Innovations in Processes and Technology	Decision-making and cost effective operation in the plant of the future will be based on information provided by solutions built on the Internet of Things, Services and People. These case studies and panel discussions will explore current and future trends in innovative technologies, or offer a challenge/solution case study.
	Enhanced Process Performance & Efficiency	In order to stay competitive, operations must continually reduce cost, boost productivity and cut downtime. These customer case studies and panel discussions will discuss successes in these areas and how to overcome challenges in discrete and process environments.
	Process Safety	A business is only as good as its security practices and safety culture. These customer case studies or panel discussions will cover trends in product safety, employee safety or security in the systems and facilities that produce those goods.
	Advanced Services and Life Cycle Strategies	How do you get payback from preventative maintenance? Even with aging assets, unplanned downtime, and unfavorable site conditions you can realize operational improvements. These customer case studies and panel discussions will cover trends in proactive maintenance programs as well as real-life solutions.
Applications & Best Practices: Infrastructure	Specialized Solutions for Unique Industries	Every industry faces its own unique challenges, so the solutions applied must be designed accordingly. These customer case studies and technology presentations will cover technologies to address the unique challenges faced by the marine, metals and pulp & paper industries.
	Mission Critical Facilities	As data management needs have grown, data centers have expanded from one server, to several servers and eventually to multiple server rooms. This industry has evolved from a commercial application to an industrial one, currently with 12 million servers operating within 3 million data centers in the US alone. This track will discuss a smarter infrastructure for the industrialized data center.
	Smart Transport & Infrastructure	Sustainable transportation planning is critical to improving energy, health, safety and infrastructure costs, as well as addressing national energy security and economic revitalization concerns. This track will cover technologies such as vehicle electrification, rail and public transportation, and will present strategies for facilities, fleets and smart cities.
Applications & Best Practices: Utilities	Aging Infrastructure & Asset Management	Aging equipment is not a short-term challenge for the electric power industry – it is a core business driver. Transformers, circuit breakers and other critical assets that have been in service well beyond their original intended working life still must continue performing for years to come. This track introduces new ways to extend the life, assess the health, and predict failure of these critical assets to achieve reliability, efficiency and regulatory goals on limited O&M budgets.
	Distributed Energy Resources & Renewables	Distributed generation provides many benefits, such as addressing local demand growth, reducing infrastructure costs and improving power reliability. However, there are also unintended consequences and operating challenges. Join us as we uncover best practices to maximize grid stability and reliability, as well as mitigate the technical challenges associated with increasing renewable penetration and integrating distributed energy resources.
	Grid Modernization & Optimization	Unpredictable weather, changing regulations, and the integration of distributed energy resources are dramatically changing the power landscape. While new technologies can help, they can be complicated to navigate. Attend these sessions on grid modernization and optimization to learn how to implement hardware and software solutions for improved reliability and operations for today's evolving grid.

Applications & Best Practices: Utilities continued	Reliability & Resiliency	The world is more dependent than ever on reliable electric power. That makes the risk of a natural disaster or terrorist attack on the grid could greater than it's ever been, in economic, environmental and public safety terms. Join industry experts as they share insights on how to anticipate, mitigate and recover from major storms or attacks. Discover how technology, automation, and strategic repair/recovery strategies can lead to more reliable systems, less downtime and improved customer satisfaction.
	Safety & Regulatory Compliance	Worker safety, system reliability, security, emissions – and even the efficiency of certain pieces of equipment – are subject to enforceable performance standards. Attend these informative sessions to learn more about the latest regulatory requirements and how to leverage technology to comply with new standards to protect your employees, equipment and bottom line.
Technological Advancements	Discrete Automation & Motion Innovations	Innovation is a core value at ABB. We create and support a comprehensive range of products, systems and services that increase energy efficiency, reliability and productivity for our industrial, utility and infrastructure customers. We also dedicate around \$1.5 billion every year to R&D activities driven by our 8,500 technologists in four divisions and seven corporate research centers. The Technological Advancements portion of the virtual conference curriculum features the latest achievements to help your company be more safe, productive and competitive.
	Electrification Products Innovations	
	Power Grids Innovations	
	Process Automation Innovations	
Interactive Technical Training	Distribution Automation	The Distribution Automation track will focus on the many benefits of IEC61850, including protection reliability and security, relay interoperability, ease of system expansion and cost savings. Individual sessions will cover key topics such as GOOSE versus mirrored bits, automatic transfer schemes and bus protection, and include hands-on training for basic and advanced protection and control schemes.
	Drives, PLCs, Servos & Motion	This track provides technical training on drives, PLCs, and servo & motion devices. These sessions will ease your familiarization with machinery drives, standard industrial drives, PLCs and servo & motion products through hands-on practice problems and scenarios.
	Electrification Product Solutions	ABB's Electrification Products division is a leading provider of a full range protection, control and measurement solutions. In these sessions, you'll get the latest on NEC code changes, innovative safety solutions, hands-on grounding and bonding applications, and an overview of the industry's best control panel solutions.
	Essential Automation	This track covers automation essentials. Sessions include: Introduction to programming for Compact Control Builder v6 for AC800M; understanding Panel Builder 800 to communicate with AC800M using MMS; compact HMI concepts and design; and an introduction to Freelance Lite Configuration and design for small scale DCS.
	Measurement Made Easy	This track features hands-on training for common instrumentation devices. You'll learn how to select, configure and maintain these instrumentation devices to achieve the greatest ROI for your plant or mill.
	Medium Voltage Services	This track covers several key industry topics for medium-voltage equipment. Common Breaker Maintenance & Monitoring, the new One-Fit retrofit solutions, and Arc Flash mitigation upgrades are each covered in individual sessions.
	Solar Excellence from Sun to Socket	Join us for an interactive training series that includes installation tips and tricks, safety considerations, inverter selection for design excellence, elite software monitoring solutions, utility interconnections and code compliance. Gain strategic insight and learn valuable technical tips that will help create a safer, more cost effective and bankable solar installation.
	Symphony Plus	Symphony Plus hands-on technical training series will introduce you to the three fundamental components of a DCS system: hardware, engineering tools, and operator console. The sessions are a subset of ABB University's standard in-center classes with a combination of lecture and hands-on labs. Also included in this track is a session on cyber security in a Symphony Plus environment.
	System 800xA Extended Automation	This 800xA hands-on technical training series will introduce you to the three fundamental components of a DCS system: hardware, engineering tools, and operator console. The sessions are a subset of ABB University's standard in-center classes with a combination of lecture and hands-on labs. Also included in this track is a session on cyber security in an 800xA environment.
	Wireless Communications	ABB's wireless product offering has expanded beyond broadband mesh to include narrowband point-to-point (PTP)/point-to-multipoint (PTMP), narrowband mesh, and comprehensive communication network management. This track offers training sessions for ABB's TropOS, TeleOS, ArcheOS and SuprOS products.