

Professional Development Seminar Series (PDSS) Overview Guide

EMPOWERING ENGINEERS. ADVANCING EXPERTISE.
POWERING THE FUTURE.





Welcome

Elevate Your Knowledge in Power Generation with Generac's Professional Development Seminar Series

Discover extraordinary opportunities for knowledge, growth, and professional development designed specifically for practicing engineers like you. Generac understands the importance of staying at the forefront of the ever-evolving power generation industry. That's why we have created a comprehensive series of seminars that empower you with the latest technologies, sizing techniques, codes and standards, and reliable design characteristics surrounding power systems. Continuous learning is the key to unlocking new horizons and elevating your expertise.

Participate in Generac's PDSS and open doors to unparalleled learning experiences. Our expert-led sessions provide invaluable insights and practical exercises that deepen your understanding of current technologies and best practices. Whether you are a project manager, power systems designer, or consulting and specifying engineer, these seminars are tailored to your unique needs and aspirations.

By attending Generac's PDSS, you gain more than just knowledge. Engage in discussions, share experiences, and network with instructors who are industry experts and are driven to help you make a difference in your projects.

Embark on this educational journey and reap a multitude of benefits. Expand your expertise and gain a competitive edge in the industry. Stay updated with the latest trends, advancements, and regulations that shape the power generation landscape. Earn valuable continuing education credits, demonstrating your commitment to professional growth and excellence.

Generac is excited to help propel you towards mastery and success in the power generation industry. Let Generac's PDSS ignite your passion for knowledge and empower you to make a lasting impact.

Welcome to PDSS!

Registration Made Easy

Join the Power of PDSS

For many projects, the reliability of the power system is crucial to facility operations. On occasion, generators are installed without a thorough understanding of system capability, functionality, reliability and site-specific load requirements.

Generac's Professional Development Seminar Series was designed for engineers who wish to expand your understanding of current technologies, sizing, codes & standards, switching technologies and reliable design characteristics surrounding power systems.

By completing a course developed by Milwaukee School of Engineering (MSOE) and Generac Power Systems, participants who successfully complete an individual seminar and achieve

a passing score on the associated final assessment will be awarded Professional Development Hour (PDH) or Continuing Education Unit (CEU) credit as shown on the next page.

Joining a course in Generac's Professional Development Seminar Series is simple and hassle-free. To get started, visit our landing page or scan the QR code below. There, you can access the detailed course descriptions, request more information, and find a seminar course that aligns with your professional goals.

Don't miss out on this opportunity to advance your engineering career. Discover how our power design seminars can help you and your team, today!

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As one of the instructors, I can confidently say that the PDSS courses offered by Generac are unparalleled in the industry. Our courses go beyond textbook knowledge, delving into the intricacies of power generation systems and providing practical solutions to real-world challenges. Through in-depth discussions and case studies, we empower practicing engineers to excel in their roles and stay ahead of the curve.”



John Sharpe

Director, National Power Solutions at Generac



Request more info today!
[generac.com/PDSS](https://www.generac.com/PDSS)

PDSS Courses

Unlock Expertise and Stay Ahead of the Curve

We provide you with transformative learning experiences that will elevate your expertise and empower you to excel in the dynamic field of power generation. Our seminars offer a range of valuable learning outcomes and are led by industry experts who bring their wealth of knowledge and real-world insights to the classroom.

Course Lengths:	CEUs	PDHs
45 min	0.1	1.0

GPS-300-Generator Sizing (Part 1)

Master the art of sizing generators for entire buildings. Learn to use historical data, comply with NEC requirements, and manage load sequencing.

GPS-305-Generator Sizing (Part 2)

Delve into isolating loads on a generator, especially non-linear harmonic-producing loads and variable frequency drives. Understand their impact on generator sizing.

GPS-310-Generator Switching (Part 1)

Explore automatic transfer switches (ATS) and make informed decisions on their features and configurations.

GPS-315-Generator Switching (Part 2)

Compare ATS technologies, from breakers to contactors. Understand 2 vs. 3 position contactor mechanisms and the importance of in-phase vs. delay-in-neutral operation.

GPS-320-Paralleling Concepts

Understand how to implement integrated paralleling technology. From momentary closed transition to peaking shaving with the grid, learn the intricacies of synchronization and system sequencing.

GPS-325-Paralleling Implementations

Compare switchgear and integrated paralleling implementations. Explore medium voltage solutions using low voltage paralleling and transformers.

GPS-330-Reliability Concepts

Explore various reliability concepts essential for equipment evaluation and design. Understand the impact of human error and equipment aging on overall system reliability.

GPS-340-National Electrical Code® (Part 1)

Dive into the NEC with a focus on generators. Explore topics like cabling, sizing, start-up, transient limitations, alarming, and instrumentation.

GPS-345-National Electrical Code® (Part 2)

Scrutinize the NEC with a focus on application and integration. Cover disconnects, circuit separation, selective coordination, grounding, and more.

GPS-350-UL & NFPA Standards

Introduce various UL standards impacting generators and power switching. Explore NFPA standards related to health care, life safety, and fire pumps.

GPS-355-NFPA 110

Explore the requirements of NFPA 110 for Emergency and Standby Power Systems. Evaluate fuel options, equipment placement, and commissioning requirements.

GPS-360-Generator Provisioning

Explore engine-generator configurations and optional items. Discuss code-compliant options, industry-standard configurations, and the need for custom-designed equipment.

GPS-370-Engines

Understand the operation and ratings of generator engines. Explore differences between diesel and natural gas engines, transient performance, and emission ramifications.

GPS-375-Alternators

Dive into the operation and ratings of genset alternators. Cover alternator construction, temperature rise, motor starting performance, and impact on non-linear load harmonic performance.

GPS-380-Controls (Single Generator)

Grasp the role of genset controls in meeting application needs. Understand control functions for engine speed, fuel inlet, emissions, monitoring, data logging, and remote communication.

GPS-385-Controls (Parallel Generation)

Learn additional controls needed for paralleling generators. Understand synchronizing, load-sharing, protection, and sequencing functions. Consider standalone and integrated solutions.

GPS-400-Genset Fuel (NG vs. Diesel)

Explore various aspects of generator fuel, emphasizing the growth of natural gas generators. Evaluate engine technologies, reliability, and the impact of demand response programs.

GPS-410-Genset Natural Gas Piping Design

Discuss generator gas piping design essentials for adequate gas flow. Learn guidelines for sizing the gas service, selecting pressure regulators, and minimizing pressure drops.

NEW COURSES

GPS-420-Battery Energy Storage System Concepts

Explore energy storage technology, power output vs. energy content, and utility tariff conditions. Understand financial viability and practical use cases for Battery Energy Storage Systems.

GPS-425-Battery Energy Storage System Implementation

Delve into battery technology, performance ratings, balance of plant components, and one-line diagram use cases. Understand how Battery Energy Storage Systems improve on-site distributed generation.

Benefits of PDSS Courses

01 Deepen Your Design and Implementation Proficiency:

Gain an in-depth understanding of power system design and implementation, equipping you with the skills to tackle complex projects with confidence.

02 Master the Latest Technologies and Best Practices:

Stay at the forefront of the industry and technology development in power generation, battery energy storage, and hybrid power systems.

03 Navigate Codes, Standards, and Regulatory Compliance:

Develop proficiency in codes, standards, and regulatory compliance, ensuring your designs meet the highest safety and performance requirements.

04 Enhance Problem-Solving and Decision-Making Skills:

Hone your problem-solving and decision-making skills through practical exercises and real-world case studies, enabling you to address challenges with creativity and precision.

05 Expand Your Network and Collaborate:

Connect with industry professionals, build valuable relationships, and collaborate with like-minded peers, fostering a supportive network that can open doors to new opportunities.



Learn more at
[generac.com/PDSS](https://www.generac.com/PDSS)

Unlock Your Professional Potential

Power Up Your Expertise, Earn Continuing Education Credits, and Gain Industry Recognition

Earn Professional Credits

At Generac, we believe in the importance of lifelong learning and professional development. That's why our seminars offer participants the opportunity to earn continuing education credits. By successfully completing our courses, you can enhance your credentials, demonstrate your commitment to ongoing education, and stay up-to-date with industry standards.



Industry-Leading Knowledge

Investing in your professional development is a key steppingstone towards career advancement. Generac's PDSS provides a platform for you to expand your industry knowledge, sharpen your skills, and broaden your perspective. Our expert-led sessions cover the latest technologies, best practices, and industry trends, equipping you with the tools you need to excel in the power generation field. Gain a competitive edge, unlock new career opportunities, and position yourself as a leader in your field by attending Generac's PDSS.

Trust in Our Accredited Seminars

Generac's PDSS has earned recognition and affiliations from leading industry organizations. Our commitment to delivering high-quality, relevant content has been acknowledged by industry professionals, making our seminars a trusted source of knowledge and expertise. When you attend Generac's PDSS, you are investing in an educational experience that carries weight and credibility within the power generation industry.





Expand your knowledge, enhance your skills and advance your career.

Our dedicated Generac team is ready to answer your questions and provide the assistance you need. For inquiries, registration, or more information about Generac's PDSS, please don't hesitate to reach out to us.



Get in touch and take the next step at [generac.com/PDSS](https://www.generac.com/PDSS)

The PDSS is presented by...

GENERAC

Founded in 1959, Generac Power Systems is a leading manufacturer of diesel and gaseous-fueled, engine-driven power generation equipment, transfer switches, battery energy storage systems, microgrid controllers, and switchgear for industrial applications



Founded in 1903, MSOE is a private, coeducational university located in downtown Milwaukee. The university offers undergraduate and graduate degrees in areas related to engineering, business, nursing, and construction management. Theory is brought to life for students through extensive integration of laboratory experimentation.



Learn more at
[generac.com/PDSS](https://www.generac.com/PDSS)

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