GE VERNOVA

GAS POWER

CUSTOMER TRAINING

Flexible training solutions to meet your total plant needs

LET'S GET STARTED

2024 COURSE CATALOG

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KNOWLEDGE IS POWER

GE VERNOVA

GE Vernova offers comprehensive, flexible training solutions to meet your total power plant needs.

Gas Power Customer Training from GE Vernova

To operate a plant in today's intensely competitive power industry, you need special competencies. Plant personnel who have hands-on experience with the latest tools and technologies are vital to maintaining your plant's availability, reliability, and flexibility. GE Vernova's Gas Power Customer Training courses are constructed to develop your team's expertise with current content, delivered through a variety of flexible methods throughout your plant's lifecycle.

Click the tabs below for detailed brochure.

SITE-SPECIFIC COURSES

Our spectrum of over 200 high value Site-Specific courses are built—using site-specific manuals, configurations, drawings, and software (as available)—to meet your specific needs, and to develop your team's expertise. They are delivered either at your site or at one of our Gas Power global learning centers+ in the language of your choice, and on a schedule that works for you.
Courses may contain a mix of classroom learning, site walkdowns, and hands-on training.

OPEN ENROLLMENT COURSES

With technology-specific content, our Open Enrollment training offers a comprehensive selection of more than 75 English language courses for small staff or new team member training, or to expand the skills of select employees.
Your employees train at one of our Gas Power learning centers or via Distance Learning with students from around the world. Courses offer a mix of learning techniques, and may contain walkdowns and/or hands-on training.

ONLINE COURSES

A cost-effective solution for a broad range of employees, our 25-plus self-paced Online English language courses let you train your personnel anytime, anywhere, and at their own pace.
Each course ranges in duration from one to several hours, and can be started and stopped at the student's discretion.

TRAINING SIMULATOR OFFERINGS

GE Vernova offers a variety of training simulator solutions to help meet your needs—whether you require an onsite simulator tailored to your equipment or remote access to a technology-specific simulator.
These simulators are effective, convenient, and comprehensive, while posing no operational risk to GE Vernova's OEM equipment.

+*Many Site Specific courses may be available for delivery via Distance Learning upon request.*

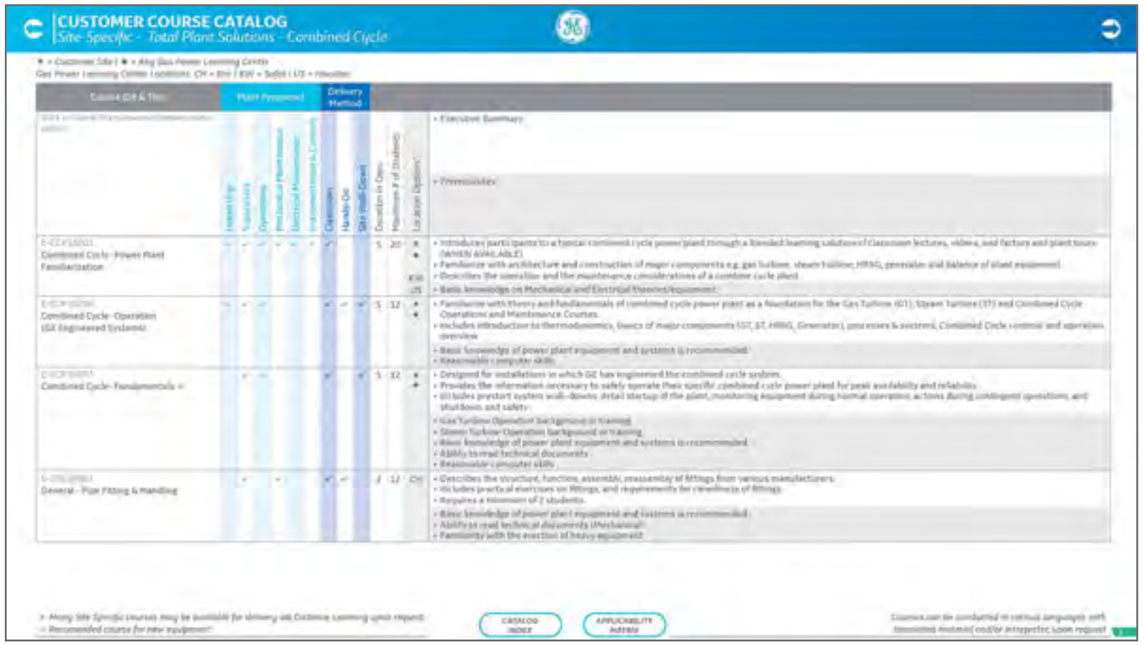
MULTI-YEAR TRAINING AGREEMENTS

Our long-term flexible training agreement is our highest value offering, which allows you to simplify your budgeting and planning efforts. This agreement entitles you to a fixed number of annual training days for GE Vernova's Site-Specific and/or Open Enrollment courses, unlimited use of all our available Online courses, plus exclusive access to our Technology-Specific Simulator. We work with you throughout your plant's lifecycle to help you select the training solutions that best meet your evolving needs.

Contact your GE Vernova representative for more information.

There are two different ways to navigate through our catalog of course offerings.
Select the method that is easiest for you below.

Navigate by course offering type...



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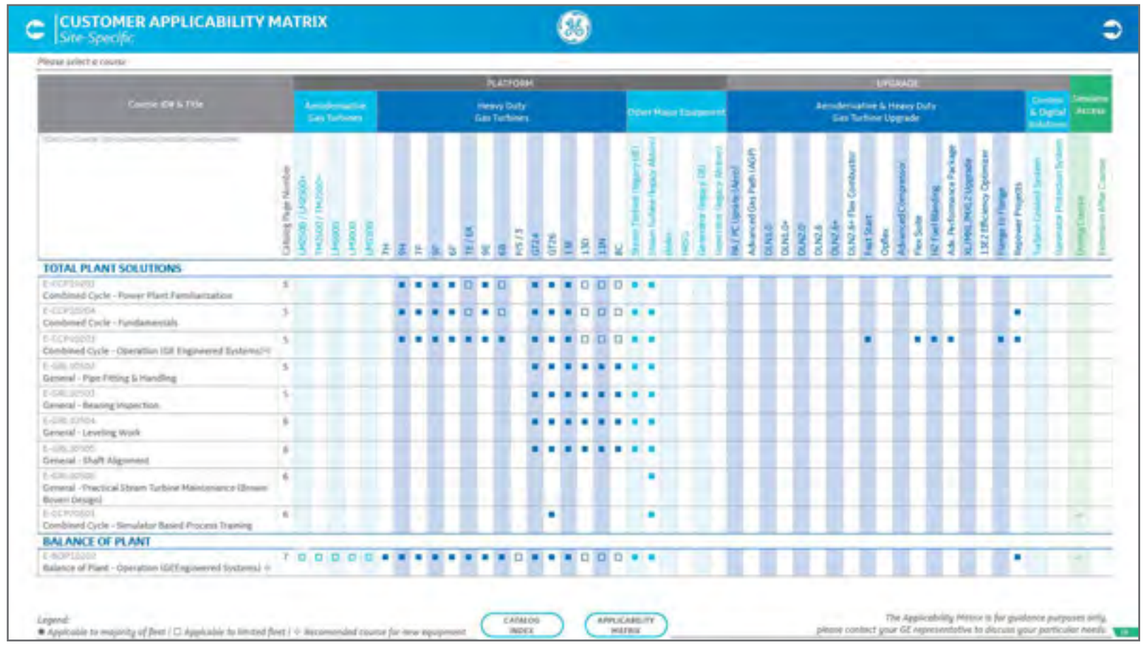

APPLICABILITY MENU
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Screenshots shown above for illustration purposes only.

Please select a course category.

SITE SPECIFIC AT CUSTOMER SITE✦ OR GAS POWER SERVICES LEARNING

OPEN ENROLLMENT AT LEARNING CENTER AND INSTRUCTOR LED DISTANCE LEARNING

ONLINE SELF-PACED LEARNING *TECHNICAL COURSES*

ONLINE SELF-PACED LEARNING *PRO-ACTIVE TRIP AVOIDANCE TRAINING*

✦ *Some exceptions apply when use of labs or simulators are required.*

★ = Customer Site | ◆ = Any Gas Power Learning Center
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Course ID# & Title	Plant Personnel						Delivery Method			Duration in Days	Maximum # of Students	Location Options+	
(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-CCP10201 Combined Cycle - Power Plant Familiarization	✓	✓	✓	✓	✓	✓	✓			5	20	★ ◆	• Introduces participants to a typical combined cycle power plant through a blended learning solution of classroom lectures, videos, and factory and plant tours (WHEN AVAILABLE). • Familiarize with architecture and construction of major components e.g. gas turbine, steam turbine, HRSG, generator and balance of plant equipment. • Describes the operation and the maintenance considerations of a combine cycle plant. • Basic knowledge on Mechanical and Electrical theories/equipment
E-CCP10203 Combined Cycle - Operation (GE Integrated Systems)✧		✓	✓				✓		✓	5	12	★ ◆	• Familiarize with theory and fundamentals of combined cycle power plant as a foundation for the Gas Turbine (GT), Steam Turbine (ST) and Combined Cycle Operations and Maintenance Courses. • Includes introduction to thermodynamics, basics of major components (GT, ST, HRSG, Generator), processes & systems, Combined Cycle controls and operation overview • Basic knowledge of power plant equipment and systems is recommended. • Reasonable computer skills
E-CCP10204 Combined Cycle - Fundamentals✧		✓	✓				✓		✓	5	12	★ ◆	• Designed for installations in which GE has engineered the combined cycle system. • Provides the information necessary to safely operate their specific combined cycle power plant for peak availability and reliability. • Includes prestart system walk-downs, detail startup of the plant, monitoring equipment during normal operation, actions during contingent operations, and shutdown and safety • Gas Turbine Operation background or training • Steam Turbine Operation background or training • Basic knowledge of power plant equipment and systems is recommended • Ability to read technical documents • Reasonable computer skills
E-GRL10502 General - Pipe Fitting & Handling		✓		✓			✓	✓		2	12	CH	• Describes the structure, function, assembly, reassembly of fittings from various manufacturers. • Includes practical exercises on fittings, and requirements for cleanliness of fittings. • Requires a minimum of 2 students. • Basic knowledge of power plant equipment and systems is recommended • Ability to read technical documents (Mechanical) • Familiarity with the erection of heavy equipment

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E-GRL10503 General - Bearing Inspection		✓		✓			✓	✓		4	12	CH	• Covers the bearing casings: function, structure, quality. • Addresses pocket bearings, insulated pocket bearings: function, structure, installation and removal, checks and measurements on the bearing, measurement of insulation resistance, quality documents. • Describes the combined axial- and radial bearings: function, structure, installation and removal, quality documents. • Basic knowledge of power plant equipment and systems is recommended • Ability to read technical documents (Mechanical) • Familiarity with the erection of heavy equipment
E-GRL10504 General - Leveling Work		✓		✓			✓	✓		2	12	CH	• Introduces the use of the levelling instrument, apply functional check of the levelling instrument, perform levelling of a turbine foundation. • Covers the use of the levelling tool for new erection and revisions, measure, check and transfer heights using the levelling instrument. • Basic knowledge of power plants • Ability to read technical documents (Mechanical) • Familiarity with the erection of heavy equipment
E-GRL10505 General - Shaft Alignment		✓		✓			✓	✓		5	12	CH	• Introduces the types of couplings: toothed couplings, stiff friction clutch, shear bush coupling, expansion sleeve coupling. • Includes how to perform coupling measurements: shaft alignment measurements, testing and checking of: coupling nuts, friction parts, coupling flanges and teaches safety measures. • Basic knowledge of power plants • Ability to read technical documents (Mechanical) • Familiarity with the erection of heavy equipment
E-GRL10506 General - Practical Steam Turbine Maintenance (Brown Boveri Design)		✓		✓			✓	✓		15	10	CH	• Gives an overview on the turbine Design & function of the main parts. • Allows hands-on training in handling of heavy turbine parts, adjusting of turbine parts taking various measurements before, during and after an overhaul. • Gives an insight on the condition of turbine parts, what needs to be checked during an overhaul. • Executes hands-on training on tightening the various bolts correctly. • Mechanical background. • Familiar with the erection of power plants.

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E-CCP20601 Combined Cycle - Simulator based Process Training		✓	✓			✓	✓			5	6	★ ◆	• Introduces the basics about the HMI and working environment using simulator equipment. • Includes refresher on GT/ST/HRSG/WSC systems. • Emphasizes Closed Loop Control of the HRSG/WSC and teaches operation and control concept of the Combined Cycle Power Plant. • Performs Combined Cycle Power Plant start-up given the plant's different conditions, covers CC Load Controller and AGC controller, covers Combined Cycle Power Plant efficiency and Key Performance Indicators and includes Combined Cycle Power Plant shutdown options and the shutdown procedure. • Teaches students how to handle various plant transient conditions like loss of feedwater, loss of condensate system, operation with one main cooling water. • Basic knowledge of Power plant equipment, systems and operation • Prior hands-on CCPP operation and field experience • Ability to read technical documents • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not have the prerequisites listed above.
E-BOP10202 Balance of Plant- Operation (GE Integrated Systems)✧		✓	✓				✓		✓	5	12	★ ◆	• Designed for installations in which General Electric has engineered the site Balance of Plant. • Provides the information necessary to safely operate their specific balance of plant systems at peak availability and reliability. • Includes BOP systems design principles, operating principles, startup, and normal and shut-down operations. • Combined cycle Operation training, experience or equivalent knowledge • Basic knowledge of power plant equipment and systems is recommended • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not have the prerequisites listed above.

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-CON23401 Control System - Mark Vle (Aero) Operation, Maintenance & Troubleshooting✧		✓	✓		✓	✓	✓	✓	✓	5	12	★ ◆	• Introduces routine preventative maintenance procedures of the gas turbine support systems and of the major electrical and control system required to attain high levels of availability and reliability. • Covers functional sensor and actuator description, troubleshooting, and a summary of calibration and inspections required for Gas Turbine package electrical and control system maintenance. • Operating and maintenance personnel should attend this course together to develop a working relationship regarding the maintenance requirements of the unit, and how unit operation may affect these requirements. • Basic understanding of gas turbine equipment and its operation • Familiarity with control system basics • Reasonable computer skills
E-CON13601 Control System - Millenium Operation, Maintenance & Troubleshooting		✓	✓		✓	✓	✓	✓		5	12	★ ◆	• Introduces routine preventative maintenance procedures of the support systems and of the major electrical and control system maintenance required to attain high levels of availability, and reliability • Covers functional sensor and actuator description, troubleshooting, and a summary of calibration and inspections required for Gas Turbine package electrical and control system maintenance. • Operating and maintenance personnel should attend this course together to develop a working relationship regarding the maintenance requirements of the unit, and how unit operation may affect these requirements. • Basic understanding of gas turbine equipment and its operation • Familiarity with control system basics • Reasonable computer skills
E-CON13602 Control System - Woodward Operation, Maintenance & Troubleshooting ✧		✓	✓		✓	✓	✓	✓		5	12	★ ◆	• Introduces plant maintenance personnel to the Woodward MicroNet™ and MicroNet Plus™ turbine control systems. • Designed for platforms that have CPUs with an Ethernet port(s) and do not have a 2-line display, course content includes the hardware layout of typical systems; from chassis to I/O cards to field termination modules. • Provides training on Graphical Application Programmer (GAP) software navigation, Woodward software tools will be used to evaluate fuel control, sequence logic, and turbine-based alarms. • Overview of control actuator and other I/O calibration procedures will be discussed, additional class work includes general information on the operator interface (HMI) • Basic understanding of gas turbine equipment and its operation • Familiarity with control system basics • Reasonable computer skills

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E-CON13603 Control System - RX3i Operation, Maintenance & Troubleshooting ✧		✓	✓		✓	✓	✓	✓		5	12	★ ◆	• Introduces plant maintenance personnel to the RX3i turbine control systems and operator interface (HMI screens) • Includes the hardware layout of typical systems; from chassis to I/O cards to field termination modules. • Covers Proficy Machine Edition (PME) software tools to navigate through the ladder logic, sequence logic, and turbine-based alarms • Basic understanding of gas turbine equipment and its operation • Familiarity with control system basics • Reasonable computer skills

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down	Duration in Days	Maximum # of Students	Location Options+	• Executive Summary • Prerequisites
E-CON10501 Control System - AC800M with IIT800xA		✓			✓	✓	✓	✓		5	6	◆	• Provides an overview on control system architecture and functional description of components • Covers structures of the IIT800xA engineering workplace, gives an overview of the configuration of the IIT800xA system • Covers AC800M hardware configuration using the Control Builder M Professional • Includes Working with Function Designer - designing a graphic display using VB 6.0 • Includes performing maintenance and troubleshooting with IIT800M and IIT800xA system • Includes practical exercises on real life experiences, group works and interactive workshops • Fundamental skills regarding combined cycle power plants and considerable instrumentation & control experience with AC800M and IIT800xA systems
E-CON10201 Control System - ADVANT with IIT800xA		✓			✓	✓	✓	✓		5	6	◆	• Provides an overview on control system architecture and functional description of components • Covers structures of the IIT800xA engineering workplace, gives an overview of the configuration of the IIT800xA system • Covers AC800M hardware configuration using the Control Builder M Professional • Includes Working with Function Designer - designing a graphic display using VB 6.0 • Includes performing maintenance and troubleshooting with IIT800M and IIT800xA system • Includes practical exercises on real life experiences, group works and interactive workshops • Basic knowledge of power plant equipment and systems • Have attended an ADVANT course or possesses experience with ADVANT and IIT800xA systems
E-CON10202 Control System - ADVANT with OS520		✓			✓	✓	✓	✓		5	6	◆	• Provides an overview on control system architecture and functional description of components • Covers configuration of ADVANT controllers using the engineering tool, Application Builder, Function Chart Builder, Online Builder Commands, applies communication protocols used within the ADVANT System • Gives an insight about DB elements used in ADVANT System, signal tracing exercises • Covers UNIX commands for OS520, X-workplace server, startup via XDM login process • Includes designing a graphic display in OS520 • Emphasizes on maintenance and troubleshooting with the ADVANT system • Basic knowledge of power plant equipment and systems • Prior experience with ADVANT control systems • Technical background (Instrumentation and Control)
E-CON11401 Control System - DLN 1.0 Standard Combustor	✓	✓	✓			✓	✓	✓		2	12	★ ◆	• Familiarizes with the hardware and system changes included with upgrading to a DLN 1.0 combustion system • Includes, operational changes of the gas turbine and review of gas fuel valve calibration • Enhances learning experience by application of a generic cloud-based Simulator appropriate for this course • Familiarity with operation of heavy-duty gas turbine

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down	Duration in Days	Maximum # of Students	Location Options+	• Executive Summary • Prerequisites
E-CON11402 Control System - DLN 1.0+ Standard Combustor	✓	✓	✓			✓	✓	✓		2	12	★ ◆	• Familiarizes the students with the hardware and system changes included with upgrading the current fuel gas system to a DLN 1.0+ combustion system • Includes, operational changes with the upgrade and turbine operation, gas fuel valve calibration will be reviewed • Familiarity with operation of heavy-duty gas turbine
E-CON11901 Control System - DLN 2.6+ Standard Combustor	✓	✓	✓			✓	✓	✓		2	12	★ ◆	• Familiarizes the participants with the hardware and system changes associated with upgrading to a DLN 2.6+ combustion system • Includes, operational changes due to upgrade including turbine start up, loading and shutdown. Review the calibration process of gas fuel valves • Enhances learning experience by application of a generic cloud-based Simulator, appropriate for this course • Familiarity with operation of heavy-duty gas turbine
E-CON11902 Control System - DLN 2.6+ Flex Combustor	✓	✓	✓			✓	✓	✓		1	12	★ ◆	• Familiarizes the participants with the hardware and system changes associated with upgrading to a DLN 2.6+ combustion system • Includes, operational changes due to upgrade including turbine start up, loading and shutdown. Review the calibration process of gas fuel valves • Enhances learning experience by application of a generic cloud-based Simulator, appropriate for this course • Familiarity with operation of heavy-duty gas turbine • Basic knowledge of DLN combustion system Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisite listed above.
E-CON10404 Control System - ALSPA Control System Fundamentals		✓	✓		✓	✓	✓	✓		5	6	CH	• This course familiarizes participants with the architecture of ALSPA control system and components & supervisory functions of ALSPA HMI, which enables them to control and monitor the plant process. This course provides an overview of the ALSPA control system hardware and CONTROCAD engineering tool. • This course will also enable the participant to do basic application programming and basic HMI modification and, do basic diagnostic of ALSPA control system using various tools e.g. ALSPA Maintenance Server. This will also enable participants to read and understands basic project documentations. • At the end of the course there will a site visit, where a brief demonstration of the components/topics discussed in the classroom will be provided. • Knowledge of power plants • Fundamental skills regarding control systems • Able to read technical documents
E-CON20406 Control System - ALSPA Control System Intermediate			✓		✓	✓	✓	✓		5	6	CH	• This course familiarizes participants with advanced level programming of ALSPA CONTROCAD engineering tool and, provides an overview of ALSPA HMI configuration. • This course will enable them to set up ALSPA HMI for first time use. They will learn how to perform online forcing and setting update to make small modification in logic, without disturbing plant operation. They will learn about MFC3000 firmware. • At the end of the course there will a site visit, where a brief demonstration of the components/topics discussed in the classroom will be provided. • Knowledge of power plants • Basic skills regarding ALSPA control systems • Able to read technical documents • Attended the course: E-CON10404 Control System – ALSPA Control System Fundamentals

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E-CON30401 Control System - ALSPA Control System Advanced						✓	✓	✓		5	6	CH	• This course familiarizes participants with redundant operation of MFC3000 controllers. Participants will learn about installation of new MFC3000 controller, ASLPA HMI and CONTROCAD tools. Acronis backup image procedure will also be discussed. • They will learn how to do online modification in application code of a running MFC3000 controller. Limitation of online modification and its consequences will also be discussed. They will learn about MFC3000 firmware. • Participants will learn basic concept of Profibus. Profibus system configuration and Profibus advanced troubleshooting using ProfiTrace tool will also be discussed. • Participants will also have a chance to learn DEPP2000. • At the end of the course there will a site visit, where a brief demonstration of the components/topics discussed in the classroom will be provided. • Fundamental skills regarding control systems • Able to read technical documents • Attended the course: E-CON20406 Control System – ALSPA Control System Intermediate
E-CON13302 Control System - Mark VI Maintenance (HMI on 1st Day)	✓	✓	✓			✓	✓	✓		5	12	★ ◆	• Familiarizes participants with the hardware and software components, provides detailed knowledge to maintain and troubleshoot the Mark VI control system and associated equipment • Instruction for the operator interface is covered on the first day and the remaining four days focus on the maintenance of the control system • Includes training material derived from actual Mark VIe installed systems • Enhances learning experience by application of a generic cloud-based Simulator, through progressively challenging labs assisting the participants to learn the basics and build up to intermediate skills including alarm and system troubleshooting • Basic knowledge and experience of Control System • Understanding of basic Windows file structure
E-CON23301 Control System - Mark VI Troubleshooting (Advanced)		✓				✓	✓	✓		5	12	★ ◆	• Designed to test and sharpen troubleshooting and operations skills for the purpose of trip reduction and recovery, maintaining optimum performance and availability. • Gain the fundamental skills of a competent Control Room Operator and those skills of an experienced Mark VI TA. • Exposure to diverse operating conditions with extensive practical training during hands-on sessions on a cloud-based technology-specific Simulator • Fundamental operational and controls skills, are recommended • Attended Mark™VI Control System –Advanced level course, or possess equivalent knowledge, including experience with Toolbox software • Moderate hands-on field experience with Mark VI Control • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisite listed above.

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E-CON13304 Control System - Mark VI with Integrated Turbine & Compressor Controls HMI	✓	✓	✓			✓	✓	✓		1	12	★ ◆	• Designed to provide the skills necessary to use the operator interface for a turbine-compressor set using the integrated Mark VI control system • Help develop operator skills for troubleshooting of alarms • Enhances learning experience by application of a generic cloud-based Simulator, appropriate for this course • Basic knowledge and experience of Mark VI Controls System • Power plant Operation experience • Reasonable computer skills
E-CON13305 Control System - Mark VI with Integrated Turbine & Compressor Controls Maintenance		✓				✓	✓	✓		5	12	★ ◆	• Designed to provide the skills necessary to operator and maintain the integrated Mark VI installation used to control a turbine-compressor set • Familiarizes students with the hardware and software components, provides fundamental knowledge to troubleshoot and maintain the associated equipment • Includes training material derived from actual installed Mark VI control systems • Enhances learning experience by application of a generic cloud-based Simulator for a turbine compressor set, through progressively challenging labs assisting the participants to learn the basic skills including alarm and system troubleshooting • Basic knowledge and experience of Mark VI Controls System • Basic troubleshooting skills • Reasonable computer skills
E-CON13306 Control System - Mark VI to Mark VIe Platform Upgrade Maintenance		✓				✓	✓	✓		5	12	★ ◆	• Intended for personnel whose site has a Mark VIe control migration from Mark VI control system • Familiarizes with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the control system and associated equipment • Includes training material derived from actual Mark VIe control migration from Mark VI control installed systems • Enhances learning experience by application of a generic cloud-based Simulator, through progressively challenging labs assisting the participants to learn the basics and build up to intermediate skills including alarm and system troubleshooting • GE Mark VI Control system knowledge and experience • Basic computer skill
E-CON13401 Control System - Mark VIe Maintenance (Extended)✧		✓				✓	✓	✓		10	12	★ ◆	• Familiarizes participants with the hardware and software components, provides detailed knowledge to maintain and troubleshoot the Mark VIe control system and associated equipment • Includes training material derived from actual Mark VIe installed systems • Enhances learning experience by application of a generic cloud-based Simulator for Mark VIe hardware, through progressively challenging labs assisting the participants to learn the basics and build up to intermediate skills including alarm and system troubleshooting, hardware replacement and software modifications • Several labs contain optional exercises where participants are given the opportunity to examine their own software in relation to the learning objective • Basic knowledge and experience of Control System • Understanding of basic Windows file structure

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E-CON13402 Control System - Mark VIe Maintenance✧		✓				✓	✓	✓		5	12	★ ◆	• Familiarizes with the hardware and software components, provides detailed knowledge to maintain and troubleshoot the Mark VIe control system and associated equipment • Includes training material derived from actual Mark VIe installed systems • Enhances learning experience by application of a generic cloud-based Simulator for Mark VIe hardware, through progressively challenging labs assisting the participants to learn the basics and build up to intermediate skills for alarm troubleshooting • Basic knowledge and experience of Control System • Understanding of basic Windows file structure
E-CON13403 Control System - Mark VIe Maintenance (HMI on 1st Day)	✓	✓	✓			✓	✓	✓		5	12	★ ◆	• Familiarizes with the hardware and software components, provides detailed knowledge to maintain and troubleshoot the Mark VIe control system and associated equipment • Instruction for the operator interface is covered on the first day and the remaining four days focus on the maintenance of the control system • Includes training material derived from actual Mark VIe installed systems • Enhances learning experience by application of a generic cloud-based Simulator for Mark VIe hardware, through progressively challenging labs assisting the participants to learn the basics and build up to intermediate skills including alarm and system troubleshooting • Basic knowledge and experience of Control System • Understanding of basic Windows file structure
E-CON13404 Control System - Mark VIe Maintenance Nuclear		✓				✓	✓	✓		10	12	★ ◆	• Familiarizes trainees with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the Mark VIe control system and associated equipment • Includes training material derived from actual Mark VIe installed systems • Enhances learning experience by application of a generic cloud-based Simulator for Mark VIe hardware, through progressively challenging labs assisting the participants to learn the basics and build up to intermediate skills including alarm and system troubleshooting, hardware replacement, and software modifications • Basic knowledge of power plant • Basic knowledge and experience of Control system • Reasonable computer skills
E-CON13413 Control System - Mark VIe Migration from Mark V (HMI on 1st day)	✓	✓	✓			✓	✓	✓		5	12	★ US	• Intended for personnel whose site has a Mark VIe control migration from Mark V control system • Familiarizes with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the control system and associated equipment • Includes training material derived from actual Mark VIe control migration from Mark V control installed systems • Enhances learning experience by application of a generic cloud-based Simulator, through progressively challenging labs assisting the participants to learn the basics and build up to intermediate skills including alarm and system troubleshooting • Basic knowledge and experience of Mark V Controls System • Reasonable computer skills

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Course ID# & Title	Plant Personnel						Delivery Method						
(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down	Duration in Days	Maximum # of Students	Location Options+	• Executive Summary • Prerequisites
E-CON13406 Control System - Mark VIe HMI	✓	✓	✓			✓	✓	✓		1	12	★ ◆	• Familiarizes with the operator screens of Mark Vie control system • Develop skill to handle the alarms and use the HMI to monitor the turbine • Includes training material derived from actual Mark VIe installed systems • Enhances learning experience by application of a generic cloud-based Simulator, through progressively challenging labs assisting the participants to learn the basic operation and build up skills to diagnose and resolve alarms • Turbine operation training, experience or equivalent knowledge • Reasonable computer skills (MS Windows Operating System)
E-CON23404 Control System - Mark VIe Troubleshooting (Advanced)		✓				✓	✓	✓		5	12	★ ◆	• Designed to test and sharpen troubleshooting and operations skills for the purpose of trip reduction and recovery, maintaining optimum performance and availability • Will gain the fundamental skills of a competent Control Room Operator and an experienced Mark VIe Control TA including efficient resolution of alarms • Learn to follow an alarm through using the ToolboxST™ software to identify the field device that caused the alarm and much more • Enhances learning experience by application of a generic cloud-based Simulator, giving exposure to diverse operating conditions Note: This course is instructed with a generic Gas Turbine HMI and 7FA control simulation. • Fundamental operational and controls skills are recommended • Attended Mark™ VIe Control System Maintenance course, or possesses equivalent knowledge, including experience with ToolboxST™ software • Moderate hands-on field experience with Mark™ VIe Control • Reasonable computer skills
E-CON13408 Control System - Mark VIe with Integrated Turbine & Compressor Controls Maintenance		✓				✓	✓	✓		5	12	★ ◆	• Designed to provide the skills necessary to operator and maintain the integrated Mark VIe installation used to control a turbine-compressor set • Familiarizes students with the hardware and software components, provides fundamental knowledge to troubleshoot and maintain the associated equipment • Includes training material derived from actual installed Mark VIe control systems • Enhances learning experience by application of a generic cloud-based Simulator for a turbine compressor set, through progressively challenging labs assisting the participants to learn the basic skills including alarm and system troubleshooting • Basic knowledge and experience of Mark VIe Controls System • Basic troubleshooting skills • Reasonable computer skills
E-CON13409 Control System - Mark VIe with Integrated Turbine & Compressor Controls Maintenance (HMI on 1st day)	✓	✓	✓			✓	✓	✓		1	12	★ ◆	• Designed to provide the skills necessary to use the operator interface for a turbine-compressor set using the integrated Mark VIe control system • Help develop operator skills for troubleshooting of alarms • Enhances learning experience by application of a generic cloud-based Simulator, appropriate for this course • Basic knowledge and experience of Mark VIe Controls System • Power plant Operation experience • Reasonable computer skills

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E-CON13410 Control System - Mark VIe Distributed Control System Maintenance✧		✓				✓	✓	✓		5	12	★ ◆	• Intended for Customers using the GE Mark VIe Control System as plant Distributed Control System • Covers the customers responsibility for the maintenance of the control system components as well as field instrumentation and communication networks • Conducted based on a typical Mark VIe Distributed Control System installation, customer specific material is subject to availability at time of training and is not guaranteed • Have attended a GE Delivered Mark™ VIe Control training course, or possess equivalent knowledge of Mark™ VIe Control • Hands-on field experience with Mark™ VIe Control is highly recommended • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-CON13411 Control System - Mark VIe Distributed Control System Maintenance (Extended)		✓				✓	✓	✓		10	12	★ ◆	• Familiarize participants with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the Mark VIe control system and associated equipment • Includes training material derived from actual Mark VIe installed systems • Enhances learning experience by application of a generic cloud-based DCS Simulator, through progressively challenging labs assisting the participants to learn the basics and build up to intermediate skills including alarm and system troubleshooting, hardware replacement, and software modifications • Several sessions on Simulator contain optional exercises where participants are given the opportunity to examine their plant software in relation to the learning objective. When available, the instructor will prepare a virtual HMI based on the site control software and screens • Controls System Experience • Understanding of basic Windows file structure • Reasonable computer skills
E-CON13412 Control System - Mark VIe Distributed Control System Operation		✓	✓			✓	✓	✓	✓	5	12	★ ◆	• Intended for customers using the GE Mark VIe Control System as their Distributed Control System • Covers the responsibility of the plant operation using GE components as well as field instrumentation and communication networks • Enhances learning experience by application of a generic cloud-based DCS Simulator, through progressively challenging labs assisting the participants to learn the basics and build up to intermediate operation skills. Integration of site-specific material is based on availability at time of training and is not guaranteed • Familiar with an HMI-based Operator Interface • Hands-on field experience with Outside Operation Duties is highly recommended • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-CON23405 Control System - OpFlex Enhanced Transient Stability Operation		✓	✓			✓	✓	✓		1	12	★ ◆	• Designed to provide the skills required to start-up and operate units installed or upgraded with advanced OpFlex Enhanced Transient Stability (ETS) technology • Designed to test and sharpen troubleshooting and operational skills for the purpose of trip reduction and recovery, maintaining optimum performance and availability • Will gain knowledge of the advanced controls terminologies, concepts and practices and the skills required to perform tuning, identify and respond to sensor faults • Enhances learning experience by application of a generic cloud-based Simulator (ETS only), appropriate for the course content • Fundamental operational skills • Mark™ VI or VIe Control System experience or possesses equivalent knowledge • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-CON23406 ControlSystem- OpFlex Enhanced Transient Stability with AutoTune DX & Cold Day Performance Operation		✓	✓			✓	✓	✓		1	12	★ ◆	• Designed to provide the skills required to start-up and operate units installed or upgraded with advanced OpFlex Enhanced Transient Stability with AutoTune DX & Cold Day Performance technology • Designed to test and sharpen troubleshooting and operational skills for the purpose of trip reduction and recovery, maintaining optimum performance and availability • Will gain knowledge of the advanced controls terminologies, concepts and practices and the skills required to perform tuning, identify and respond to sensor faults • Enhances learning experience by application of a generic cloud-based Simulator (ETS only), appropriate for the course content • Fundamental operational skills • Mark™ VI or VIe Control System experience or possesses equivalent knowledge • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-CON23407 ControlSystem- OpFlex Enhanced Transient Stability with AutoTune DX Operation		✓	✓			✓	✓	✓		1	12	★ ◆	• Designed to provide the skills required to start-up and operate units installed or upgraded with advanced OpFlex Enhanced Transient Stability with Autotune DX technology • Designed to test and sharpen troubleshooting and operational skills for the purpose of trip reduction and recovery, maintaining optimum performance and availability • Will gain knowledge of the advanced controls terminologies, concepts and practices and the skills required to perform tuning, identify and respond to sensor faults • Enhances learning experience by application of a generic cloud-based Simulator (ETS only), appropriate for the course content • Fundamental operational skills • Mark™ VI or VIe Control System experience or possesses equivalent knowledge • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.

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E-CON23408 ControlSystem- OpFlex Enhanced Transient Stability with AutoTune LT Operation		✓	✓			✓	✓	✓		1	12	★ ◆	• Designed to provide the skills required to start-up and operate units installed or upgraded with advanced OpFlex Enhanced Transient Stability with Autotune LT technology • Designed to test and sharpen troubleshooting and operational skills for the purpose of trip reduction and recovery, maintaining optimum performance and availability • Will gain knowledge of the advanced controls terminologies, concepts and practices and the skills required to perform tuning, identify and respond to sensor faults • Enhances learning experience by application of a generic cloud-based Simulator (ETS only), appropriate for the course content • Fundamental operational skills • Mark™ VI or VIe Control System experience or possesses equivalent knowledge • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-CON23409 Control System - OpFlex Enhanced Transient Stability with AutoTune MX & Variable Load Path Operation		✓	✓			✓	✓	✓		2	12	★ ◆	• Designed to provide the skills required to start-up and operate units installed or upgraded with advanced OpFlex Enhanced Transient Stability with AutoTune MX & Variable Load Path technology • Designed to test and sharpen troubleshooting and operational skills for the purpose of trip reduction and recovery, maintaining optimum performance and availability • Will gain knowledge of the advanced controls terminologies, concepts and practices and the skills required to perform tuning, identify and respond to sensor faults • Enhances learning experience by application of a generic cloud-based Simulator (ETS only), appropriate for the course content • Fundamental operational skills • Mark™ VI or VIe Control System experience or possesses equivalent knowledge • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-CON10801 Control System - ActivePoint™ HMI Operation Familiarization	✓	✓	✓			✓	✓	✓		3	12	★ ◆	• Familiarizes with ActivePoint™ HMI to improve usability, accessibility, and ease of use of the control system • Learn the advanced features and intuitive visual coding, contextual data and the ability to determine the root cause of a critical event 'at a glance' • Develops skills to manage the enhanced Alarm System, which provides features such as; Go to Display Screen, Alarm Help and Go to Definition in Logic etc. • Enhances learning experience by application of a generic cloud-based Simulator, guiding the participants through scenarios related to each topic.Display Screen, Alarm Help and Go to Definition in Logic. ActivePoint™ Alarm Filtering and Viewing enhances usability, and provides the user with a better understanding of the alarms • Power plant operations experience or training • Computer literacy Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down	Duration in Days	Maximum # of Students	Location Options+	• Executive Summary • Prerequisites
E-CON33402 Control System - Proficy CIMPLICITY™ for Turbine Controls (Advanced)		✓	✓			✓	✓	✓		5	12	★ ◆	• Focuses on the development, maintenance and troubleshooting of a CIMPLICITY™ project, as applied to GE Control System for Gas and Steam Turbines • Offered as the final course in the progressive series on Mark Controls • Will develop the skills necessary to import points into the project point database, create new or modify existing screens and graphics • Enhances learning experience by application of a generic cloud-based Simulator, appropriate for the course content • Advanced knowledge or experience with control system of GE Industrial equipment • Practical to high level of computer literacy including Windows OS fundamentals Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-CON13414 Control System - Mark VIe Foundation Fieldbus		✓	✓			✓	✓	✓		2	4	★ ◆	• Designed to familiarize with the Foundation Fieldbus technology using with the Mark Vie control system • Learn how FFB devices are field wired with a Mark VIe control panel and how the devices communicate their data to application code within ToolboxST™ • Be introduced to hardware configurations, linking hardware to software, and basic troubleshooting from within ToolboxST™. Virtual HMI's will be used to navigate FFB configurations within ToolboxST™ • Participants will have the opportunity to work on the FFB training hardware to enhance their learning experience • Fundamental operational and control skills • Attended Mark™ VIe Control System Maintenance course, or possesses equivalent knowledge, including experience with ToolboxST™ and ControlST software • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisite listed above.
E-CON13701 Control System - Control Server and Thin Client Familiarization	✓	✓	✓			✓	✓			2	6	★ ◆	• This training course will explain the structure and use of the Control Server system • It will provide explanation of the virtual environment and the physical hardware used to host the vHMIs • Control system experience • Computer literacy
E-ELX10902 Electrical - Electrical Control System (ECS) Training		✓	✓		✓	✓	✓			3	12	★ ◆	• Course covers the Electrical Control System (ECS) functionality, and is designed to enhance participant competence in ECS's functionality and troubleshooting • This course utilizes site specific drawings and software • Basic knowledge of electrical circuits and control systems • Basic knowledge of Microsoft Windows operating system
E-ELX10903 Electrical - Intelligent Electronic Device (IED) IED's – Protection & Control		✓	✓		✓	✓	✓			7	12	★ ◆	• This course covers the Intelligent Electronic Devices (IED) functionality, and is designed to enhance participant competence in IED's protection & Control functionality and troubleshooting. • This course utilizes site specific drawings and software. The participants will conduct hands-on lab work using the applicable software. • Basic knowledge of electrical circuits and control systems • Basic knowledge of Microsoft Windows operating system

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-CCP20604 Combined Cycle - Simulator based Steam Cycle Operation		✓	✓				✓	✓		5	6	★ ◆	• Introduces the basics about the HMI and working environment using simulator equipment • Overview of steam turbine systems, operation and control concept of the steam turbine and steam bypass system, limiters for the steam turbine, thermal stress evaluation • Discusses starting and operating instructions for the steam turbine, startup prerequisites, fixed pressure and sliding pressure concept, online testing capabilities of the ST and Combined Cycle Power Plant startup and shutdown procedures • Have fundamental skills regarding combined cycle power plants and considerable field experience
E-CCP20605 Combined Cycle - Simulator Based Steam Turbine Operation		✓	✓				✓			2	6	★ ◆	• Introduces the basics about the HMI and working environment using simulator equipment • Reviews preparation steps for Steam turbine startup and steam quality requirement for the startup, understanding of concept of GT hold points in context with the steam turbine operation • Covers the startup of the steam turbine using the automatic controller, handling the Combined Cycle Power Plant load conditions, observing the key plant parameters, using the alarms, events and trend displays to analyze the process • Includes Operator actions under transient conditions (ST operation concept during GT fuel switch over etc.) • Fundamental skills regarding control systems

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E-ELX10301 Excitation - EX2100e Maintenance		✓			✓	✓	✓	✓	✓	4	12	★ ◆	• Designed to enhance the skills of maintenance and operations personnel to operate, maintain, and troubleshoot an EX2100e Exciter or Regulator system • Includes classroom theory, exercises, and site visits to enhance learning experience • Uses a EX2100e simulator for “hands-on” training along with Site-Specific software and documentation • Reasonable computer skills • Knowledge of generator, excitation and static start operation recommended
E-ELX10302 Excitation - EX2100e Operation & Maintenance		✓	✓		✓	✓	✓	✓	✓	5	12	★ ◆	• The participants will learn about the functionality, operation, maintenance, and troubleshooting an EX2100e static exciter or regulator system. • This training utilizes a classroom simulator to provide attendees the ability to safely operate and maintain the generator excitation system. • Training consists of classroom theory, classroom exercises, and a site walk down. • Participants will perform classroom hands-on lab exercises using an EX2100e simulator for classroom training. • Reasonable computer skills
E-ELX10303 Excitation - EX2100e Generator Operation		✓	✓		✓	✓	✓	✓	✓	1	12	★ ◆	• Focuses on generator fundamentals and safe operation through the application of “hands-on” training with a simulator • Focus on excitation theory, control hardware and software and utilization of operator interfaces • Familiarizes with Exciter faults and alarm messages, limiter values. Site-specific software will be used for discussion, if available • Prior generator operation experience and knowledge of excitation systems is recommended • Reasonable computer skills
E-ELX10304 Excitation - EX2100e Platform Upgrade Maintenance		✓			✓	✓	✓	✓	✓	1	12	★ ◆	• Designed for turbine-generator maintenance personnel whose site has migrated to an EX2100e generator excitation control system • Focuses on excitation hardware, software, and GE supplied documentation to help participants diagnose faults and efficient troubleshooting • Conducted with lectures and demonstrations using an EX2100e simulator and ToolboxST™ interface • Recommended complementary course is “EX2100e Generator Operation” • Prior experience with generator excitation • Technical background (Electrical or Control) • Reasonable computer skills
E-ELX10305 Excitation - Aero EX2100e and Integrated Generator Protection System (IGPS)	✓	✓	✓		✓	✓	✓	✓	✓	4	12	★ ◆	• Focuses on the layout of the generator control panel, the EX2100e regulator configuration, operation, maintenance, and troubleshooting, as well as the IGPS. • Conducted with a classroom simulator to provide attendees the ability to safely operate and maintain the generator excitation and protection system. • Reasonable computer skills
E-ELX11501 Excitation - Generator Excitation, Protection and Static Starter Introduction✧		✓	✓		✓	✓	✓		✓	5	12	★ ◆	• Designed to support safe operation of the generator and develop competence in maintenance and troubleshooting skills • Utilize site specific drawings and system settings • Includes hands-on practice on the excitation training module • Reasonable computer skills • Knowledge of excitation and static start operation

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E-ELX11101 Excitation - Combisystem Excitation & Static Starting Device Maintenance✧		✓			✓	✓	✓	✓	✓	5	8	★ ◆	• Overview of electrical safety rules and measures • Includes excitation system soft- and hardware functions (voltage controller, limit controllers, superimposed controllers, reference signal sources) • Includes synchronous turbo generator (design and function, characteristics, steady-state and transient behavior, dynamic response of the excitation system on sudden variations, operating limits, protection) • Includes converters and its subsystems (power parts, auxiliaries, control, monitoring, and protection), front panel handling (set points, actual values, fault messages, events and records), how to use the software tools for the common control equipment, cross-start manipulations (if applicable), O&M handbook, hardware diagrams • Basic knowledge of power plant and its control system is recommended • Have attended Electrical Operation & Maintenance course for legacy Alstom Generator control system or possesses equivalent knowledge or relevant experience • Technical background – Electrical Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above
E-ELX10901 Electrical - Operation & Maintenance (GE Integrated Systems)✧		✓	✓		✓	✓	✓		✓	5	12	★ ◆	• Covers Single Line Diagram and overview of electrical main components, Electrical Operation Concept, operation ranges and capabilities and safety measures • Overview of generator monitoring and maintenance, MV and LV Switchgear design, function, operation, control modes and safety features • Discussion on Generator Circuit Breaker and Transformer: Function and design operating modes, monitoring, checks and inspections • Discussion on UPS-System, Batteries, stand-by DG set: Function and design, operation, control, protection, routine maintenance, safe working practices • Review of Fault tracing in electrical and electronic systems, interfaces to Distributed Control System • Basic knowledge of power plant equipment and systems • Technical experience or certificate (Electrical or Mechanical) is recommended • Ability to understand Technical drawing and documents
E-ELX30101 Protection - MiCOM Generator & Transformer Protection		✓			✓	✓	✓	✓	✓	4	6	★ ◆	• Overview of electrical safety rules and measures • Includes protection functions: Basic theory and applications • Includes numerical generator protection system: System layout, hardware components, software and firmware, signal data flow • Includes documentation: Protection, measuring and metering single line diagrams, tripping logic diagram, schematic diagrams, setting lists, training manual, operation & maintenance manual • Includes user interface program S1: Configuration and parameterization of the system • Includes monitoring functions: Event and data recording, display of measured quantities, recording of disturbances • Includes functional checks and maintenance: Test functions, checklists, error handling, diagnostics, service information, and technical support, Fault-tracing in electrical systems, interfaces to Distributed Control System • Basic knowledge of power plant equipment and systems • Technical background or relevant experience (Electrical) • Ability to read technical documents

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E-ELX30501 Excitation - LS2100e LCI for Turbine Static Start		✓			✓	✓	✓	✓	✓	2	12	★ ◆	• Designed for operations and maintenance personnel: configuration, maintenance and troubleshooting of the LCI™ static starter • Includes hardware identification, Control System ToolboxST™ communications, UCSB programming, Alarm Viewer configuration and diagnostic testing • Utilizes simulators, and walk down (if available) of the site LCI™ starter to enhance learning experience • Technical (Electrical) experience/education • Reasonable computer skills
E-ELX30202 Protection - REG216 Protection System Maintenance		✓			✓	✓	✓	✓		4	6	CH	• This course explains the systems basic configuration and its main features. • Includes, system software and hardware concepts, explainsthe purpose of the various protection functions and state respective standard settings, configure and parameterize the different protection functions and to change their settings (limit values, response times), using the user interface program CAP216, interpret signals and messages of the system. • Also, Troubleshoot the system, carry out periodic functional checks, regular maintenance and state electrical safety rules for working on the equipment. • Have experience in electrical operation and maintenance of GE power plants • Be able to interpret technical documents: Single Line Diagrams (SLD) and drawings • Fully competent on other brand electrical protection system

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E-AER10101 Gas Turbine - LM2500 Aero Package Operation/Familiarization✧		✓	✓	✓	✓		✓		✓	5	12	★ ◆	• Introduces the basic skills and knowledge required to ensure proper operation of the LM2500 gas turbine and their associated systems • Focuses on operator responsibilities such as startup, loading and monitoring during operation and interpretation of fault annunciation for suitable remedy • None
E-AER10201 Gas Turbine - LM2500+ Aero and LM2500+ Xpress Package Operation/ Familiarization✧		✓	✓	✓	✓		✓		✓	5	12	★ ◆	• Introduces the basic skills and knowledge required to ensure proper operation of the LM2500+ gas turbine and their associated systems • Focuses on operator responsibilities such as startup, loading and monitoring during operation and interpretation of fault annunciation for suitable remedy • None
E-AER10102 Gas Turbine - LM2500+ Package Maintenance✧		✓		✓			✓		✓	5	12	★ ◆	• Introduces operations and maintenance personnel to the routine preventative maintenance procedures and minor mechanical maintenance • Covers basic troubleshooting, and a summary of the inspections required for minor Gas Turbine generator mechanical maintenance • Operation and maintenance personnel should attend together to develop a working relationship regarding the maintenance requirements • Also includes detail Level 1 maintenance work packages and familiarization of the O&M Manual • Does not include repair procedures for Gas Turbine components • Attend Aero Package Operation/Familiarization Course or having equivalent knowledge • Prior general knowledge of power plant systems and operation
E-AER10202 Gas Turbine - LM2500+ and LM2500+ Xpress Package Maintenance✧		✓		✓			✓		✓	5	12	★ ◆	• Introduces operations and maintenance personnel to the routine preventative maintenance procedures and minor mechanical maintenance • Covers basic troubleshooting, and a summary of the inspections required for minor Gas Turbine generator mechanical maintenance • Operation and maintenance personnel should attend together to develop a working relationship regarding the maintenance requirements • Also includes detail Level 1 maintenance work packages and familiarization of the O&M Manual • Does not include repair procedures for Gas Turbine components • Attend Aero Package Operation/Familiarization Course or having equivalent knowledge • Prior general knowledge of power plant systems and operation
E-AER10103 Gas Turbine - LM2500 Engine Familiarization	✓	✓	✓	✓			✓			3	12	★ ◆	• Covers overview of Gas Turbine theory, construction, and operation • Introduces major components, typical alarms and troubleshooting • Technical background or relevant experience

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✧ Recommended course for new equipment

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Course ID# & Title	Plant Personnel						Delivery Method			Duration in Days	Maximum # of Students	Location Options+	
(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-AER10104 Gas Turbine - LM2500 Level 1 Maintenance		✓		✓			✓	✓		5	8	KW US	• Provides the skills necessary to perform Level 1 Maintenance on the LM2500 Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of external components • Includes hands-on sessions on a LM2500 training engine, enhancing the practical experience of the participants • Attended LM2500 Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-AER10105 Gas Turbine - LM2500 Level 2 Cold Maintenance		✓		✓			✓	✓		5	8	KW US	• Provides the skills necessary to perform Level 2 Cold Maintenance on the LM2500 Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of internal components • Includes hands-on sessions on a LM2500 training engine, enhancing the practical experience of the participants • Attended LM2500 Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-AER10106 Gas Turbine - LM2500 Level 2 Hot Maintenance		✓		✓			✓	✓		5	8	KW US	• Provides the skills necessary to perform Level 2 Hot Maintenance on the LM2500 Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of internal components • Includes hands-on sessions on a LM2500 training engine, enhancing the practical experience of the participants • Attended LM2500 Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-AER10107 Gas Turbine - LM2500+ Level 2 Hot Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 2 Hot Maintenance on the LM2500+ Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of internal components • Includes hands-on sessions on a LM2500+ training engine, enhancing the practical experience of the participants • Attended LM2500+ Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-AER10203 Gas Turbine - LM2500+ Borescope Inspection		✓		✓			✓	✓		2	8	US	• Familiarizes the procedures required to assess the physical condition of a LM2500+ gas turbine internal components using borescope equipment • Includes hands-on sessions on a LM2500+ training engine, enhancing the practical experience of the participants • Attended LM2500+ Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-AER10204 Gas Turbine - LM2500+/G4 Engine Familiarization	✓	✓	✓		✓		✓			3	12	★ ◆	• Covers overview of Gas Turbine theory, construction, and operation • Introduces major components, typical alarms and troubleshooting • Technical background or relevant experience
E-AER10205 Gas Turbine - LM2500+ Level 1 Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 1 Maintenance on the LM2500+ Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of external components • Includes hands-on sessions on a LM2500+ training engine, enhancing the practical experience of the participants • Attended LM2500+ Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-AER10206 Gas Turbine - LM2500+ Level 2 Cold Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 2 Cold Maintenance on the LM2500+ Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of internal components • Includes hands-on sessions on a LM2500+ training engine, enhancing the practical experience of the participants • Attended LM2500+ Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-AER10108 Gas Turbine - LM2500 Borescope Inspection		✓		✓			✓	✓		2	8	KW US	• Familiarizes the procedures required to assess the physical condition of a LM2500 gas turbine internal components using borescope equipment • Includes hands-on sessions on a LM2500 training engine, enhancing the practical experience of the participants • Attended LM2500 Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-AER10301 Gas Turbine - LM6000 Aero Package Operation/Familiarization✧		✓	✓	✓	✓		✓		✓	5	12	★ ◆	• Introduces the basic skills and knowledge required to ensure proper operation of the LM6000 gas turbine and their associated systems • Focuses on operator responsibilities such as startup, loading and monitoring during operation and interpretation of fault annunciation for suitable remedy • None
E-AER10302 Gas Turbine - LM6000 Package Maintenance✧		✓		✓			✓		✓	5	12	★ ◆	• Introduces operations and maintenance personnel to the routine preventative maintenance procedures and minor mechanical maintenance • Covers basic troubleshooting, and a summary of the inspections required for minor Gas Turbine generator mechanical maintenance • Operation and maintenance personnel should attend together to develop a working relationship regarding the maintenance requirements • Also includes detail Level 1 maintenance work packages and familiarization of the O&M Manual • Does not include repair procedures for Gas Turbine components • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • Attend Aero Package Operation/Familiarization Course or having equivalent knowledge • Prior general knowledge of power plant systems and operation
E-AER10303 Gas Turbine - LM6000 Engine Familiarization	✓	✓	✓	✓			✓			3	12	★ ◆	• Covers overview of Gas Turbine theory, construction, and operation • Introduces major components, typical alarms and troubleshooting • Technical background or relevant experience
E-AER10304 Gas Turbine - LM6000 Level 1 Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 1 Maintenance on the LM6000 Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of external components • Includes hands-on sessions on a LM6000 training engine, enhancing the practical experience of the participants • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • Attended LM6000 Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-AER10305 Gas Turbine - LM6000 Level 2 Cold Maintenance		✓		✓			✓	✓		7	8	US	• Provides the skills necessary to perform Level 2 Cold Maintenance on the LM6000 Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of internal components • Includes hands-on sessions on a LM6000 training engine, enhancing the practical experience of the participants • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • Attended LM6000 Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-AER10306 Gas Turbine - LM6000 Level 2 Hot Maintenance		✓		✓			✓	✓		7	8	US	• Provides the skills necessary to perform Level 2 Hot Maintenance on the LM6000 Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of internal components • Includes hands-on sessions on a LM6000 training engine, enhancing the practical experience of the participants • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • Attended LM6000 Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-AER10307 Gas Turbine - LM6000 Borescope Inspection		✓		✓			✓	✓		2	8	US	• Familiarizes the procedures required to assess the physical condition of a LM6000 gas turbine internal components using borescope equipment • Includes hands-on sessions on a LM6000 training engine, enhancing the practical experience of the participants • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • Attended LM6000 Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-AER11201 Gas Turbine - LM9000 Aero Package Operation / Familiarization✧		✓	✓	✓	✓		✓		✓	5	12	★ ◆	• Introduces the basic skills and knowledge required to ensure proper operation of the LM6000 gas turbine and their associated systems • Focuses on operator responsibilities such as startup, loading and monitoring during operation and interpretation of fault annunciation for suitable remedy • None
E-AER11202 Gas Turbine - LM9000 Package Maintenance✧		✓		✓			✓		✓	5	12	★ ◆	• Introduces operations and maintenance personnel to the routine preventative maintenance procedures and minor mechanical maintenance • Covers basic troubleshooting, and a summary of the inspections required for minor Gas Turbine generator mechanical maintenance • Operation and maintenance personnel should attend together to develop a working relationship regarding the maintenance requirements • Also includes detail Level 1 maintenance work packages and familiarization of the O&M Manual • Does not include repair procedures for Gas Turbine components • Attended Aero Package Operation/Familiarization Course or having equivalent knowledge • Prior general knowledge of power plant systems and operation
E-AER10401 Gas Turbine - LMS100 Aero Package Operation/Familiarization✧		✓	✓	✓	✓		✓		✓	5	12	★ ◆	• Introduces the basic skills and knowledge required to ensure proper operation of the LMS100 gas turbine and their associated systems • Focuses on operator responsibilities such as startup, loading and monitoring during operation and interpretation of fault annunciation for suitable remedy • None

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-AER10402 Gas Turbine - LMS100 Package Maintenance✧		✓		✓			✓		✓	5	12	★ ◆	• Introduces operations and maintenance personnel to the routine preventative maintenance procedures and minor mechanical maintenance • Covers basic troubleshooting, and a summary of the inspections required for minor Gas Turbine generator mechanical maintenance • Operation and maintenance personnel should attend together to develop a working relationship regarding the maintenance requirements • Also includes detail Level 1 maintenance work packages and familiarization of the O&M Manual • Does not include repair procedures for Gas Turbine components • Attend Aero Package Operation/Familiarization Course or having equivalent knowledge • Prior general knowledge of power plant systems and operation • Participants MUST bring safety glasses and work shoes for tours
E-AER10403 Gas Turbine - LMS100 Engine Familiarization	✓	✓	✓	✓			✓			3	12	★ ◆	• Covers overview of Gas Turbine theory, construction, and operation • Introduces major components, typical alarms and troubleshooting • Technical background or relevant experience
E-AER10404 Gas Turbine - LMS100 Level 1 Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 1 Maintenance on the LMS100 Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of external components • Includes hands-on sessions on a LMS100 training engine, enhancing the practical experience of the participants • Attended LMS100 Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-AER10405 Gas Turbine - LMS100 Level 2 Cold Maintenance		✓		✓			✓	✓		7	8	US	• Provides the skills necessary to perform Level 2 Cold Maintenance on the LMS100 Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of internal components • Includes hands-on sessions on a LMS100 training engine, enhancing the practical experience of the participants • Attended LMS100 Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-AER10406 Gas Turbine - LMS100 Level 2 Hot Maintenance		✓		✓			✓	✓		7	8	US	• Provides the skills necessary to perform Level 2 Hot Maintenance on the LMS100 Gas Turbine • Cover detail maintenance procedures such as removal, inspection, and replacement of internal components • Includes hands-on sessions on a LMS100 training engine, enhancing the practical experience of the participants • Attended LMS100 Engine Familiarization course, or possesses equivalent knowledge • Reasonable level of mechanical maintenance skill and use of hand tools is required • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-AER10501 Gas Turbine - TM2500 Aero Package Operation/Familiarization✧		✓	✓		✓		✓		✓	5	12	★ ◆	• Introduces the basic skills and knowledge required to ensure proper operation of the TM2500 gas turbines and their associated systems • Focuses on operator responsibilities such as startup, loading and monitoring during operation • None
E-AER10601 Gas Turbine - TM2500+ Aero Package Operation/Familiarization✧		✓	✓		✓		✓		✓	5	12	★ ◆	• Introduces the basic skills and knowledge required to ensure proper operation of the TM2500+ gas turbines and their associated systems • Focuses on operator responsibilities such as startup, loading and monitoring during operation • None
E-AER10502 Gas Turbine - TM2500 Aero Package Maintenance✧		✓		✓			✓		✓	5	12	★ ◆	• Introduces operations and maintenance personnel to the routine preventative maintenance procedures and minor mechanical maintenance • Covers basic troubleshooting, and a summary of the inspections required for minor Gas Turbine generator mechanical maintenance • Operation and maintenance personnel should attend together to develop a working relationship regarding the maintenance requirements • Also includes detail Level 1 maintenance work packages and familiarization of the O&M Manual • Does not include repair procedures for Gas Turbine components • Attended Aero Package Operation/Familiarization Course or having equivalent knowledge • Prior general knowledge of power plant systems and operation
E-AER10602 Gas Turbine - TM2500+ Aero Package Maintenance✧		✓		✓			✓		✓	5	12	★ ◆	• Introduces operations and maintenance personnel to the routine preventative maintenance procedures and minor mechanical maintenance • Covers basic troubleshooting, and a summary of the inspections required for minor Gas Turbine generator mechanical maintenance • Operation and maintenance personnel should attend together to develop a working relationship regarding the maintenance requirements • Also includes detail Level 1 maintenance work packages and familiarization of the O&M Manual • Does not include repair procedures for Gas Turbine components • Attended Aero Package Operation/Familiarization Course or having equivalent knowledge • Prior general knowledge of power plant systems and operation

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-GAS10401 Gas Turbine - Familiarization for Power Plant Management	✓	✓	✓				✓	✓		5	12	★ ◆	• Introduces Gas Turbine Power Plant Fundamentals • Covers Power Plant Designation System, reading Process & Instrumentation Diagram (P&ID) • Gives an insight on Gas Turbine Operation with simulator support and maintenance overview • This course is for Legacy Alstom products only (GT13E2, GT24, GT26) • Technical background • Familiar with managing aspects of Power Plants
E-GAS12001 Gas Turbine - Operation✧		✓	✓				✓	✓	✓	10	12	★	• Develops a background in Gas Turbine-generator design, construction and operations of the unit installed at their plant • Provides detailed description and function of the Gas Turbine-generator major components, the auxiliary systems • Include the operator's responsibilities regarding systems operations, operational data acquisition, evaluation of anomalies through the use of classroom instruction and exercises, sitespecific process alarms and HMI control screens are explained • Learn to interpret fault annunciation and determine if it can be remedied by operator action or with the assistance of instrumentation and/or maintenance personnel • Focuses on the starting, loading, and specific operator checks of the various system parameters to ensure reliable operation of the Gas Turbine-generator unit, and the affect that operation has on major mechanical maintenance • May include site visits to familiarize personnel with the physical layout of the Gas Turbine generator, its auxiliaries and piping systems • Basic knowledge of Power plant equipment, systems and operation • Prior hands-on gas turbine equipment experience is recommended • Ability to read technical drawings • Reasonable computer skills
E-GAS22101 Gas Turbine - Operation E-Class (Advanced)		✓	✓				✓			5	12	★ ◆	• Designed to enhance GE E-class (7EA and 9E) Gas Turbine-generator operator knowledge and skills • Provides a detailed overview of Gas Turbine operating sequences and control and protection functions • Expands upon background in Gas Turbine-generator operation that improves the participant's ability to properly analyze operating problems and take the necessary corrective action • Focuses on the Gas Turbine and generator control and protection, the operational relationships of the compressor, combustion and turbine sections and generator systems • Minimal discussion on turbine auxiliary support systems • Prior Gas Turbine experience as control room or outside operator, I&C or Mechanical Technician • Have attended a GE Gas Turbine Operation course, or possesses equivalent knowledge • Technical background (Mechanical or Controls) • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-GAS22201 Gas Turbine - Operation F-Class (Advanced)		✓	✓				✓			5	12	★ ◆	• Designed to enhance GE F-class Gas Turbine-generator operator knowledge and skills • Provides a detailed overview of Gas Turbine operating sequences and control and protection functions • Expands upon background in Gas Turbine-generator operation that improves the participant's ability to properly analyze operating problems and take the necessary corrective action • Focuses on the Gas Turbine and generator control and protection, the operational relationships of the compressor, combustion and turbine sections and generator systems • Minimal discussion on turbine auxiliary support systems • Prior Gas Turbine experience as control room or outside operator, I&C or Mechanical Technician • Have attended a GE Gas Turbine Operation course, or possesses equivalent knowledge • Technical background (Mechanical or Controls) • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-GAS22501 Gas Turbine- Operation H-Class (Advanced)		✓	✓				✓			5	12	★ ◆	• Designed to enhance GE H-class Gas Turbine-generator operator knowledge and skills • Provides a detailed overview of Gas Turbine operating sequences and control and protection functions • Expands upon background in Gas Turbine-generator operation that improves the participant's ability to properly analyze operating problems and take the necessary corrective action • Focuses on the Gas Turbine and generator control and protection, the operational relationships of the compressor, combustion and turbine sections and generator systems • Minimal discussion on turbine auxiliary support systems • Prior Gas Turbine experience as control room or outside operator, I&C or Mechanical Technician • Have attended a GE Gas Turbine Operation course, or possesses equivalent knowledge • Technical background (Mechanical or Controls) • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisites listed above.
E-GAS20203 Gas Turbine - Operation Training on GT26 Simulator		✓	✓				✓		✓	2	6	★ ◆	• Introduces the basics about the HMI and working environment using simulator equipment • Reviews preparation steps for GT startup, checking the release criteria for startup • Covers Startup of the gas turbine (run-up, idle and load operation), handling different plant load conditions, understanding the concept of "hold points" • Addresses observing the key plant parameters, using the alarms, events and trend displays to analyze the process • Includes Operator actions under transient conditions (handling GT PLS, TRIP etc.) • Gas Turbine Operation experience or equivalent knowledge • Control System ALSPA or Advant IIT800xA (whichever applicable) operation training, experience or equivalent knowledge Note: Participants will have difficulty to follow this course content if they do not have the pre-requisites listed above.

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down	Duration in Days	Maximum # of Students	Location Options+	• Executive Summary • Prerequisites
E-GAS12002 Gas Turbine - Maintenance✧		✓		✓			✓		✓	5	12	★ ◆	• Offers a firm understanding of the basic maintenance requirements of GE heavy duty Gas Turbines and their auxiliary support systems installed at site • Provides participants a basic understanding of Gas Turbine construction, how it works and the maintenance requirements, troubleshooting and inspection procedures • Basic knowledge of power plant equipment, systems and operation • Prior hands-on plant maintenance experience is recommended • Reasonable computer skills
E-GAS20101 Gas Turbine - GT13E2 Inspection		✓		✓			✓		✓	10	12	★ ◆	• Covers preparation and setting up site for a C-inspection, planning manpower • Includes working with documentation: O&M manuals and test certificates • Overview of disassembly and reassembly of the turbine instrumentation, applying step by step sequences for disassembly, inspections, and reassembly of all turbine components, covers special tools for disassembly and reassembly • Includes alignment of the outer and inner casing to the rotor (radial rotor position), coupling alignment • Includes preparation work for start-up of the Gas Turbine and cleaning of systems, “motor roll” and for first ignition after the inspection • Mechanical background • Familiarity with the service or erection of power plants
E-GAS10102 Gas Turbine - GT13E2 Mechanical Systems & Components		✓		✓			✓		✓	7	12	★ ◆	• This course familiarizes personnel with detailed knowledge and operation of the GT13E2 • The training includes, handling of site documentation, description of all components and their function, description of all systems and their function • Able to interpret technical documents, such as Piping & Instrumentation Diagrams (P&ID) and drawings • Mechanical background • Familiar with the service of erection of power plants
E-GAS20201 Gas Turbine - GT26 Inspection (retractable EV Burner)		✓		✓			✓		✓	10	12	★ ◆	• Covers preparation and setting up site for C-inspection, planning manpower • Includes working with documentation: O&M manuals and test certificates • Overview of disassembly and reassembly of the turbine instrumentation, applying step by step sequences for disassembly, inspections, and reassembly of all turbine components, covers special tools for disassembly and reassembly • Includes alignment of the outer and inner casing to the rotor (radial rotor position), coupling alignment • Includes preparation work for start-up of the Gas Turbine and cleaning of systems, “motor roll” and for first ignition after the inspection • Mechanical background • Familiar with the service or erection of power plants

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Course ID# & Title	Plant Personnel						Delivery Method			Duration in Days	Maximum # of Students	Location Options+	
(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
E-GAS10204 Gas Turbine - GT26 Mechanical Systems & Components (retractable EV Burner)		✓		✓			✓		✓	10	12	★ ◆	• Covers GT26 Thermal Block: main components and parts dimensions, weight and function • Overview of the Gas Turbine systems - purpose, design and function of the following systems: lube oil system, jacking oil system, power oil system, fuel gas system, fuel oil system, NOx water system, air intake system, variable inlet guide vanes, blow off valves • Includes purpose, design and function of the Gas Turbine main components: compressor, combustion chamber, turbine, rotor, blades and vanes, bearings, instrumentation to the thermal block, sealing and cooling air • Includes discussion on the use of operation and maintenance manuals: assembly and disassembly procedures, working with quality documentation and test certificates, exercises finding the required documents in the maintenance manual • Able to interpret technical documents such as the Piping & Instrumentation Diagram (P&ID) and drawings • Mechanical background • Familiar with the service or erection of power plants
E-GAS10205 Gas Turbine - GT24/GT26 Routine Maintenance		✓		✓			✓	✓		5	12	CH	• Cover the design and function of an annular combustor engine of GT 24 and GT 26 • Overview of the purpose and the duration of the three types of inspection on the Gas Turbine (A, B, C) - Describe and carry out the required measurements before, during and after an A, B or C-inspection overview • Describe the correct use of the relevant documentation such as Test Certificates, Procedures and O&M Manuals, select and correctly use of the relevant special tools, for performing the tasks required for an inspection, the function of the installed Instrumentation • Perform in-situ Radial Rotor Position measurements, calculations and possible adjustments, describe and apply the disassembly and re-assembly of, EV Burners, EV Lances, SEV Lances, Flame Monitors, Pulsation Probes EV and SEV, Ignition Probes, in-situ Boroscope preparations and inspections • Apply all EHS procedures relevant to the task • Basic knowledge of power plant equipment, systems and operation • Experience in power plant and/or general equipment maintenance

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E-STM10702 Steam Turbine - Conversion/Modification/ Upgrade Operation with Controls Upgrade		✓	✓	✓		✓	✓			5	12	★ ◆	• Prepares both Operations and Maintenance personnel of a GE Steam Turbine which has just completed a major upgrade to help achieve peak availability, reliability and production • Discuss major components: site specific turbine-generator including auxiliaries • Review the HMIs, monitoring capabilities, process alarms, start-up and shutdown processes & permissive, P&ID's and devices summaries • Prepare to handle complex process situations by learning to detect the early warning signs, root causes of the most common operational problems are examined, and corrective actions are discussed • Basic knowledge of power plant equipment, systems and operation • Ability to read technical documents • Reasonable computer skills
E-STM10801 Steam Turbine - Maintenance✧		✓		✓			✓			5	12	★ ◆	• Provides a thorough understanding of the maintenance requirements for GE Steam Turbines and their support systems to facilitate planning and safe execution of daily inspections and regular maintenance activities • Discussion on scheduling and preparation for the minor and major inspections • Covers impact of operation on maintenance, routine maintenance, and inspections • Basic knowledge of power plant equipment and systems • Prior hands-on plant maintenance experience is recommended • Reasonable computer skills
E-STM10802 Steam Turbine - Operation✧		✓	✓				✓		✓	10	12	★ ◆	• Designed to enable operators, engineers, supervisors, and maintenance personnel to safely operate a GE manufactured Steam Turbine-generator unit • Develops a background in Steam Turbine - generator process design specifics which will enable participants to properly analyze and effectively troubleshoot operating issues • Provides recommended design, starting and loading specifics, Operator's daily and weekly tests along with all site-specific process alarms and control HMI screens • Emphasis on the operator's understanding of design functionality and operation of the various auxiliary systems, control systems and operating parameters • Basic knowledge of power plant equipment, systems and operation • Prior hands-on steam plant experience is recommended • Ability to read technical documents • Reasonable computer skills
E-STM10803 Steam Turbine - Operation (Basic)		✓	✓				✓		✓	5	12	★ ◆	• Designed to enable plant personnel to safely operate a GE manufactured steam turbine-generator unit • Develops a background in steam turbine-generator operation which will enable participants to analyze operating problems and take the corrective actions • Provides recommended starting and loading specifics, Operator's daily and weekly tests along with all Site-Specific process alarms and control HMI screens • Develops operator's basic understanding of the various auxiliary systems, control systems and operating parameters • Basic knowledge of power plant equipment, systems and operation • Prior hands-on steam plant experience is recommended • Ability to read technical documents • Reasonable computer skills

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down	Duration in Days	Maximum # of Students	Location Options+	• Executive Summary • Prerequisites
E-STM20701 Steam Turbine - Operation (Advanced)		✓	✓				✓			5	12	★ ◆	• Help to develop the skills needed to operate GE Steam Turbine for peak availability, reliability and production • Discussion on major components and students explore: turbine-generator auxiliaries, HMIs, process alarms, and start-up and shutdown processes • Review of auxiliary systems in detail by discussing unit specific process alarms, HMI monitoring capability, P&IDs and devices summaries, learn the full potential and limits of all Steam Turbine support systems • Operators are prepared to handle complex process situations by learning to detect the early warning signs of trouble • The root causes of the common operational problems are reviewed and potential corrective actions are discussed • Basic knowledge of power plant equipment, systems and operation • Prior steam turbine training, hands-on experience or equivalent knowledge • Ability to read technical documents • Reasonable computer skills Note: Participants will have difficulty to follow this course content if they do not have the prerequisites listed above.

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E-BOI10302 Heat Recovery Steam Generator (HRSG) - Operation & Maintenance (GE Engineered)✧		✓	✓	✓		✓	✓		✓	3	12	★ ◆	• Designed for GE engineered HRSG equipment only • Familiarize with HRSG architecture and its auxiliary systems • Covers operator's daily responsibilities, tracking and troubleshooting of typical issues including water chemistry • Reviews inspection and maintenance requirements of HRSG • Basic knowledge of power plant • Power plant operational experience or training • Reasonable computer skill

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E-GEN10504 Generator - Hydrogen Cooled Operation & Auxiliary Systems		✓	✓	✓	✓	✓	✓		✓	3	8	★ CH KW	• Provides a description of hydrogen cooled generator: functional description of a generator, description of excitation equipment, normal operation and monitoring • Includes Generator Cooling System GRH or MKA: functional description of a generator, freparation and start up, normal operation and monitoring • Includes Generator Seal Oil System GHE or MKW: functional description of a generator, description of excitation equipment, normal operation and monitoring • Includes Generator Gas System GRV or MKG: functional description, preparation, scavenging air and CO2, filling with hydrogen or draining, scavenging the H2 and CO2, operation and monitoring • Includes Generator Stator Water System GST or MKF: functional description of a generator, description of excitation equipment, normal operation and monitoring • Familiarity with the assembly and operation of the generator and the auxiliary systems • Technical background or relevant experience
E-GEN10403 Generator - Water & Hydrogen Cooled Operation & Maintenance of Auxiliary Systems		✓	✓	✓	✓	✓	✓			5	12	★ ◆	• Cover and explain the layout and function of the generator auxiliaries; H2-cooling system triple circuit seal oil system, water cooling system, describe from memory the processes of gas sealing and gas extracting from the seal oil by means of the P&ID and the O&M manual • Carry out maintenance-related procedures such as; purging the generator and the auxiliary systems, regenerating the H2-gas dryer, change-over filter cartridges • List from memory the operating parameters of the cooling system and its auxiliary systems (differential-pressure control, core monitoring, gas and water purity meter) and state their permissible ranges • List the H2-specific safety rules and measures for operation of and maintenance on H2-cooled generators • Basic knowledge of power plant equipment and systems • Experience with electromechanical systems and components • Technical background (Electrical or Mechanical)
E-GEN10301 Generator - Mechanical Systems & Components		✓		✓			✓		✓	5	10	★ ◆	• Discusses basic types of power plant and their main functional units • Covers functional principle of generators, electrical quantities and ratings of turbo generators, generator type designations • Includes design features of air-cooled and hydrogen-cooled turbo generators, design of stator and rotor functional units (magnetic cores, windings, insulation systems, corona protection, wedging, winding supports, rotor retaining rings, connections) • Overview of the cooling systems of stator and rotor (air-water, water, hydrogen), and the associated sealing systems • Overview of instrumentation and monitoring, excitation system, winding and rewinding of stator and rotor, theoretical education of DVV, theoretical education of phase separation replacement, practical training of phase separation replacement • Knowledge of power plants • Able to read technical documents
E-GEN10903 Generator - Hydrogen Cooled Auxiliaries Maintenance		✓		✓			✓		✓	3	10	★ ◆	• Provides an overview of O&M documents such as descriptions, P&IDs, P-FUPs, setting lists, Inspection and Test Plans, Test Certificates for commissioning (and erection) and other procedures • Includes manuals and data sheets of components and sub-systems, practical examples and experience exchange • Overview of mandatory safety rules and regulation on all involved systems (gas, fire, pressure) • Prior experience related to the service or erection of major components • Ability to read technical drawings and documents • Technical background (Mechanical)

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E-GEN10901 Generator - Hydrogen Cooling System Operation & Maintenance		✓	✓	✓	✓	✓	✓			3	12	★ ◆	• Discussion on H2-related safety rules • Overview of the gas cooling system with its gas unit: configuration, components, and function • Overview of the seal oil system with its seal oil unit: configuration, components, and function • Includes Instrumentation and Monitoring, interpretation of process value readings such as pressure, flow rates, gas purity, humidity, alarms and fault handling scenarios • Covers Maintenance procedures: purging of the generator, replacement of oil filter cartridges, regeneration of the gas dryer • Discussion on cooling and humidification of the brush-gear cooling air • Explains periodic checks of levels, pressures, flow rates, temperatures, gas purity, gas leakage, gas reserves and periodic functional checks of the various pump units (readiness for operation, change-over functions) • Experience in operation and maintenance of large power plants • Ability to read technical documents
E-GEN10102 Generator - Air or Hydrogen Cooled for Gas Turbine Operation & Maintenance		✓	✓	✓	✓		✓		✓	5	8	◆	• Covers the components, architecture, operation and maintenance of the air- or hydrogen Cooled generator (as applicable) • Functional description of the excitation System, including operation, settings and troubleshooting • Functional description of the protection System, including operation, maintenance and troubleshooting • Technical background (Electrical) • Experience with electromechanical systems and components is recommended • Basic knowledge of excitation regulation and electrical protection Note: Participants will have difficulty to follow this course content if they do not fulfill the prerequisities listed above.

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O-CCP10205 Combined Cycle - Operation Familiarization		✓	✓	✓			✓			5	15	KW US	• Offers a firm understanding of the basic operations of GE Combine Cycle Plants and is designed for those persons with no or limited knowledge of Combine Cycle Plants • Gives participants an understanding of basic Combine Cycle Power Plants operations as well as a fundamental knowledge on plant start-up, normal operations, shutdown and abnormal operations • Emphasis upon safe, efficient power plant operations • None

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O-ELX10101 Excitation - EX2000 Generator Excitation Maintenance		✓			✓	✓	✓	✓		5	12	US	• Offers training in the skills needed to do basic operation, maintenance and troubleshooting on an EX2000 excitation system • Learn how to operate the EX2000 Exciter, how to use the Diagnostic Keypad and GE Control System Toolbox to troubleshoot problems • Consists of classroom instruction, practical lab exercises using EX2000 simulators and actual EX2000 Exciters • Ability to work with excitation systems • The student should have reasonable computer skills
O-ELX10201 Excitation - EX2100 Generator Excitation Maintenance	✓	✓	✓		✓	✓	✓	✓		5	12	◆	• Offers training in the skills needed to do basic operation, maintenance and troubleshooting on an EX2100 excitation system • Learn how to operate the EX2100 Exciter, how to use the Diagnostic Keypad and GE Control System Toolbox to troubleshoot problems • Consists of classroom instruction, practical lab exercises using EX2100 simulators and actual EX2100 Exciters • Ability to work with excitation systems • The student should have reasonable computer skills.
O-ELX20201 Excitation - EX2100 Generator Excitation Maintenance (Advanced)	✓	✓	✓		✓	✓	✓	✓		5	12	◆	• Provides background in advanced EX2100 Digital Excitation System maintenance and troubleshooting using the Control System Toolbox • The training is divided equally between classroom theory and practical lab exercises • Consists of classroom presentations, discussions and using EX2100 hardware to complete lab exercises troubleshooting and maintenance techniques • The student should have reasonable computer skills • Participants should bring a copy of their EX2100 system elementary drawing with them to class • Recommended prior cours(s): • Excitation - EX2100 Generator Excitation Maintenance (O-ELX10201)
O-ELX10301 Excitation - EX2100e Generator Excitation Maintenance✧		✓			✓	✓	✓	✓		5	12	◆	• Offers training in the skills needed to do basic operation, maintenance and troubleshooting on an EX2100e excitation system • Learn how to operate the EX2100e Exciter from HMI and local keypad and how to use the GE Control System ToolboxST™ to troubleshoot problems • Consists of a classroom instruction and lab exercises using EX2100e simulators and actual EX2100e Exciters • Reasonable computer skills
D-ELX10301 Excitation - EX2100e Generator Excitation Maintenance - Distance Learning	✓	✓	✓		✓	✓				5	10	💻	• Enhance skills necessary to operate, maintain, and troubleshoot an EX2100e Static Exciter and Regulator system and the related communication networks • Consists of remote lecture, classroom exercises, operation overview, basic troubleshooting, and maintenance procedures • Reasonable computer skills • Desktop/laptop with high speed internet connection
O-ELX20301 Excitation - EX2100e Generator Excitation Maintenance (Advanced)✧		✓			✓	✓	✓			5	12	◆	• Provides background in EX2100e Digital Excitation System operation, maintenance and troubleshooting using the ToolboxST™ application program • Consists of classroom theory and practical lab exercises • Includes EX2100e hardware for lab exercises which are designed to teach EX2100e operation, troubleshooting and maintenance techniques • Previous experience with EX2000 or EX2100 or EX2100e • Reasonable computer skills

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O-ELX11002 Excitation - LS2100 LCI for Turbine Static Start	✓	✓	✓		✓	✓	✓	✓		4	12	◆	• Designed for engineering and maintenance personnel who configure and maintain the LCI™ static starter • Includes hardware identification and Control System Toolbox™ communications, understanding the monitor commands • Utilizes a simulator, lectures and hands-on exercises are used to maximize student material retention • Electrical experience / education • Reasonable computer skills • Participants should bring a copy of their Innovation Series LCI™ static starter system elementary drawing with them to class
O-ELX11003 Excitation - LS2100e LCI for Turbine Static Start		✓			✓	✓	✓	✓		4	12	◆	• Designed for engineering and maintenance personnel who configure, and maintain the LCI™ static starter • Includes hardware identification, Control System ToolboxST™ communications, UCSB programming, and Alarm Viewer configuration • Utilizes simulators, and a walk through (if available) of your full functioning LCI™ starter along with lectures and hands-on exercises are used to reinforce retention of the subject • Electrical experience / education • Reasonable computer skills • Participants should bring a copy of their Innovation Series LCI™ static starter system elementary drawing with them to class
O-CON13301 Control System - Mark VI Operation		✓			✓	✓	✓	✓		10	12	US	• Provides training on the essential elements of the Mark VI turbine control system • Includes instruction on the hardware and software components of the Mark VI control system and its interface system (HMI), alarm troubleshooting and LVDT calibration • Includes, practical exercises on Mark VI equipment • Basic understanding of turbine equipment and its operation (gas or steam) • Familiarity with control system basics
O-CON23301 Control System - Mark VI Maintenance (Advanced)		✓			✓	✓	✓	✓		5	10	US	• Provides the knowledge required to properly maintain your Mark VI Control keeping your units available and reliable, 100% hands-on, realistic and practical • Addresses the following questions: a. What if your unit is in a critical condition? It's shutting down, running back, or worse it has tripped or you cannot obtain a ready to start. Using your existing troubleshooting skills or those gained from the Advanced Mark VI Troubleshooting course, you have isolated the cause to a singular device. b. How is it to be properly calibrated or replaced? Should you, or how do you, force its variable into a safe state so it can be replaced and what are the consequences? You have received an alarm indicating a valve failure. c. What are the differences between pneumatic and hydraulic? You have determined the probable cause of a diagnostic alarm; open or shorted circuit, blown fuse, voter mismatch. d. How is it to be repaired? • Not for customers with aeroderivative applications • GE Mark*VI Control Owners • Recommended prior course(s): • Control System - Mark VI Troubleshooting (Advanced) (O-CON23302) • Or those who possess a high degree of troubleshooting skills

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O-CON23302 Control System - Mark VI Troubleshooting (Advanced)		✓			✓	✓	✓	✓		5	12	US	• Designed to test and sharpen troubleshooting and operations skills for the purpose of trip reduction and recovery, maintaining optimum performance and availability • Gain the fundamental skills of a competent Control Room Operator and those skills of an experienced Mark VI TA • Covers operating conditions from typical to extreme situations and is 100% hands-on training that is realistic and practical • Fundamental operational and controls skills, with a moderate level of computer literacy are recommended • Recommended prior course(s): • Control System - Mark VI Operation (O-CON13301) • Or possess equivalent knowledge, including experience with Toolbox
O-CON13405 Control System - Mark VIe Familiarization (Advanced Viewer)	✓	✓			✓	✓	✓	✓		5	18	◆	• Familiarizes students with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the control system and associated equipment • Includes training material derived from actual Mark VIe installed systems, lessons followed by hands-on labs that are performed on an HMI computer specially programmed to simulate a turbine, labs are progressively challenging and assist the students in learning the basics and building to intermediate skills including alarm and system troubleshooting • Basic control system knowledge
D-CON13405 Control System - Mark VIe Familiarization (Advanced Viewer) - Distance Learning	✓	✓			✓	✓		✓		5	6	💻	• Familiarizes students with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the control system and associated equipment • Includes training material derived from actual Mark VIe installed systems, lessons followed by hands-on labs that are performed on an HMI computer specially programmed to simulate a turbine, labs are progressively challenging and assist the students in learning the basics and building to intermediate skills including alarm and system troubleshooting • Basic control system knowledge
O-CON13406 Control System - Mark VIe Familiarization (ActivePoint™)	✓	✓			✓	✓	✓	✓		5	18	◆	• Familiarizes students with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the control system and associated equipment • Includes training material derived from actual Mark VIe installed systems, lessons followed by hands-on labs that are performed on an HMI computer specially programmed to simulate a turbine, labs are progressively challenging and assist the students in learning the basics and building to intermediate skills including alarm and system troubleshooting • Basic control system knowledge
D-CON13406 Control System - Mark VIe Familiarization (ActivePoint™) - Distance Learning	✓	✓			✓	✓		✓		5	6	💻	• Familiarizes students with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the control system and associated equipment • Includes training material derived from actual Mark VIe installed systems, lessons followed by hands-on labs that are performed on an HMI computer specially programmed to simulate a turbine, labs are progressively challenging and assist the students in learning the basics and building to intermediate skills including alarm and system troubleshooting • Basic control system knowledge

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O-CON13407 Control System - Mark VIe Intermediate (Advanced Viewer)		✓			✓	✓	✓	✓		5	18	◆	• Familiarizes students with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the control system and associated equipment • Includes training material derived from actual Mark VIe control migration from Mark V control installed systems, lessons followed by hands-on labs that are performed on an HMI computer specially programmed to simulate a turbine, labs are progressively challenging and assist the students to learn intermediate skills including alarm and system troubleshooting CIMPLICITY™ Software, editing and valve calibration • Control system experience • Recommended prior course(s): Control System - Mark VIe Familiarization (Advanced viewer) (O-CON13405 or D-CON13405)
D-CON13407 Control System - Mark VIe Intermediate (Advanced Viewer) - Distance Learning		✓			✓	✓		✓		5	8	💻	• Familiarizes students with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the control system and associated equipment • Includes training material derived from actual Mark VIe control migration from Mark V control installed systems, lessons followed by hands-on labs that are performed on an HMI computer specially programmed to simulate a turbine, labs are progressively challenging and assist the students to learn intermediate skills including alarm and system troubleshooting CIMPLICITY™ Software, editing and valve calibration • Control system experience • Recommended prior course(s): Control System - Mark VIe Familiarization (Advanced viewer) (O-CON13405 or D-CON13405)
O-CON13408 Control System - Mark VIe Intermediate (ActivePoint™)		✓			✓	✓	✓	✓		5	18	◆	• Familiarizes students with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the control system and associated equipment • Includes training material derived from actual Mark VIe control migration from Mark V control installed systems, lessons followed by hands-on labs that are performed on an HMI computer specially programmed to simulate a turbine, labs are progressively challenging and assist the students to learn intermediate skills including alarm and system troubleshooting, CIMPLICITY™ Software, editing and valve calibration • Control system experience • Recommended prior course(s): Control System - Mark VIe Familiarization (ActivePoint™) (O-CON13406 or D-CON13406)
D-CON13408 Control System - Mark VIe Intermediate (ActivePoint™) - Distance Learning		✓			✓	✓		✓		5	8	💻	• Familiarizes students with the hardware and software components, provides detailed knowledge to troubleshoot and maintain the control system and associated equipment • Includes training material derived from actual Mark VIe control migration from Mark V control installed systems, lessons followed by hands-on labs that are performed on an HMI computer specially programmed to simulate a turbine, labs are progressively challenging and assist the students to learn intermediate skills including alarm and system troubleshooting, CIMPLICITY™ Software, editing and valve calibration • Control system experience • Recommended prior course(s): Control System - Mark VIe Familiarization (ActivePoint™) (O-CON13406 or D-CON13406)

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Course ID# & Title	Plant Personnel						Delivery Method			Duration in Days	Maximum # of Students	Location Options+	
(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
O-CON23401 Control System - Mark VIe Maintenance (Advanced)		✓			✓	✓	✓	✓		5	12	CH KW US	• Provides the knowledge required to properly maintain your Mark VIe Control keeping your units available and reliable, 100% hands-on, realistic and practical • Addresses the following questions: a. What if your unit is in a critical condition? It's shutting down, running back, or worse it has tripped or you cannot obtain a ready to start. Using your existing troubleshooting skills or those gained from the Advanced Mark VI Troubleshooting course, you have isolated the cause to a singular device. b. How is it to be properly calibrated or replaced? Should you, or how do you, force its variable into a safe state so it can be replaced and what are the consequences? You have received an alarm indicating a valve failure. c. What are the differences between pneumatic and hydraulic? You have determined the probable cause of a diagnostic alarm; open or shorted circuit, blown fuse, voter mismatch. d. How can it be stroked, tested, calibrated? • Not for customers with aeroderivative applications. • Recommended prior course(s): • Control System - Mark VIe Familiarization (O-CON13405, D-CON13405, O-CON13406, or D-CON13406) • Control System - Mark Ve / VIe Troubleshooting Advanced (O-CON33401) • Or those who possess a high degree of troubleshooting skills.
O-CON33401 Control System - Mark Ve / VIe Troubleshooting (Advanced)		✓			✓	✓	✓	✓		5	12	◆	• Designed to test and sharpen troubleshooting and operations skills for the purpose of trip reduction and recovery, maintaining optimum performance and availability • Will gain the fundamental skills of a competent Control Room Operator and an experienced Mark VIe Control TA, including how to properly start and stop a unit and how to respond to different levels of alarms throughout operation, follow an alarm through using the ToolboxST™ software to find the singular field device that caused the alarm and much more, GE documentation will be taught and used throughout the course, the same way your unit is designed to be operated and maintained • Fundamental operational and controls skills recommended • Recommended prior course(s): • Control System - Mark* VIe Familiarization (O-CON13405, D-CON13405, O-CON13406, or D-CON13406) • Or possesses equivalent knowledge, including experience with ToolboxST™
O-CON13401 Control System - Mark VIe Migration from Mark V, Familiarization		✓			✓	✓	✓	✓		5	18	US	• Familiarizes students with the hardware and software components, provide detailed knowledge to troubleshoot and maintain the control system and associated equipment • Includes training material derived from actual Mark VIe control migration from Mark V control installed systems, lessons followed by hands-on labs that are performed on an HMI computer specially programmed to simulate a turbine, labs are progressively challenging and assist the students to learn the basics and build up to intermediate skills including alarm and system troubleshooting • Control system experience
O-CON13501 Control System - Introduction to Mark VIeS Functional Safety System		✓			✓	✓	✓	✓		5	12	US	• Introduces the fundamentals of the Mark VIeS Functional Safety System • Familiarity with Safety applications, PLC, and HMI communication experience

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O-CON20701 Control System - Mark VIe (Aero) Operation, Maintenance & Troubleshooting		✓	✓		✓	✓	✓	✓		10	8	US	• Introduces routine preventative maintenance procedures of the support systems and to the major electrical and control system maintenance required to attain high levels of availability, and reliability from the Aeroderivative Gas Turbine • Covers functional sensor and actuator description, troubleshooting, and a summary of calibration and inspections required for Gas Turbine package electrical and control system maintenance • Operating and maintenance personnel should attend this course together to develop a working relationship regarding the maintenance requirements of the unit, and how unit operation may affect these requirements • Does not include repair procedures for Gas Turbine components • Basic understanding of Gas Turbine equipment and its operation • Familiarity with control system basics
O-CON10801 Control System - Woodward (Aero) Operation, Maintenance & Troubleshooting		✓	✓		✓	✓	✓	✓		5	8	US	• Introduces plant maintenance personnel to the Woodward MicroNet™ and MicroNet Plus™ turbine control systems • Designed for platforms that have CPUs with an Ethernet port(s) and do not have a 2-line display, course content includes the hardware layout of typical systems; from chassis to I/O cards to field termination modules • Provides training on Graphical Application Programmer (GAP) software navigation, Woodward software tools will be used to evaluate fuel control, sequence logic, and turbine-based alarms • Overview of Control actuator and other I/O calibration procedures will be discussed, additional class work includes general information on the operator interface (HMI) • Basic understanding of Gas Turbine equipment and its operation • Familiarity with control system basics
O-CON13602 Control System - RX3i Operation, Maintenance & Troubleshooting		✓	✓		✓	✓	✓	✓		5	8	US	• Introduces plant maintenance personnel to the RX3i turbine control systems • Includes the hardware layout of typical systems; from chassis to I/O cards to field termination modules • Software tools will be used to evaluate fuel control • Calibration procedures will be discussed • Includes general information on the operator interface (HMI) • Basic understanding of Gas Turbine equipment and its operation • Familiarity with control system basics
O-CON11401 Control System - Aero DLE Familiarization and Mapping Overview		✓	✓				✓			3	12	◆	• Offers an insight into the design philosophy and software of the DLE control system • Includes overview of the “mapping” of the gas turbine control schedules, cause and effect information, interpretation of alarm data and troubleshooting of alarms • In addition, the course includes a “lessons learned” section and practice solving actual field problems • Basic understanding of gas turbine equipment and its operation • Familiarity with control systems • Ability to speak and understand English • Reasonable computer skills

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O-CON13409 Control System - Control Server & Thin Client Familiarization	✓	✓	✓			✓	✓			2	6	US	• This training course will explain the structure and use of the Control Server system. It will provide explanation of the virtual environment and the physical hardware used to host the vHMIs • Control system experience • Computer literacy
D-CON13409 Control System - Control Server & Thin Client Familiarization - Distance Learning	✓	✓	✓			✓				2	6	💻	• This training course will explain the structure and use of the Control Server system. It will provide explanation of the virtual environment and the physical hardware used to host the vHMIs • Control system experience • Computer literacy
O-CON10402 Control System - ALSPA Control System Fundamentals		✓	✓		✓	✓	✓	✓		5	12	◆	• This course familiarizes participants with the architecture of ALSPA control system and components & supervisory functions of ALSPA HMI, which enables them to control and monitor the plant process • This course provides an overview of the ALSPA control system hardware and CONTROCAD engineering tool • This course will also enable the participant to do basic application programming and basic HMI modification and, do basic diagnostic of ALSPA control system using various tools e.g. ALSPA Maintenance Server. This will also enable participants to read and understands basic project documentations • At the end of the course there will a site visit, where a brief demonstration of the components/topics discussed in the classroom will be provided • Knowledge of power plants • Fundamental skills regarding control systems • Able to read technical documents
O-CON20401 Control System - ALSPA Control System Intermediate		✓	✓		✓	✓	✓	✓		5	12	◆	• This course familiarizes participants with advanced level programming of ALSPA CONTROCAD engineering tool and, provides an overview of ALSPA HMI configuration • This course will enable them to set up ALSPA HMI for first time use. They will learn how to perform online forcing and setting update to make small modification in logic, without disturbing plant operation. They will learn about MFC3000 firmware • At the end of the course there will a site visit, where a brief demonstration of the components/topics discussed in the classroom will be provided • Attended course: O-CON10402 Control System – ALSPA Control System Fundamentals
O-CON30401 Control System - ALSPA Control System Advanced		✓	✓		✓	✓	✓	✓		5	12	◆	• This course familiarizes participants with redundant operation of MFC3000 controllers. Participants will learn about installation of new MFC3000 controller, ASLPA HMI and CONTROCAD tools. Acronis backup image procedure will also be discussed • They will learn how to do online modification in application code of a running MFC3000 controller. Limitation of online modification and its consequences will also be discussed. They will learn about MFC3000 firmware • Participants will learn basic concept of Profibus. Profibus system configuration and Profibus advanced troubleshooting using ProfiTrace tool will also be discussed • Participants will also have a chance to learn DEPP2000 • At the end of the course there will a site visit, where a brief demonstration of the components/topics discussed in the classroom will be provided • Attended course: O-CON20401 Control System – ALSPA Control System Intermediate

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O-CON33404 Control System - Foundation Fieldbus✧		✓	✓			✓		✓		5	4	US	• Foundation Fieldbus (FFB) is an open source digital standard for field devices that uses digital communication in place of traditional analog communication. • This course will introduce you to FFB as it pertains to a Mark VIe control system. You will learn how FFB devices are field wired back to a Mark VIe control panel and how the devices communicate their data to application code within ToolboxST. Examples using some of the most commonly used FFB devices on a GE turbine will be reviewed. • Throughout the course, you will be introduced to hardware configurations, linking hardware to software, and basic troubleshooting from within ToolboxST. Virtual HMI's will be used allowing trainees to navigate FFB configurations within ToolboxST. • Ability to understand and speak English • Basic turbine operations experience • Computer literacy • Familiarity with the Mark Vie Control System and ControlST or be taking this training module as part of a Mark Vie training program

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O-AER10101 Gas Turbine - LM2500 & LM2500+ Aero Package Operation/Familiarization		✓	✓	✓	✓		✓			5	15	KW US	• Covers topics from basic Gas Turbine theory to detailed turbine operation to ensure consistent, trouble-free performance from the engine and its associated equipment • Develops a background in Gas Turbine operation that enables participants to analyze operating problems properly and take the necessary corrective action • Emphasizes the operator's responsibilities with regard to auxiliary systems, operational data taking and evaluation • Interprets fault annunciation and how to determine if the annunciated fault can be remedied by operator action or by the assistance of instrumentation and/or maintenance personnel, focuses on package familiarization, starting, loading, and specific operator checks of the various turbine support and auxiliary systems to ensure safe and reliable operation of the Gas Turbine • None
D-AER10101 Gas Turbine - LM2500 & LM2500+ Aero Package Operation/Familiarization - Distance Learning		✓	✓	✓	✓					5	8	💻	• Covers topics from basic Gas Turbine theory to detailed turbine operation to ensure consistent, trouble-free performance from the engine and its associated equipment • Develops a background in Gas Turbine operation that enables participants to analyze operating problems properly and take the necessary corrective action • Emphasizes the operator's responsibilities with regard to auxiliary systems, operational data taking and evaluation • Interprets fault annunciation and how to determine if the annunciated fault can be remedied by operator action or by the assistance of instrumentation and/or maintenance personnel, focuses on package familiarization, starting, loading, and specific operator checks of the various turbine support and auxiliary systems to ensure safe and reliable operation of the Gas Turbine • None
O-AER10105 Gas Turbine - LM2500 Engine Familiarization	✓	✓	✓	✓			✓			3	15	KW US	• Covers basic Gas Turbine theory, construction, and operation • Focuses is on basic turbine construction, major components, and operation • Technical background or relevant experience
D-AER10105 Gas Turbine - LM2500 Engine Familiarization - Distance Learning	✓	✓	✓	✓						3	8	💻	• Covers basic Gas Turbine theory, construction, and operation • Focuses is on basic turbine construction, major components, and operation • Technical background or relevant experience
O-AER10106 Gas Turbine - LM2500 Level 1 Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 1 Maintenance on the Gas Turbine • Includes hands-on maintenance procedures such as removal, adjustment, and replacement of external parts • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM2500 Engine Familiarization (O-AER10105)
O-AER10104 Gas Turbine - LM2500 Level 2 Cold Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 2 Cold Maintenance on the Gas Turbine • Includes hands-on maintenance procedures such as removal, inspection, and replacement of internal parts • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM2500 Engine Familiarization (O-AER10105)

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O-AER10103 Gas Turbine - LM2500 Level 2 Hot Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 2 Hot Maintenance on the Gas Turbine • Includes hands-on maintenance procedures such as removal, inspection, and replacement of internal parts • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM2500 Engine Familiarization (O-AER10105)
O-AER10102 Gas Turbine - LM2500 Borescope Inspection		✓		✓			✓	✓		2	8	US	• Familiarizes the procedures required to assess the operational condition of internal Gas Turbine components using borescope equipment • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM2500 Engine Familiarization (O-AER10105)
O-AER10203 Gas Turbine - LM2500+/G4 Engine Familiarization	✓	✓	✓	✓			✓			3	15	KW US	• Covers basic Gas Turbine theory, construction, and operation • Focuses is on basic turbine construction, major components, and operation • Technical background or relevant experience
D-AER10203 Gas Turbine - LM2500+/G4 Engine Familiarization - Distance Learning	✓	✓	✓	✓						3	8	💻	• Covers basic Gas Turbine theory, construction, and operation • Focuses is on basic turbine construction, major components, and operation • Technical background or relevant experience
O-AER10204 Gas Turbine - LM2500+ Level 1 Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 1 Maintenance on the Gas Turbine • Includes hands-on maintenance procedures such as removal, adjustment, and replacement of external parts • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM2500+ Engine Familiarization (O-AER10203 or D-AER10203)
O-AER10205 Gas Turbine - LM2500+ Level 2 Cold Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 2 Cold Maintenance on the Gas Turbine • Includes hands-on maintenance procedures such as removal, inspection, and replacement of internal parts • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM2500+ Engine Familiarization (O-AER10203 or D-AER10203)
O-AER10202 Gas Turbine - LM2500+ Level 2 Hot Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 2 Hot Maintenance on the Gas Turbine • Includes hands-on maintenance procedures such as removal, inspection, and replacement of internal parts • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM2500+ Engine Familiarization (O-AER10203 or D-AER10203)

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O-AER10201 Gas Turbine - LM2500+ Borescope Inspection		✓		✓			✓	✓		2	8	US	• Familiarizes the procedures required to assess the operational condition of internal Gas Turbine components using borescope equipment • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM2500+ Engine Familiarization (O-AER10203 or D-AER10203)
O-AER10301 Gas Turbine - LM6000 Aero Package Operation/Familiarization		✓	✓	✓	✓		✓			5	15	KW US	• Covers topics from basic Gas Turbine theory to detailed turbine operation to ensure consistent, trouble-free performance from the engine and its associated equipment • Develops a background in Gas Turbine operation that enables participants to analyze operating problems properly and take the necessary corrective action • Emphasizes the operator's responsibilities with regard to auxiliary systems, operational data taking and evaluation • Interprets fault annunciation and how to determine if the annunciated fault can be remedied by operator action or by the assistance of instrumentation and/or maintenance personnel, focuses on package familiarization, starting, loading, and specific operator checks of the various turbine support and auxiliary systems to ensure safe and reliable operation of the gas turbine • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • None
D-AER10301 Gas Turbine - LM6000 Aero Package Operation/Familiarization - Distance Learning		✓	✓	✓	✓					5	8	💻	• Covers topics from basic Gas Turbine theory to detailed turbine operation to ensure consistent, trouble-free performance from the engine and its associated equipment • Develops a background in Gas Turbine operation that enables participants to analyze operating problems properly and take the necessary corrective action • Emphasizes the operator's responsibilities with regard to auxiliary systems, operational data taking and evaluation • Interprets fault annunciation and how to determine if the annunciated fault can be remedied by operator action or by the assistance of instrumentation and/or maintenance personnel, focuses on package familiarization, starting, loading, and specific operator checks of the various turbine support and auxiliary systems to ensure safe and reliable operation of the gas turbine • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • None
O-AER10306 Gas Turbine - LM6000 Engine Familiarization	✓	✓	✓	✓			✓			3	15	KW US	• Covers basic Gas Turbine theory, construction, and operation • Focuses is on basic turbine construction, major components, and operation • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • Technical background or relevant experience
D-AER10306 Gas Turbine - LM6000 Engine Familiarization - Distance Learning	✓	✓	✓	✓						3	8	💻	• Covers basic Gas Turbine theory, construction, and operation • Focuses is on basic turbine construction, major components, and operation • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • Technical background or relevant experience

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O-AER10303 Gas Turbine - LM6000 Level 1 Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 1 Maintenance on the Gas Turbine • Includes hands-on maintenance procedures such as removal, adjustment, and replacement of external parts • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM6000 Engine Familiarization (O-AER10306)
O-AER10304 Gas Turbine - LM6000 Level 2 Cold Maintenance		✓		✓			✓	✓		7	8	US	• Provides the skills necessary to perform Level 2 Cold Maintenance on the Gas Turbine • Includes hands-on maintenance procedures such as removal, inspection, and replacement of internal parts • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM6000 Engine Familiarization (O-AER10306)
O-AER10305 Gas Turbine - LM6000 Level 2 Hot Maintenance		✓		✓			✓	✓		7	8	US	• Provides the skills necessary to perform Level 2 Hot Maintenance on the Gas Turbine • Includes hands-on maintenance procedures such as removal, inspection, and replacement of internal parts • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM6000 Engine Familiarization (O-AER10306)
O-AER10302 Gas Turbine - LM6000 Borescope Inspection		✓		✓			✓	✓		2	8	US	• Familiarizes the procedures required to assess the operational condition of internal Gas Turbine components using borescope equipment • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LM6000 Engine Familiarization (O-AER10306)
O-AER10401 Gas Turbine - LMS100 Aero Package Operation/Familiarization		✓	✓	✓	✓		✓			5	15	US	• Introduces the basic skills and knowledge required to ensure proper operation of the turbine and their associated systems • Focuses on operator responsibilities such as startup, loading and monitoring during operation • None
D-AER10401 Gas Turbine - LMS100 Aero Package Operation/Familiarization - Distance Learning		✓	✓	✓	✓					5	8	💻	• Introduces the basic skills and knowledge required to ensure proper operation of the turbine and their associated systems • Focuses on operator responsibilities such as startup, loading and monitoring during operation • None
O-AER10405 Gas Turbine - LMS100 Engine Familiarization	✓	✓	✓	✓			✓			3	15	KW US	• Covers basic Gas Turbine theory, construction, and operation • Focuses is on basic turbine construction, major components, and operation • Technical background or relevant experience

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O-AER10402 Gas Turbine - LMS100 Level 1 Maintenance		✓		✓			✓	✓		5	8	US	• Provides the skills necessary to perform Level 1 Maintenance on the LMS100 Gas Turbine • Consists of classroom instruction, and also includes hands-on maintenance procedures such as removal, adjustment, and replacement of external parts • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LMS100 Engine Familiarization (O-AER10405)
O-AER10403 Gas Turbine - LMS100 Level 2 Cold Maintenance		✓		✓			✓	✓		7	8	US	• Provides the skills necessary to perform Level 2 Cold Maintenance on the LMS100 Gas Turbine • Consists of classroom instruction, and also includes hands-on maintenance procedures such as removal, inspection, and replacement of internal parts • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LMS100 Engine Familiarization (O-AER10405)
O-AER10404 Gas Turbine - LMS100 Level 2 Hot Maintenance		✓		✓			✓	✓		7	8	US	• Provides the skills necessary to perform Level 2 Hot Maintenance on the LMS100 Gas Turbine • Consists of classroom instruction, and also includes hands-on maintenance procedures such as removal, inspection, and replacement of internal parts • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LMS100 Engine Familiarization (O-AER10405)
O-AER10406 Gas Turbine - LMS100 Borescope Inspection		✓		✓			✓	✓		2	8	US	• Familiarizes the procedures required to assess the operational condition of internal Gas Turbine components using borescope equipment • Basic understanding of a Gas Turbine is highly recommended • Reasonable level of mechanical skill and use of hand tools • Recommended prior course(s): • Gas Turbine - LMS100 Engine Familiarization (O-AER10405)
O-AER10501 Gas Turbine - TM2500 & TM2500+ Aero Package Operation/Familiarization		✓	✓	✓	✓		✓			5	15	KW US	• Introduces the basic skills and knowledge required to ensure proper operation of the TM2500 model turbines and their associated systems • Focuses on operator responsibilities such as startup, loading and monitoring during operation. • None
D-AER10501 Gas Turbine - TM2500 & TM2500+ Aero Package Operation/Familiarization - Distance Learning		✓	✓	✓	✓					5	8	💻	• Introduces the basic skills and knowledge required to ensure proper operation of the TM2500 model turbines and their associated systems • Focuses on operator responsibilities such as startup, loading and monitoring during operation. • None

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O-GAS12002 Gas Turbine - 6, 7, 9, B, E, F Class Introduction to Maintenance Theory		✓		✓			✓			5	12	◆	• Offers a firm understanding of the basic maintenance requirements of all types of GE heavy duty gas turbines and their auxiliary support systems • Provides participants a basic understanding of gas turbine construction, how it works and the maintenance requirements and inspection procedures • None
D-GAS12002 Gas Turbine - 6, 7, 9, B, E, F Class Maintenance Familiarization - Distance Learning		✓		✓						5	8	💻	• Offers a firm understanding of the basic maintenance requirements of all types of GE heavy duty gas turbines and their auxiliary support systems • Provides participants a basic understanding of gas turbine construction, how it works and the maintenance requirements and inspection procedures • None
O-GAS22101 Gas Turbine - Operation E-Class (Advanced)		✓	✓				✓	✓	✓	5	12	◆	• Designed to enhance GE E-class (7EA and 9E) Gas Turbine-generator operator knowledge and skills • Provides a detailed overview of Gas Turbine operating sequences and control and protection functions • Expands upon background in Gas Turbine-generator operation that improves the participant's ability to properly analyze operating problems and take the necessary corrective action • Focuses on the Gas Turbine and generator control and protection, the operational relationships of the compressor, combustion and turbine sections and generator systems • Minimal discussion on turbine auxiliary support systems • Prior Gas Turbine operating experience or • Familiarity with the Gas Turbine operation and control systems • Recommended prior course(s): • Gas Turbine - 6,7,9,B,E & F Class Operation (O-GAS12003 or D-GAS12003)
O-GAS22201 Gas Turbine - Operation F-Class (Advanced)		✓	✓				✓	✓		5	12	◆	• Designed to enhance GE F-class Gas Turbine-generator operation skills and provides a detailed overview of Gas Turbine operating sequences and control and protection functions • Builds upon student's operational skills and expands upon the student's background in Gas Turbine-generator operation, improving the participant's ability to properly analyze operating problems and take the necessary corrective action • Focuses on Gas Turbine and generator control and protection, operational relationships of the compressor, combustion and turbine sections and generator cooling system • Minimal discussion on turbine auxiliary support systems • Prior Gas Turbine operating experience or • Familiarity with the Gas Turbine operation and control systems • Recommended prior course(s): • Gas Turbine - 6,7,9,B,E & F Class Operation (O-GAS12003 or D-GAS12003)

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
O-GAS12003 Gas Turbine - 6, 7, 9, B, E, F Class Operation Familiarization		✓	✓				✓		✓	5	15	KW US	• Offers a basic understanding of the construction and operations of all types of GE heavy duty gas turbine-generators, Model Series (MS) / frame sizes covered are the 3, 5, 6, 7 and 9 B/E and F class unit types • Discussions on starting, loading, control and protection features of the turbine, generator and the functions of key accessory systems • Emphasis on basic gas turbine operating cycle • Overview of gas turbine major components and equipment arrangements and how these relate to overall operation and performance, base design differences between frame sizes • Familiarity with GE Manuals and reference drawings • Includes fundamentals of gas turbine start-up, speed, load, shutdown and temperature control and protection features, Operating parameters and control / protection features of the key turbine support systems such as the lubricating oil, hydraulics, fuels, variable inlet guide vanes, and starting means (Other auxiliary systems are covered as time permits) Generator construction and Operating Fundamentals, Operating factors and considerations that affect maintenance intervals • Entry- level course, no previous turbine experience required
D-GAS12003 Gas Turbine - 6, 7, 9, B, E, F Class Operation Familiarization - Distance Learning		✓	✓							5	8	💻	• Offers a basic understanding of the construction and operations of all types of GE heavy duty gas turbine-generators, Model Series (MS) / frame sizes covered are the 3, 5, 6, 7 and 9 B/E and F class unit types • Discussions on starting, loading, control and protection features of the turbine, generator and the functions of key accessory systems • Emphasis on basic gas turbine operating cycle • Overview of gas turbine major components and equipment arrangements and how these relate to overall operation and performance, base design differences between frame sizes • Familiarity with GE Manuals and reference drawings • Includes fundamentals of gas turbine start-up, speed, load, shutdown and temperature control and protection features, Operating parameters and control / protection features of the key turbine support systems such as the lubricating oil, hydraulics, fuels, variable inlet guide vanes, and starting means (Other auxiliary systems are covered as time permits) Generator construction and Operating Fundamentals, Operating factors and considerations that affect maintenance intervals • Entry- level course, no previous turbine experience required

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O-GAS20401 Gas Turbine - GT11, GT13E2, GT24/GT26 Routine Maintenance				✓			✓			5	10	CH	• Understanding the design and function of an annular combustor engine • Stating the purpose and the duration of the three types of inspection on the Gas Turbine (A, B, C) • Describes and carry out the required measurements before, during and after an A, B or C-inspection. (C-Inspection in summarizing form only) • Describes the correct use of the relevant documentation such as Test Certificates, Procedures and O&M Manuals • Selecting and correct use of the relevant special tools, for performing the tasks required for an inspection • Performing in-situ Radial Rotor Position measurements, calculations and possible adjustments • Describes and apply the disassembly and re-assembly of: EV Burners, EV Lances, SEV Lances, Flame Monitors, Pulsation Probes EV and SEV, Ignition Probes • Describes the function of the installed Instrumentation • Performing an in-situ Boroscope preparations and inspections • Applying all EHS procedures relevant to the task • Have elementary background of power plants • Be able to read technical documents • Have a mechanical background • Be familiar with the service or erection of power plants • Have general knowledge about Gas Turbine hardware
O-GAS10102 Gas Turbine - GT13E2 Mechanical Systems & Components		✓		✓			✓			7	15	◆	• Covers GT13E2 Thermal Block: Main components and Parts dimensions, weight and function. • Overview of the Gas Turbine Systems - Purpose, design and function of the following Systems: Lube oil System, Jacking oil System, Power oil System, Fuel gas System, Fuel oil System, NOx Water System, Air intake System, Variable inlet guide vanes, Blow off valves • Includes discussion of using the operation and maintenance manuals: Assembly and disassembly procedures, Working with quality documentation and test certificates • Provides exercises on finding the required documents in the maintenance manual Gas Turbine components - purpose, design and function of the Gas Turbine main components: compressor, combustion chamber, turbine, rotor, blades and vanes, bearings, instrumentation to the thermal block, sealing and cooling air • Able to interpret technical documents such as the Piping & Instrumentation Diagram (P&ID) and drawings • Mechanical background • Familiar with the service or erection of power plants
O-GAS20101 Gas Turbine - GT13E2 Inspection		✓		✓			✓			10	15	◆	• Covers preparation and setting up site for a C-inspection, planning manpower • Includes working with documentation: O&M manuals and test certificates • Overview of disassembly and reassembly of the turbine instrumentation, applying step-by-step sequences for disassembly, inspections, and reassembly of all turbine components, covers special tools for disassembly and reassembly • Includes alignment of the outer and inner casing to the rotor (radial rotor position), coupling alignment • Includes preparation work for start-up of the Gas Turbine and cleaning of systems, “motor roll” and for first ignition after the inspection • Mechanical background • Familiar with the service or erection of power plants

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O-GAS10201 Gas Turbine - GT26/GT24 Mechanical Systems & Components (Retractable EV Burner)		✓		✓			✓			10	15	◆	• Covers GT26/GT24 Thermal Block: Main components and Parts dimensions, weight and function. • Overview of the Gas Turbine Systems - Purpose, design and function of the following Systems: Lube oil System, Jacking oil • System, Power oil System, Fuel gas System, Fuel oil System, NOx Water System, Air intake System, Variable inlet guide vanes, • Blow off valves. • Includes purpose, design and function of the gas turbine main components: Compressor, Combustion chamber, Turbine, • Rotor, Blades and vanes, Bearings, Instrumentation to the thermal block, Sealing and cooling air. • Includes discussion on the use of operation and maintenance manuals: Assembly and disassembly procedures, working with • quality documentation and test certificates, exercises finding the required documents in the maintenance manual. • Able to interpret technical documents such as the Piping & Instrumentation Diagram (P&ID) and drawings • Mechanical background • Familiar with the service or erection of power plants
O-GAS20201 Gas Turbine - GT26 Inspection (retractable EV Burner)		✓		✓			✓			10	15	◆	• Covers preparation and setting up site for C-inspection, planning Manpower • Includes working with documentation: O&M manuals and test certificates • Overview of disassembly and reassembly of the turbine instrumentation, applying step-by-step sequences for disassembly, inspections, and reassembly of all turbine components, covers special tools for disassembly and reassembly • Includes alignment of the outer and inner casing to the rotor (radial rotor position), coupling alignment • Includes preparation work for start-up of the Gas Turbine and cleaning of systems, “motor roll” and for first ignition after the inspection • Mechanical background • Familiar with the service or erection of power plants
O-GAS32501 Gas Turbine – Operation HA-Class (Advanced)		✓	✓							5	15	US	• This course is designed to enhance GE H-class gas turbine-generator operation skills and provides a detailed overview of H-class turbine operating sequences and control and protection functions. The course builds upon student's operational skills and develops a background in gas turbine-generator operation that enables participants to properly analyze operating problems and take the necessary corrective action. Focus will be on the gas turbine and generator control and protection and does not include discussions on auxiliary support systems. • Experience with Gas Turbine Operation.

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down				• Executive Summary • Prerequisites
O-GRL10501 General - Practical Steam Turbine Maintenance (Brown Boveri Design)		✓		✓			✓	✓		15	8	CH	• Gives an overview on the turbine design & function of the main parts • Allows hands-on training in handling of heavy turbine parts, adjusting of turbine parts taking various measurements before, during and after an overhaul • Gives an insight on the condition of turbine parts, what needs to be checked during an overhaul • Executes hands-on training on tightening the various bolts correctly • Mechanical background • Familiar with the erection of power plants
O-STM10703 Steam Turbine - Maintenance Familiarization (GE design)		✓		✓			✓			5	15	KW US	• Provides a thorough understanding of the maintenance requirements for GE steam turbines and their support systems, understanding of steam turbine maintenance fundamentals and preventive maintenance requirements • Covers operation impact on maintenance, routine maintenance, and inspections • Prior hands-on plant maintenance experience
D-STM10703 Steam Turbine - Maintenance Familiarization (GE design) - Distace Learning		✓		✓						5	8	💻	• Provides a thorough understanding of the maintenance requirements for GE steam turbines and their support systems, understanding of steam turbine maintenance fundamentals and preventive maintenance requirements • Covers operation impact on maintenance, routine maintenance, and inspections • Prior hands-on plant maintenance experience
O-STM20701 Steam Turbine - D11 Operation (Advanced)		✓	✓				✓			5	15	KW US	• Designed to enhance GE D11 Steam Turbine-Generator operation skills • Provides a detailed overview of D11 turbine operating sequences and control and protection functions, builds upon student's operational skills • Develops a background in Steam Turbine-Generator (ST-GN) operation that enables participants to properly analyze operating problems and take the necessary corrective action • Focuses on the ST-GN control and protection and will include discussions on auxiliary support systems. • Review of the entire alarm list for the most current D11 control specification to date as well as full analysis of all possible unit trips. • None
O-STM10702 Steam Turbine - D11, A10 Operation		✓	✓				✓			5	15	KW US	• Designed to enable operators, supervisors, and engineering personnel to safely operate a GE designed steam-turbine generator unit • Provides a background in Steam Turbine-generator operation, which will enable participants to properly analyze operating problems and take the necessary corrective action • Offers detail on turbine and generator equipment as well as their support systems • Includes in-depth instruction on the start-up and loading activities, and the operational duties of the operator, in-depth instruction on alarm troubleshooting and the use of the control interface (HMI) • None
D-STM10702 Steam Turbine - D11 Operation - Distance Learning		✓	✓							5	8	💻	• Designed to enable operators, supervisors, and engineering personnel to safely operate a GE designed steam-turbine generator unit • Provides a background in Steam Turbine-generator operation, which will enable participants to properly analyze operating problems and take the necessary corrective action • Offers detail on turbine and generator equipment as well as their support systems • Includes in-depth instruction on the start-up and loading activities, and the operational duties of the operator, in-depth instruction on alarm troubleshooting and the use of the control interface (HMI) • None

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O-BOI10301 Heat Recovery Steam Generator (HRSG) - Operation & Inspection		✓	✓	✓			✓			2	18	US	• Addresses HRSG inspection and maintenance cycles and activities to outage work on the Gas Turbine and Balance of Plant for both Combined Cycle and Co-Generation Facilities • Covers the arrangement of both horizontal and vertical units, cycle performance, control, pressure part and non-pressure part degradation, water treatment, metallurgical design issues for cyclic operation, advanced condition assessment and remaining life estimation, and practical inspection and repair activities • None

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Classroom	Hands-On	Site Walk-Down	Duration in Days	Maximum # of Students	Location Options+	• Executive Summary • Prerequisites
O-GEN10701 Generator - Generator Fundamentals	✓	✓	✓		✓		✓			5	12	◆	• The course introduces the participant to the design and construction of generator fields and stators. It investigates the functions of the generator components and describes the synchronous and isochronous operation of generators • 4 days of technical training in a classroom setting and a 1-day lab session. • Laptop or computer with an Internet connection
D-GEN10701 Generator - Generator Fundamentals - Distance Learning	✓	✓	✓		✓					5	12	💻	• The course introduces the participant to the design and construction of generator fields and stators. It investigates the functions of the generator components and describes the synchronous and isochronous operation of generators • 4 days of technical training in a virtual classroom setting and a 1-day virtual lab session. • Laptop or computer with an Internet connection capable of streaming 1080p video • A webcam is recommended but not required

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Duration in Hours	Location Options	• Executive Summary • Prerequisites
W-CON13402 Control System - Mark™ VIe CIMPLICITY™ ActivePoint™ - Online Series with Simulation		✓	✓		✓	✓	6		• This course will cover the knowledge and skills necessary to understand and interact with an ActivePoint™ HMI • Access to a virtualized cloud hosted HMI with GT simulation will allow the student to apply course objectives hands-on following guided lab procedures • This course is designed as a self-paced, web-based training curriculum. Narrated presentations, demonstration videos and guided lab exercises will be utilized • Duration: 4 weeks access; 1-2 hours per week • Computer with internet connection, 1.2 Mbps (150 kbyte/s) or higher connection recommended • Mark™ VIe Training - Online Series or equivalent training/experience recommended
W-CON13403 Control System - Mark™ VIe CIMPLICITY™ Projects - Online Series with Simulation		✓	✓		✓	✓	6		• This course will cover the knowledge and skills necessary to understand, interact with, and edit CIMPLICITY™ Project based HMI displays • Access to a virtualized cloud hosted HMI with GT simulation will allow the student to apply course objectives hands-on following guided lab procedures • This course is designed as a self-paced, web-based training curriculum. Narrated presentations, demonstration videos and guided lab exercises will be utilized • Duration: 4 weeks access; 1-2 hours per week • Computer with internet connection, 1.2 Mbps (150 kbyte/s) or higher connection recommended • Mark™ VIe Training - Online Series or equivalent training/experience recommended
W-CON13404 Control System – Mark™ VIe CIMPLICITY™ Advanced Viewer - Online Series with Simulation		✓	✓		✓	✓	6		• This course will cover the knowledge and skills necessary to understand, interact with, and edit CIMPLICITY™ Advanced Viewer HMI displays • Access to a virtualized cloud hosted HMI with GT simulation will allow the student to apply course objectives hands-on following guided lab procedures • This course is designed as a self-paced, web-based training curriculum. Narrated presentations, demonstration videos and guided lab exercises will be utilized • Duration: 4 weeks access; 1-2 hours per week • Computer with internet connection, 1.2 Mbps (150 kbyte/s) or higher connection recommended • Mark™ VIe Training - Online Series or equivalent training/experience recommended
W-CON13405 Control System - Mark™ VIe Foundation – Online Series with Simulation		✓	✓		✓	✓	80		• This course will utilize typical Gas Turbine (GT) software to describe and demonstrate the principles of configuration and troubleshooting the Mark™ VIe control system • Access to a virtualized cloud hosted HMI with GT simulation will allow the student to apply course objectives hands-on following guided lab procedures • This course is designed as a self-paced, web-based training curriculum. Narrated presentations, demonstration videos and guided lab exercises will be utilized • Duration: 4 weeks access; 10-20 hours per week • Computer with internet connection, 1.2 Mbps (150 kbyte/s) or higher connection recommended

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W-AER10101 Aeroderivative Engine - LM2500 Familiarization	✓	✓	✓	✓	✓	✓	2		• Provides a basic overview of GE Gas Turbines • Includes theory of operation, the influencial properties of a Gas Turbine, configuration and construction, and key components of the unit assembly • None
W-AER10301 Aeroderivative Engine - LM6000 Familiarization	✓	✓	✓	✓	✓	✓	2		• Provides a basic overview of GE Gas Turbines • Includes theory of operation, the influencial properties of a Gas Turbine, configuration and construction, and key components of the unit assembly • This course is applicable for all models of the LM6000 aeroderivative Gas Turbine • None

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W-GAS10703 Gas Turbine Fundamentals (7F)	✓	✓	✓	✓			4		• Focuses on the functions and locations of a Gas Turbine's major components • Introduces the basic components of a Gas Turbine, physics of Gas Turbine operations, and turbine performance enhancements • Covers the methods and procedures required to diagnose possible performance issues from specific situational data • None
W-GAS10906 Gas Turbine Systems - Basics of Gas Turbine Combustion				✓			2		• Introduces the basics of Gas Turbine combustion, including how emissions are produced, their effect on the environment and how they are controlled • None
W-GAS10908 Gas Turbine Systems - Compressor Water Wash				✓			2		• Explains the purpose of the compressor water wash system and covers system components, operation and maintenance • Describes the function of each component • Covers various operating modes • None
W-GAS10909 Gas Turbine Systems - Cooling and Sealing Air				✓			2		• Explains the purpose of the cooling and sealing air system • Covers system components, including function, operation and maintenance • Describes various operating modes • None
W-GAS10910 Gas Turbine Systems - Cooling Water				✓			2		• Explains the purpose of the cooling water system • Covers key system components, including function, operation and maintenance • Describes various operating modes • None
W-GAS10912 Gas Turbine Systems - Fire Protection, Heating and Ventilation				✓	✓	✓	2		• Provides an overview of the fire protection system and the heating and ventilation system, including function, components, operation and maintenance • None
W-GAS10913 Gas Turbine Systems - Fuel and Atomizing Air Systems				✓			2		• Explains the purpose of the gas fuel, liquid fuel, dual fuel and atomizing air systems • Describes the components, including function, operation and maintenance • Describes the various operating modes of each system • None
W-GAS10915 Gas Turbine Systems - Hydraulic Oil, Trip Oil, and VIGV Systems				✓			2		• Explains the purpose of the hydraulic oil, trip oil and VIGV systems • Covers the components of each system, including function, operation and maintenance • Describes the various operating modes of each system • None

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W-GAS10917 Gas Turbine Systems - Lube Oil Systems				✓			2		• Describes the components, operation and maintenance of lube oil system • Using schematic piping diagrams, explores the functions of the system components • Includes maintenance procedures applicable to the lube oil system • Covers routine and required maintenance, and examines specific safety precautions and inspection requirements • None
W-GAS10918 Gas Turbine Systems - Steam and Water Injection				✓			2		• Describes the components of the steam and water injection systems, including function, operation and maintenance • None
W-GAS10903 Gas Turbine - Inlet and Exhaust				✓		✓	2		• Provides an overview of the inlet and exhaust systems, including the purpose of the systems, key components and their functions • Includes various operating modes of the air inlet system and describes appropriate inspection and maintenance procedures • None
W-GAS12002 Gas Turbine - Generator Hydrogen Control System			✓	✓			1.5		• In this course, you will learn about the elements of the hydrogen gas control system. • None

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W-STM10703 Steam Turbine Fundamentals	✓	✓	✓	✓	✓	✓	4	

- Executive Summary
  - Addresses Steam Turbine components, including nozzles, bearings, rotor, steam-sealing devices and valves
  - Covers the location and assembly of each component
  - Introduces the basics of the Steam Turbine cycle, including physics, components, types of turbines, turbine classes and subclasses of Steam Turbines
  - Covers the basics of efficiency and applications
- Prerequisites
  - None

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(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Duration in Hours	Location Options
W-ELX10901 Generator & Electrical - 3-Phase Power	✓	✓	✓	✓	✓	✓	1	
W-ELX10902 Electrical - ACDC Motors			✓		✓		2	
W-GEN10701 Generator & Electrical - Elements of Power Delivery	✓		✓		✓		2	
W-GEN10703 Generator - Generator Theory	✓	✓	✓	✓	✓	✓	1	
W-GEN10901 Generator & Electrical - Hydrogen Gas Control System			✓	✓			1	

Course ID# & Title	• Executive Summary • Prerequisites
W-ELX10901 Generator & Electrical - 3-Phase Power	• Describes methods and procedures required to perform single-phase and 3-phase power calculations • Identifies Wye and Delta connections • Familiarizes participants with rearragement on motor windings • Covers line-to-line and line-to-neutral voltage measurements • None
W-ELX10902 Electrical - ACDC Motors	• Introduces the components and operation of a motor with three modules: 1. Components of a Motor - Covers the various parts of a motor 2. DC Motors - Describes the operation of a DC motor and identification of relevant nameplate data 3. AC Motors - Describes the operation of an AC motor and identification of relevant nameplate data • None
W-GEN10701 Generator & Electrical - Elements of Power Delivery	• Introduces participants to the elements involved in the process of power delivery with three modules: 1. Functions of a Power System - Describes the functions of a power system and the process of power generation and transmission 2. One-line Diagrams - Explains the use and importance of a one-line diagram 3. System Components - Covers the components of a power system • None
W-GEN10703 Generator - Generator Theory	• Introduces the fundamentals of generator theory with two modules: 1. Basics of Electromagnetism - Covers the characteristics of magnetic flux and the factors affecting current induced in a conductor 2. Components and Operation of an AC Generator - Describes the major components and operation of an AC, 3-phase synchronous generator and explains the tabular sequence winding diagram • None
W-GEN10901 Generator & Electrical - Hydrogen Gas Control System	• Introduces the elements of the hydrogen gas control system with five modules: 1. Operating Principles - Explains the use of hydrogen as a cooling medium in the gas control system as well as the operating requirements of the system 2. Major Components - Covers the functions of the components of the generator gas control system 3. System Operation - Describes how the generator gas control system operates 4. Maintenance - Addresses maintenance of the gas control system for optimal performance 5. Inspection - Covers the various operational inspections, lubrication, and tests of the generator gas control system • None

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W-GEN10801 Generator & Electrical - Stator Winding Cooling System			✓	✓			1		• Introduces participants to the stator winding cooling system of a generator with four modules: 1. Major Components - Covers the locations and functions of the various components that comprise the stator winding cooling system 2. Operating Systems - Provides in-depth coverage of the operation process of a stator winding cooling system 3. Testing of Components - Explains the tests and inspections for stator winding cooling system components 4. Removal of Stator Cooling Water and Unit Operation Without Cooling Water - Addresses the procedure to remove cooling water from the generator and describes how a generator functions without the flow of cooling water • None
W-ELX11701 Excitation - Circuit and MCC Basics	✓	✓	✓		✓	✓	1		• Familiarization of electrical circuits, forms of circuit protection, and motor control centers, or MCCs • Reading circuit symbols and ladder diagrams and, demonstrate basic circuit troubleshooting techniques • None
W-ELX11702 Excitation - Generator Operation and Synchronization	✓	✓	✓		✓	✓	2		• Understanding of the operation of a generator and the various types of power generated at power plants, various generator curves, regulators & limiters, typical start-up & shut-down operations of a generator and the various parameters required for the safe synchronization of a generator • None
W-GEN11401 Generator - Generator Fundamentals - Design and Construction	✓	✓			✓	✓	1.5		• Provide a basic understanding of the design and construction of a generator, including the function of different parts of the generator • None
W-GEN11402 Generator - Introduction to Generator Product Line	✓	✓	✓		✓	✓	1.5		• Provides product summary and specifications of key/common generator models from both legacy GE and legacy Alstom • Models covered include: 6A6, 6FA, 7A6, 9A5, SPL-MA, 7FH2, 7FH2B, 324, 330H, SPL-MH, 390H, 450HE, SPL-LH, LSTG-675-60-2, SPL-LW, LSTG-710-50-2, LSTG-900-60-2, T-190-240, T-214-234, T-240-370, WX/WY23Z, WT21H, WT23E/D, TA1400-78. • None
W-GEN11403 Generator - Generator Inspection	✓	✓	✓		✓		1		• The course will show differences in designs of these various components and specific inspection points and evaluation criteria. • It will also guide the field engineer in assessing damage that will require the specific intervention of a qualified generator specialist. • None
W-GEN10501 Generator - Shaft Sealing System	✓	✓	✓	✓			1.5		• In this module, learners will come to know about the importance, components, operation, and detecting alarm signals of the Shaft Sealing System • None
W-GEN10704 Generator - Generator Fundamentals - Field Design and Construction	✓	✓	✓		✓		1		• This course focuses on the design and construction of the major components of the rotor, how the rotor is cooled, and the various types of cooling systems available. • A reasonable ability to read and understand English is required.

✧ Recommended course for new equipment
Customer self-registration capability at: www.gevernovatechtraining.com

= Online

Course ID# & Title	Plant Personnel						Duration in Hours	Location Options	
(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls			• Executive Summary • Prerequisites
W-GEN10706 Generator - Generator Fundamentals - Stator Design and Construction	✓	✓	✓		✓		1		• This course focuses on the design and construction of the major components of the stator, how the stator is cooled, and the various types of cooling systems available. • A reasonable ability to read and understand English is required.
W-ELX11502 Excitation - Generator Digital Systems	✓	✓	✓		✓		4		• This will introduce you to the major components and terminology used in the EX2100 Warm Backup System. Using color graphics and text, the major components and individual circuit boards are described in terms of: function, operation and location in the EX2100 Warm Backup Panel. • A reasonable ability to read and understand English is required.
W-ELX11001 Excitation - LCI Static Starter System Fundamentals	✓	✓	✓		✓		1		• The LCI Static Starter System Fundamentals course is designed to provide basic knowledge of GE static starters for gas turbine applications. • This course is not intended to provide technical training on testing, evaluating, or repairing electrical equipment. • A reasonable ability to read and understand English is required.
W-ELX10903 Electrical - Electrical Troubleshooting	✓	✓	✓		✓		1		• Motor Control and Elementary basic theory. • A reasonable ability to read and understand English is required.

= Online

Course ID# & Title	Plant Personnel								
(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Duration in Hours	Location Options	• Executive Summary • Prerequisites
W-GAS10928 PATAT 2 - Plant Trip Reduction		✓	✓	✓			1.05		• Increases awareness about the various approaches and procedures to trip reduction, including the best practices, supporting plant reliability • Explains to use the Trip Cost Calculator • A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a gas turbine • An intimate familiarity with all relevant safety regulations and guidelines
W-GAS10929 PATAT 3 - GT Exhaust Gas Thermocouple Installation		✓		✓		✓	1.25		• Familiarizes with the thermocouples installed in the Gas Turbine exhaust system • Explains the recommended practices for proper inspection, testing, removal, and installation to prevent exhaust gas thermocouple failure, thus reducing the number of Gas Turbine Trip • A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a gas turbine • An intimate familiarity with all relevant safety regulations and guidelines
W-GEN10710 PATAT 4 - Generator Brush Inspection & Maintenance		✓		✓	✓		1		• Introduces the basic components of a generator brush assembly • Helps to understand the causes of trips related to the generator brush assembly • Explains the recommend practices to avoid trips related to the generator brush and collector ring • A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a gas turbine • An intimate familiarity with all relevant safety regulations and guidelines
W-GAS10930 PATAT 5 - High Exhaust Temperature Spread		✓	✓			✓	1.25		• Introduces to the combustion process and high exhaust temperature spreads (HETS) in gas turbines • Helps to understand how high exhaust temperature spreads occur in gas turbines and how to recognize a high exhaust temperature spread • Familiarizes with the common causes of HETS trips and the various trip response techniques for issues related to the HETS trips and alarms • A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a gas turbine • An intimate familiarity with all relevant safety regulations and guidelines
W-GAS10931 PATAT 6 - Lean Blowout		✓	✓			✓	1		• Explains the conditions that could lead to Lean Blow Out (LBO) events, including the most vulnerable operating ranges • Helps to identify the trips caused by a Lean Blow Out event • Familiarizes with the solutions recommended by GE to minimize LBO occurrences • A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a gas turbine • An intimate familiarity with all relevant safety regulations and guidelines

= Online

Course ID# & Title	Plant Personnel								
(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Duration in Hours	Location Options	• Executive Summary • Prerequisites
W-BOI10401 PATAT 7 - HRSG Operation and Maintenance		✓	✓	✓			1.2		• Introduces the role of a Heat Recovery Steam Generator (HRSG) and its subsystems in a combined cycle power plant • Helps identify the tasks performed by HRSG system during its operation • Familiarizes with the regular and preventive maintenance procedures that are essential to keep the HRSG and its components operational • A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a gas turbine • An intimate familiarity with all relevant safety regulations and guidelines
W-BOI10402 PATAT 8 - Drum Level 1: Overview - Introduction		✓	✓	✓			1.2		• Introduces to the major components and basic operation of a Combined Cycle Power Plant • Focuses on the basic operation of Heat Recovery Steam Generator (HRSG) and the importance of proper water level control in the HRSG steam drums • Familiarizes with principles and components that may impact the proper control of the HRSG drum water level • A reasonable ability to read and understand English is required • Recommended to complete the 'HRSG Operations and Maintenance' course • Basic understanding of the operational fundamentals of gas turbines, steam turbines, and Combined Cycle Power Plants
W-BOI10403 PATAT 9 - Drum Level 2: Level Controls - Control Systems		✓	✓	✓			1.2		• Introduces the Heat Recovery Steam Generator (HRSG) drum level controls, the valves that may have an impact on steam drum level control • Familiarizes with the common troubleshooting techniques for potential problems associated with steam drum level controls • A reasonable ability to read and understand English is required • Recommended to complete the 'HRSG Operations and Maintenance' as well as the 'HRSG Drum Level 1: Control Overview – Introduction" courses • Basic understanding of the operational fundamentals of gas turbines, steam turbines, and Combined Cycle Power Plants
W-BOI10404 PATAT 10 - Drum Level 3: Condensate and Feedwater Pump Systems		✓	✓	✓			1		• Introduces the components, functions, and potential problems associated with the Condensate System, the Feedwater System, and the Feedwater Control System • Helps to identify common problems associated with the condensate Pumps, including Condensate flow problems, instrumentation failures, and common system mis-operation • Helps to identify common problems with the Feedwater Pumps, including electrical supply, Feedwater flow, instrumentation failures and common system mis-operation • Familiarizes with the design, operation, and potential problems associated with the Feedwater Control System • A reasonable ability to read and understand English is required • Recommended to complete the 'HRSG Operations and Maintenance' • Basic understanding of the operational fundamentals of a combined cycle power plant, and familiarity with all relevant safety regulations and guideline
W-BOI10405 PATAT 11 - Drum Level 4: Bypass Systems		✓	✓	✓			1.2		• Familiarizes with the Steam Turbine Bypass Systems that play an important role in the efficient operation of a Heat Recovery Steam Generator (HRSG) • Introduces the standard types of bypass systems, the valves that form part of the bypass systems • Explains the control logic for the bypass valves, the types of problems that may occur in the software of the control systems, and the techniques for troubleshooting these problems • A reasonable ability to read and understand English is required • Recommended to complete the 'HRSG Operations and Maintenance' as well as the 'HRSG Drum Level 1: Control Overview – Introduction" courses • Basic understanding of the operational fundamentals of a steam turbine and combined cycle power plant, and be familiar with all safety regulations and guidelines

= Online

Course ID# & Title	Plant Personnel							
(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Duration in Hours	Location Options
W-GAS10932 PATAT 12 - Bearing Lube Oil & Hydraulics		✓	✓	✓			2	
W-GAS10933 PATAT 13 - Compressor Bleed Valve System		✓	✓	✓			1	
W-STM10705 PATAT 14 - Steam Turbine Startup and Shutdown Procedures		✓	✓				1.15	
W-GAS10934 PATAT 15 - Winterization		✓	✓	✓	✓	✓	1.5	
W-GAS10935 PATAT 16 - Troubleshooting Liquid Fuel System Problems		✓	✓	✓			1	

Executive Summary	Prerequisites
• Introduces the Bearing Lube Oil and Hydraulics System (BLOH) and the functions of the major components and the sub-systems • Focuses on the conditions that can lead to system trips and recommended best practices in preventive maintenance to avoid trips • Familiarizes about the relevant safety precautions while working on or around the Bearing Lube Oil and Hydraulics System	• A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a gas turbine • An intimate familiarity with all relevant safety regulations and guidelines
• Introduces the function of the Compressor Bleed Valve (CBV) System • Explains the problems associated with compressor bleed valves, and provide recommendations to improve CBV system operation • Familiarizes with the safety considerations that the participant should follow when working around the Compressor Bleed Valve System	• A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a gas turbine • An intimate familiarity with all relevant safety regulations and guidelines
• Familiarizes with the problems that can occur during startup and shutdown of a Steam turbine and the methods that can be employed to minimize such problems • Introduces to basic startup and shutdown procedures for a steam turbine and the safety guidelines that need to be followed while operating or working on a steam turbine	• A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a steam turbine • An intimate familiarity with all relevant safety regulations and guidelines
• Helps identify the components of a power plant that are vulnerable to freezing and the freeze protection procedures that should be followed • Familiarizes with the purpose of a Winterization Checklist as well as introduce the participant to the best practices to be followed for heat tracing site components to prevent them from freezing	• A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a steam turbine and other equipment
• Introduces the various components of the Liquid Fuel System and the functionality of each component • Helps identify the chief causes of trips in the Liquid Fuel System, and the strategies and guidelines for reducing the number of such trips • Familiarizes with the advantages and disadvantages of switching between fuels, and the safety guidelines to be followed while working in and around the turbine compartment, and the Liquid Fuel System	• A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a steam turbine and other equipment • An intimate familiarity with all relevant safety regulations and guidelines

= Online

Course ID# & Title	Plant Personnel								
(Click on Course Title to download detailed course outline)	Leadership	Supervisors	Operations	Mechanical Maintenance	Electrical Maintenance	Instrumentation & Controls	Duration in Hours	Location Options	• Executive Summary • Prerequisites
W-GAS10936 PATAT 17 - Troubleshooting Gaseous Fuel System Problems		✓	✓	✓			1		• Introduces the various components of the Gaseous Fuel System and the functionality of each component • Helps identify the chief causes of trips in the Gaseous Fuel System, and the strategies and guidelines for reducing the number of such trips • Familiarizes with the advantages and disadvantages of switching between fuels, and the safety guidelines to be followed while working in and around the turbine compartment, and the Gaseous Fuel System • A reasonable ability to read and understand English is required • Basic understanding of the operational fundamentals of a steam turbine and other equipment • An intimate familiarity with all relevant safety regulations and guidelines

Please select a course category.

SITE SPECIFIC AT CUSTOMER SITE✦ OR GAS POWER SERVICES LEARNING

OPEN ENROLLMENT AT LEARNING CENTER AND INSTRUCTOR LED DISTANCE LEARNING

ONLINE SELF-PACED LEARNING *TECHNICAL COURSES*

ONLINE SELF-PACED LEARNING *PRO-ACTIVE TRIP AVOIDANCE TRAINING*

✦ *Some exceptions apply when use of labs or simulators are required.*

Please select a course

Course ID# & Title	PLATFORM: Aeroderivative Gas Turbines					PLATFORM: Heavy Duty Gas Turbines													PLATFORM: Other Major Equipment						UPGRADE: Aeroderivative & Heavy Duty Gas Turbine Upgrade																		UPGRADE: Control & Excitation		Simulator Access	
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
TOTAL PLANT SOLUTIONS																																													
E-CCP10201 (*page 5*) Combined Cycle - Power Plant Familiarization						■	■	■	■	■	□	■	□		■	■	■	□	□	□	■	■																								
E-CCP10203 (*page 5*) Combined Cycle - Operation (GE Integrated Systems)✧						■	■	■	■	■	■	■	■		■	■	■	□	□	□	■	■												■			■	■	■			■	■			✓	
E-CCP10204 (*page 5*) Combined Cycle - Fundamentals✧						■	■	■	■	■	□	■	□		■	■	■	□	□	□	■	■																					■				
E-GRL10502 (*page 5*) General - Pipe Fitting & Handling															■	■	■	■	■	■	■	■																								
E-GRL10503 (*page 6*) General - Bearing Inspection															■	■	■	■	■	■	■	■																								
E-GRL10504 (*page 6*) General - Leveling Work															■	■	■	■	■	■	■	■																								
E-GRL10505 (*page 6*) General - Shaft Alignment															■	■	■	■	■	■	■	■																								
E-GRL10506 (*page 6*) General - Practical Steam Turbine Maintenance (Brown Boveri Design)																						■																								
E-CCP20601 (*page 7*) Combined Cycle - Simulator based Process Training																■						■																								
BALANCE OF PLANT																																													
E-BOP10202 (*page 7*) Balance of Plant- Operation (GE Integrated Systems)✧	□	□	□	□	□	■	■	■	■	■	■	■	■	□	■	■	■	□	□	□	■	■																					■			✓	

Legend:
■ *Applicable to majority of fleet* | □ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

CATALOG INDEX

APPLICABILITY MATRIX

The Applicability Matrix is for guidance purposes only, please contact your GE Vernova representative to discuss your particular needs.

Please select a course

Course ID# & Title	PLATFORM: Aeroderivative Gas Turbines					PLATFORM: Heavy Duty Gas Turbines													PLATFORM: Other Major Equipment						UPGRADE: Aeroderivative & Heavy Duty Gas Turbine Upgrade																		UPGRADE: Control & Excitation		Simulator Access	
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
CONTROLS AND EXCITATION - AERODERIVATIVE GAS TURBINES																																													
E-CON23401 (*page 8*) Control System - Mark Vle (Aero) Operation, Maintenance & Troubleshooting✧	■	■	■	■	■																						■																■			
E-CON13601 (*page 8*) Control System - Millenium Operation, Maintenance & Troubleshooting	■	■	■																								■																■			
E-CON13602 (*page 8*) Control System - Woodward Operation, Maintenance & Troubleshooting ✧	■	■	■																								■							■			■	■	■			■	■				
E-CON13603 (*page 9*) Control System - RX3i Operation, Maintenance & Troubleshooting ✧	■	■																																												
CONTROLS AND EXCITATION - HEAVY DUTY GAS TURBINES																																													
E-CON10501 (*page 10*) Control System - AC800M with IIT800xA															■	■																															
E-CON10201 (*page 10*) Control System - ADVANT with IIT800xA															■	■	■	□	■	■																								✓	
E-CON10202 (*page 10*) Control System - ADVANT with OS520															■	■	■	■	■	■																									
E-CON11401 (*page 10*) Control System - DLN 1.0 Standard Combustor											■	■	■	■														■																✓	✓
E-CON11402 (*page 11*) Control System - DLN 1.0+ Standard Combustor											■	■	■	■																															
E-CON11901 (*page 11*) Control System - DLN 2.6+ Standard Combustor						■	■	■	■	■																						■		■										✓	✓

Legend:
■ *Applicable to majority of fleet* | □ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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APPLICABILITY MATRIX

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Please select a course

Course ID# & Title	PLATFORM																										UPGRADE																				Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																		Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
CONTROLS AND EXCITATION - HEAVY DUTY GAS TURBINES - CONTINUED																																																
E-CON11902 (page 11) Control System - DLN 2.6+ Flex Combustor						■	■	■	■																									■	■	■			■					■			✓	✓
E-CON10404 (page 11) Control System - ALSPA Control System Fundamentals															■	■	■					□																									✓	
E-CON20406 (page 11) Control System - ALSPA Control System Intermediate															■	■	■					□																									✓	
E-CON30401 (page 12) Control System - ALSPA Control System Advanced															■	■	■					■																									✓	
E-CON13302 (page 12) Control System - Mark VI Maintenance (HMI on 1st Day)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	■	□																									✓	
E-CON23301 (page 12) Control System - Mark VI Troubleshooting (Advanced)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	■	□																							■		✓	
E-CON13304 (page 13) Control System - Mark VI with Integrated Turbine & Compressor Controls HMI						■	■	■	■	■	■	■	■	■							■																										✓	
E-CON13305 (page 13) Control System - Mark VI with Integrated Turbine & Compressor Controls Maintenance						■	■	■	■	■	■	■	■	■							■																										✓	
E-CON13306 (page 13) Control System - Mark VI to Mark VIe Platform Upgrade Maintenance						■	■	■	■	■	■	■	■	■	■	■	■																	■	■	■			■					■			✓	✓
E-CON13401 (page 13) Control System - Mark VIe Maintenance (Extended)✧						■	■	■	■	■	■	■	■	■	□	□	■	□	□	□	■	□																					■	■			✓	✓
E-CON13402 (page 14) Control System - Mark VIe Maintenance✧						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	■	□																							■		✓	✓

Legend:
■ Applicable to majority of fleet | □ Applicable to limited fleet | ✧ Recommended course for new equipment

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Please select a course

Course ID# & Title	PLATFORM																							UPGRADE																										Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines																Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																							Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
CONTROLS AND EXCITATION - HEAVY DUTY GAS TURBINES - CONTINUED																																																		
E-CON13403 (*page 14*) Control System - Mark VIe Maintenance (HMI on 1st Day)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	■	□																						■		✓	✓
E-CON13404 (*page 14*) Control System - Mark VIe Maintenance Nuclear																					■																												
E-CON13413 (*page 14*) Control System - Mark VIe Migration from Mark V (HMI on 1st day)						■	■	■	■	■	■	■	■	■							■																						■	■	■		✓	✓
E-CON13406 (*page 15*) Control System - Mark VIe HMI						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	■	□																								✓	✓
E-CON23404 (*page 15*) Control System - Mark VIe Troubleshooting (Advanced)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	■	□																								✓	✓
E-CON13408 (*page 15*) Control System - Mark VIe with Integrated Turbine & Compressor Controls Maintenance						■	■	■	■	■	■	■	■	■							■																								✓	
E-CON13409 (*page 15*) Control System - Mark VIe with Integrated Turbine & Compressor Controls Maintenance (HMI on 1st day)						■	■	■	■	■	■	■	■	■							■																								✓	
E-CON13410 (*page 16*) Control System - Mark VIe Distributed Control System Maintenance✧						■	■	■	■	■	■	■	■	■	□	□	■	□	□	□	■	□																						■	■	■		✓	
E-CON13411 (*page 16*) Control System - Mark VIe Distributed Control System Maintenance (Extended)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	■	□																								■		✓	
E-CON13412 (*page 16*) Control System - Mark VIe Distributed Control System Operation						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	■	□																								■		✓	

Legend:
■ *Applicable to majority of fleet* | □ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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APPLICABILITY MATRIX

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Please select a course

Course ID# & Title	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
(Click on Course Title to download detailed course outline)	PLATFORM: Aeroderivative Gas Turbines					PLATFORM: Heavy Duty Gas Turbines															PLATFORM: Other Major Equip-ment						UPGRADE: Aeroderivative & Heavy Duty Gas Turbine Upgrade																		UPGRADE: Control & Excitation		Simulator Access	
CONTROLS AND EXCITATION - HEAVY DUTY GAS TURBINES - CONTINUED																																																
E-CON23405 (page 17) Control System - OpFlex Enhanced Transient Stability Operation						■	■	■	■	■	■	■	■								■																										✓	✓
E-CON23406 (page 17) ControlSystem- OpFlex Enhanced Transient Stability with AutoTune DX & Cold Day Performance Operation						■	■	■	■	■	■	■	■								■															■											✓	✓
E-CON23407 (page 17) ControlSystem- OpFlex Enhanced Transient Stability with AutoTune DX Operation						■	■	■	■	■	■	■	■								■															■											✓	✓
E-CON23408 (page 18) ControlSystem- OpFlex Enhanced Transient Stability with AutoTune LT Operation						■	■	■	■	■	■	■	■								■															■											✓	✓
E-CON23409 (page 18) Control System - OpFlex Enhanced Transient Stability with AutoTune MX & Variable Load Path Operation						■	■	■	■	■	■	■	■								■															■											✓	✓
E-CON10801 (page 18) Control System - ActivePoint™ HMI Operation Familiarization						■	■	■	■	■	■	■	■	■																															□		✓	✓
E-CON33402 (page 19) Control System - Proficy CIMPLICITY™ for Turbine Controls (Advanced)						■	■	■	■	■	■	■	■	■																															□		✓	✓
E-CON13414 (page 19) Control System - Mark VIe Foundation Fieldbus						■	■	■	■	■																																					✓	
E-CON13701 (page 19) Control System - Control Server and Thin Client Familiarization						□	□	□	□	□	□	□	□	□																															□			

Legend:
■ Applicable to majority of fleet | □ Applicable to limited fleet | ✧ Recommended course for new equipment

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Please select a course

Course ID# & Title	PLATFORM: Aeroderivative Gas Turbines: LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	Heavy Duty Gas Turbines: 7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Other Major Equipment: Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	UPGRADE: Aeroderivative & Heavy Duty Gas Turbine Upgrade: PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Control & Excitation: Turbine Control System	Generator Protection System	Simulator Access: During Course	Extension After Course
(Click on Course Title to download detailed course outline)																																															
CONTROLS AND EXCITATION - HEAVY DUTY GAS TURBINES - CONTINUED																																															
E-ELX10902 (*page 19*) Electrical - Electrical Control System (ECS) Training ✧						■	■	■	■												■	■			■	■																				✓	
E-ELX10903 (*page 19*) Electrical - Intelligent Electronic Device (IED) IED's – Protection & Control ✧						■	■	■	■																																				✓	
CONTROLS AND EXCITATION - STEAM TURBINES																																														
E-CCP20604 (*page 20*) Combined Cycle - Simulator based Steam Cycle Operation																					■	■																								✓	
E-CCP20605 (*page 20*) Combined Cycle - Simulator Based Steam Turbine Operation																■						■																								✓	
CONTROLS AND EXCITATION - GENERATORS																																														
E-ELX10301 (*page 21*) Excitation - EX2100e Maintenance																					■	■																								✓	
E-ELX10302 (*page 21*) Excitation - EX2100e Operation & Maintenance																					■	■																							□	✓	
E-ELX10303 (*page 21*) Excitation - EX2100e Generator Operation																									■																				□	✓	
E-ELX10304 (*page 21*) Excitation - EX2100e Platform Upgrade Maintenance																									■																				■	✓	
E-ELX10305 (*page 21*) Excitation - Aero EX2100e and Integrated Generator Protection System (IGPS)	■	■	■	■	■																																								✓	

Legend:
■ *Applicable to majority of fleet* | □ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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Please select a course

Course ID# & Title	PLATFORM																						UPGRADE																							Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines														Other Major Equipment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																			Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
CONTROLS AND EXCITATION - GENERATORS - CONTINUED																																														
E-ELX11501 (*page 21*) Excitation - Generator Excitation, Protection and Static Starter Introduction✧																									■	■																					
E-ELX11101 (*page 22*) Excitation - Combisystem Excitation & Static Starting Device Maintenance✧																									■	■																				✓	
E-ELX10901 (*page 22*) Electrical - Operation & Maintenance (GE Integrated Systems)✧	□	□	□	□	□	■	■	■	■	■	■	■	■	□	■	■	■	□	□	□	■	■			■	■																				
E-ELX30101 (*page 22*) Protection - MiCOM Generator & Transformer Protection																										■																					
E-ELX30501 (*page 23*) Excitation - LS2100e LCI for Turbine Static Start																									■																				✓	
E-ELX30202 (*page 23*) Protection - REG216 Protection System Maintenance																										■																					

Legend:
■ *Applicable to majority of fleet* | □ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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APPLICABILITY MATRIX

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Please select a course

Course ID# & Title	PLATFORM																						UPGRADE																								Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																					Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
AERODERIVATIVE GAS TURBINES																																																
E-AER10101 (*page 24*) Gas Turbine - LM2500 Aero Package Operation/ Familiarization✧	■																																										■	■				
E-AER10201 (*page 24*) Gas Turbine - LM2500+ Aero and LM2500+ Xpress Package Operation/Familiarization✧	■																																										■	■				
E-AER10102 (*page 24*) Gas Turbine - LM2500+ Package Maintenance✧	■																																										■	■				
E-AER10202 (*page 24*) Gas Turbine - LM2500+ and LM2500+ Xpress Package Maintenance✧	■																																										■	■				
E-AER10103 (*page 24*) Gas Turbine - LM2500 Engine Familiarization	■	■																																														
E-AER10104 (*page 25*) Gas Turbine - LM2500 Level 1 Maintenance	■	■																																														
E-AER10105 (*page 25*) Gas Turbine - LM2500 Level 2 Cold Maintenance	■	■																																														
E-AER10106 (*page 25*) Gas Turbine - LM2500 Level 2 Hot Maintenance	■	■																																														
E-AER10107 (*page 25*) Gas Turbine - LM2500+ Level 2 Hot Maintenance	■	■																																														
E-AER10203 (*page 26*) Gas Turbine - LM2500+ Borescope Inspection	■	■																																														
E-AER10204 (*page 26*) Gas Turbine - LM2500+/G4 Engine Familiarization	■	■																																														

Legend:
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Please select a course

Course ID# & Title	PLATFORM																						UPGRADE																							Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines														Other Major Equip-ment					Aeroderivative & Heavy Duty Gas Turbine Upgrade																			Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
AERODERIVATIVE GAS TURBINES - CONTINUED																																														
E-AER10205 (*page 26*) Gas Turbine - LM2500+ Level 1 Maintenance	■	■																																													
E-AER10206 (*page 26*) Gas Turbine - LM2500+ Level 2 Cold Maintenance	■	■																																												
E-AER10108 (*page 26*) Gas Turbine - LM2500 Borescope Inspection	■	■																																												
E-AER10301 (*page 27*) Gas Turbine - LM6000 Aero Package Operation/ Familiarization✧			■																																								■	■				
E-AER10302 (*page 27*) Gas Turbine - LM6000 Package Maintenance✧			■																																								■	■				
E-AER10303 (*page 27*) Gas Turbine - LM6000 Engine Familiarization			■																																												
E-AER10304 (*page 27*) Gas Turbine - LM6000 Level 1 Maintenance			■																																												
E-AER10305 (*page 27*) Gas Turbine - LM6000 Level 2 Cold Maintenance			■																																												
E-AER10306 (*page 28*) Gas Turbine - LM6000 Level 2 Hot Maintenance			■																																												
E-AER10307 (*page 28*) Gas Turbine - LM6000 Borescope Inspection			■																																												
E-AER11201 (*page 28*) Gas Turbine - LM9000 Aero Package Operation / Familiarization✧				■																																							■	■				

Legend:
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APPLICABILITY MATRIX

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Please select a course

Course ID# & Title	PLATFORM																						UPGRADE																							Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment					Aeroderivative & Heavy Duty Gas Turbine Upgrade																			Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
AERODERIVATIVE GAS TURBINES - CONTINUED																																														
E-AER11202 (*page 28*) Gas Turbine - LM9000 Package Maintenance✧				■																																						■	■				
E-AER10401 (*page 28*) Gas Turbine - LMS100 Aero Package Operation/ Familiarization✧					■																																					■	■				
E-AER10402 (*page 29*) Gas Turbine - LMS100 Package Maintenance✧					■																																										
E-AER10403 (*page 29*) Gas Turbine - LMS100 Engine Familiarization					■																																										
E-AER10404 (*page 29*) Gas Turbine - LMS100 Level 1 Maintenance					■																																										
E-AER10405 (*page 29*) Gas Turbine - LMS100 Level 2 Cold Maintenance					■																																										
E-AER10406 (*page 29*) Gas Turbine - LMS100 Level 2 Hot Maintenance					■																																										
E-AER10501 (*page 30*) Gas Turbine - TM2500 Aero Package Operation/ Familiarization✧		■																																							■	■				
E-AER10601 (*page 30*) Gas Turbine - TM2500+ Aero Package Operation/ Familiarization✧		■																																							■	■				
E-AER10502 (*page 30*) Gas Turbine - TM2500 Aero Package Maintenance✧		■																																							■	■				
E-AER10602 (*page 30*) Gas Turbine - TM2500+ Aero Package Maintenance✧		■																																							■	■				

Legend:
■ *Applicable to majority of fleet* | ☐ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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APPLICABILITY MATRIX

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Please select a course

Course ID# & Title	PLATFORM																										UPGRADE																					
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equipment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																		Control & Excitation		Simulator Access	
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
HEAVY DUTY GAS TURBINES																																																
E-GAS10401 (page 31) Gas Turbine - Familiarization for Power Plant Management															■	■	■	■	■	■																											✓	
E-GAS12001 (page 31) Gas Turbine - Operation✧						■	■	■	■	■	■	■	□		□	□	□	□	□																												✓	✓
E-GAS22101 (page 31) Gas Turbine - Operation E-Class (Advanced)											■	■																■																			✓	✓
E-GAS22201 (page 32) Gas Turbine - Operation F-Class (Advanced)								■	■	■																		■																			✓	✓
E-GAS22501 (page 32) Gas Turbine- Operation H-Class (Advanced)						■	■																					■																			✓	✓
E-GAS20203 (page 32) Gas Turbine - Operation Training on GT26 Simulator																■																																
E-GAS12002 (page 33) Gas Turbine - Maintenance✧						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■																	■	■				
E-GAS20101 (page 33) Gas Turbine - GT13E2 Inspection																	■																															
E-GAS10102 (page 33) Gas Turbine - GT13E2 Mechanical Systems & Components																	■																															
E-GAS20201 (page 33) Gas Turbine - GT26 Inspection (retractable EV Burner)																■																																
E-GAS10204 (page 34) Gas Turbine - GT26 Mechanical Systems & Components (retractable EV Burner)																■																																

Legend:
■ Applicable to majority of fleet | □ Applicable to limited fleet | ✧ Recommended course for new equipment

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Please select a course

Course ID# & Title	PLATFORM																					UPGRADE																										Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines																Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																						Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
HEAVY DUTY GAS TURBINES - CONTINUED																																																
E-GAS10205 (*page 34*) Gas Turbine - GT24/GT26 Routine Maintenance															■	■																																		

Legend:
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Please select a course

Course ID# & Title	PLATFORM																					UPGRADE																								Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment					Aeroderivative & Heavy Duty Gas Turbine Upgrade																				Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
STEAM TURBINES																																															
E-STM10702 (*page 35*) Steam Turbine - Conversion/Modification/Upgrade Operation with Controls Upgrade																					■	■																							■		✓	
E-STM10801 (*page 35*) Steam Turbine - Maintenance✧																					■	■																										
E-STM10802 (*page 35*) Steam Turbine - Operation✧																					■	■																									✓	
E-STM10803 (*page 35*) Steam Turbine - Operation (Basic)																					■	■																									✓	
E-STM20701 (*page 36*) Steam Turbine - Operation (Advanced)																					■	■																									✓	

Legend:
■ *Applicable to majority of fleet* | ☐ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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Please select a course

Course ID# & Title	PLATFORM																					UPGRADE																										Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines																Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																						Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
HEAT RECOVERY STEAM GENERATORS																																																
E-BOI10302 (*page 37*) Heat Recovery Steam Generator (HRSG) - Operation & Maintenance (GE Engineered)✧																								■																								

Legend:
■ *Applicable to majority of fleet* | ☐ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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Please select a course

Course ID# & Title	PLATFORM																					UPGRADE																												Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment					Aeroderivative & Heavy Duty Gas Turbine Upgrade																					Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
GENERATORS																																																		
E-GEN10504 (*page 38*) Generator - Hydrogen Cooled Operation & Auxiliary Systems																								■	■																									
E-GEN10403 (*page 38*) Generator - Water & Hydrogen Cooled Operation & Maintenance of Auxiliary Systems																									■																									
E-GEN10301 (*page 38*) Generator - Mechanical Systems & Components																										■																									
E-GEN10903 (*page 38*) Generator - Hydrogen Cooled Auxiliaries Maintenance																									■																									
E-GEN10901 (*page 39*) Generator - Hydrogen Cooling System Operation & Maintenance																									■																									
E-GEN10102 (*page 39*) Generator - Air or Hydrogen Cooled for Gas Turbine Operation & Maintenance																										■																									

Legend:
■ *Applicable to majority of fleet* | ☐ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

The Applicability Matrix is for guidance purposes only, please contact your GE Vernova representative to discuss your particular needs.

Please select a course

Course ID# & Title	PLATFORM																					UPGRADE																						Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines														Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																			Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
TOTAL PLANT SOLUTIONS																																													
O-CCP10205 (*page 40*) Combined Cycle - Operation Familiarization						■	■	■	■	■	■	■	□	□	■	■	■	□	□	□																									✓	

Legend:
■ *Applicable to majority of fleet* | □ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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Please select a course

Course ID# & Title	PLATFORM																						UPGRADE																							Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equipment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																			Control & Excitation		During Course	
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
CONTROLS AND EXCITATION																																														
O-ELX10101 (*page 41*) Excitation - EX2000 Generator Excitation Maintenance																									□																							
O-ELX10201 (*page 41*) Excitation - EX2100 Generator Excitation Maintenance						□	□	□	□	□	□	□	□	□	□	□	□	□	□	□					□	□																			□	□		
O-ELX20201 (*page 41*) Excitation - EX2100 Generator Excitation Maintenance (Advanced)						□	□	□	□	□	□	□	□	□	□	□	□	□	□	□					□	□																			□	□		
O-ELX10301 (*page 41*) Excitation - EX2100e Generator Excitation Maintenance✧	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□					□	□																			□	□		
D-ELX10301 (*page 41*) Excitation - EX2100e Generator Excitation Maintenance - Distance Learning																									■	□																						
O-ELX20301 (*page 41*) Excitation - EX2100e Generator Excitation Maintenance (Advanced)✧	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□					□	□																			□	□		
O-ELX11002 (*page 42*) Excitation - LS2100 LCI for Turbine Static Start						□	□	□	□	□	□	□	□	□	□	□	□	□	□	□					□	□																			□	□		
O-ELX11003 (*page 42*) Excitation - LS2100e LCI for Turbine Static Start						□	□	□	□	□	□	□	□	□	□	□	□	□	□	□					□	□																			□	□		
O-CON13301 (*page 42*) Control System - Mark VI Operation						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□	□																										✓	
O-CON23301 (*page 42*) Control System - Mark VI Maintenance (Advanced)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□	□																										✓	
O-CON23302 (*page 43*) Control System - Mark VI Troubleshooting (Advanced)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□	□																										✓	

Legend:
■ *Applicable to majority of fleet* | □ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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APPLICABILITY MATRIX

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Please select a course

Course ID# & Title	PLATFORM																										UPGRADE																				Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equipment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																		Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
CONTROLS AND EXCITATION - CONTINUED																																																
O-CON13405 (page 43) Control System - Mark VIe Familiarization (Advanced Viewer)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□																								□		✓	
D-CON13405 (page 43) Control System - Mark VIe Familiarization (Advanced Viewer) - Distance Learning						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□																								□		✓	
O-CON13406 (page 43) Control System - Mark VIe Familiarization (ActivePoint™)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□																								□		✓	
D-CON13406 (page 43) Control System - Mark VIe Familiarization (ActivePoint™) - Distance Learning						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□																								□		✓	
O-CON13407 (page 44) Control System - Mark VIe Intermediate (Advanced Viewer)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□																								□		✓	
D-CON13407 (page 44) Control System - Mark VIe Intermediate (Advanced Viewer) - Distance Learning						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□																								□		✓	
O-CON13408 (page 44) Control System - Mark VIe Intermediate (ActivePoint™)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□																								□		✓	
D-CON13408 (page 44) Control System - Mark VIe Intermediate (ActivePoint™) - Distance Learning						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□																								□		✓	
O-CON23401 (page 45) Control System - Mark VIe Maintenance (Advanced)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□	□																							■		✓	
O-CON33401 (page 45) Control System - Mark Ve / VIe Troubleshooting (Advanced)						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□	□	□																							■		✓	

Legend:
■ Applicable to majority of fleet | □ Applicable to limited fleet | ✧ Recommended course for new equipment

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Please select a course

(Click on Course Title to download detailed course outline)

CONTROLS AND EXCITATION - CONTINUED

Course ID# & Title	PLATFORM																									
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equipment					
	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)
O-CON13401 (page 45) Control System - Mark VIe Migration from Mark V, Familiarization						■	■	■	■	■	■	■	■	■							□					
O-CON13501 (page 45) Control System - Introduction to Mark VIeS Functional Safety System						■	■	■	■	■	■	■	■	■							□					
O-CON20701 (page 46) Control System - Mark VIe (Aero) Operation, Maintenance & Troubleshooting	■	■	■	■	■																				■	
O-CON10801 (page 46) Control System - Woodward (Aero) Operation, Maintenance & Troubleshooting	■	■	■																						■	
O-CON13602 (page 46) Control System - RX3i Operation, Maintenance & Troubleshooting	■	■																							■	
O-CON11401 (page 46) Control System - Aero DLE Familiarization and Mapping Overview	■	■	■	■	■																					
O-CON13409 (page 47) Control System - Control Server & Thin Client Familiarization						■	■	■	■	□	□	□	□	□	□	□	□	□	□	□						
D-CON13409 (page 47) Control System - Control Server & Thin Client Familiarization - Distance Learning						■	■	■	■	□	□	□	□	□	□	□	□	□	□	□						

Course ID# & Title	UPGRADE																				Simulator Access	
	Aeroderivative & Heavy Duty Gas Turbine Upgrade																		Control & Excitation			
	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
O-CON13401 (page 45) Control System - Mark VIe Migration from Mark V, Familiarization																			■		✓	
O-CON13501 (page 45) Control System - Introduction to Mark VIeS Functional Safety System																					✓	
O-CON20701 (page 46) Control System - Mark VIe (Aero) Operation, Maintenance & Troubleshooting																						
O-CON10801 (page 46) Control System - Woodward (Aero) Operation, Maintenance & Troubleshooting																						
O-CON13602 (page 46) Control System - RX3i Operation, Maintenance & Troubleshooting																						
O-CON11401 (page 46) Control System - Aero DLE Familiarization and Mapping Overview																						
O-CON13409 (page 47) Control System - Control Server & Thin Client Familiarization																			□	□		
D-CON13409 (page 47) Control System - Control Server & Thin Client Familiarization - Distance Learning																			□	□		

Legend:
■ *Applicable to majority of fleet* | □ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

CATALOG INDEX **APPLICABILITY MATRIX**

The Applicability Matrix is for guidance purposes only, please contact your GE Vernova representative to discuss your particular needs.

Please select a course

Course ID# & Title	PLATFORM: Aeroderivative Gas Turbines					PLATFORM: Heavy Duty Gas Turbines												PLATFORM: Other Major Equipment						UPGRADE: Aeroderivative & Heavy Duty Gas Turbine Upgrade																				UPGRADE: Control & Excitation		Simulator Access	
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
CONTROLS AND EXCITATION - CONTINUED																																													
O-CON10402 (*page 47*) Control System - ALSPA Control System Fundamentals															■	■	■					□																							✓	
O-CON20401 (*page 47*) Control System - ALSPA Control System Intermediate															■	■	■					□																							✓	
O-CON30401 (*page 47*) Control System - ALSPA Control System Advanced															■	■	■					□																							✓	
O-CON33404 (*page 48*) Control System - Foundation Fieldbus✧							■	■	□	□																																□			

Legend:
■ *Applicable to majority of fleet* | □ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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Please select a course

Course ID# & Title	PLATFORM																					UPGRADE																								Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines														Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																					Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
AERODERIVATIVE GAS TURBINES																																														
O-AER10101 (*page 49*) Gas Turbine - LM2500 & LM2500+ Aero Package Operation/Familiarization	■																																									■	■				
D-AER10101 (*page 49*) Gas Turbine - LM2500 & LM2500+ Aero Package Operation/Familiarization - Distance Learning	■																																									■	■				
O-AER10105 (*page 49*) Gas Turbine - LM2500 Engine Familiarization	■	■																																								■	■				
D-AER10105 (*page 49*) Gas Turbine - LM2500 Engine Familiarization - Distance Learning	■	■																																								■	■				
O-AER10106 (*page 49*) Gas Turbine - LM2500 Level 1 Maintenance	■	■																																								■	■				
O-AER10104 (*page 49*) Gas Turbine - LM2500 Level 2 Cold Maintenance	■	■																																								■	■				
O-AER10103 (*page 50*) Gas Turbine - LM2500 Level 2 Hot Maintenance	■	■																																								■	■				
O-AER10102 (*page 50*) Gas Turbine - LM2500 Borescope Inspection	■	■																																								■	■				
O-AER10203 (*page 50*) Gas Turbine - LM2500+/G4 Engine Familiarization	■	■																																								■	■				
D-AER10203 (*page 50*) Gas Turbine - LM2500+/G4 Engine Familiarization - Distance Learning	■	■																																								■	■				

Legend:
■ *Applicable to majority of fleet* | ☐ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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Please select a course

Course ID# & Title	PLATFORM																						UPGRADE																								Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																						Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
AERODERIVATIVE GAS TURBINES - CONTINUED																																																
O-AER10204 (*page 50*) Gas Turbine - LM2500+ Level 1 Maintenance	■	■																																								■	■				
O-AER10205 (*page 50*) Gas Turbine - LM2500+ Level 2 Cold Maintenance	■	■																																								■	■				
O-AER10202 (*page 50*) Gas Turbine - LM2500+ Level 2 Hot Maintenance	■	■																																								■	■				
O-AER10201 (*page 51*) Gas Turbine - LM2500+ Borescope Inspection	■	■																																								■	■				
O-AER10301 (*page 51*) Gas Turbine - LM6000 Aero Package Operation/ Familiarization			■																																							■	■				
D-AER10301 (*page 51*) Gas Turbine - LM6000 Aero Package Operation/ Familiarization - Distance Learning			■																																							■	■				
O-AER10306 (*page 51*) Gas Turbine - LM6000 Engine Familiarization			■																																							■	■				
D-AER10306 (*page 51*) Gas Turbine - LM6000 Engine Familiarization - Distance Learning			■																																							■	■				
O-AER10303 (*page 52*) Gas Turbine - LM6000 Level 1 Maintenance			■																																							■	■				
O-AER10304 (*page 52*) Gas Turbine - LM6000 Level 2 Cold Maintenance			■																																							■	■				

Legend:
■ *Applicable to majority of fleet* | ☐ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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Please select a course

Course ID# & Title	PLATFORM																					UPGRADE																						Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines														Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																			Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
AERODERIVATIVE GAS TURBINES - CONTINUED																																													
O-AER10302 (*page 52*) Gas Turbine - LM6000 Borescope Inspection			■																																							■	■				
O-AER10401 (*page 52*) Gas Turbine - LMS100 Aero Package Operation/ Familiarization					■																																					■	■				
D-AER10401 (*page 52*) Gas Turbine - LMS100 Aero Package Operation/ Familiarization - Distance Learning					■																																					■	■				
O-AER10405 (*page 52*) Gas Turbine - LMS100 Engine Familiarization					■																																					■	■				
O-AER10402 (*page 53*) Gas Turbine - LMS100 Level 1 Maintenance					■																																					■	■				
O-AER10403 (*page 53*) Gas Turbine - LMS100 Level 2 Cold Maintenance					■																																					■	■				
O-AER10404 (*page 53*) Gas Turbine - LMS100 Level 2 Hot Maintenance					■																																					■	■				
O-AER10406 (*page 53*) Gas Turbine - LMS100 Borescope Inspection					■																																					■	■				
O-AER10501 (*page 53*) Gas Turbine - TM2500 & TM2500+ Aero Package Operation/Familiarization		■																																							■	■				
D-AER10501 (*page 53*) Gas Turbine - TM2500 & TM2500+ Aero Package Operation/Familiarization - Distance Learning		■																																							■	■				

Legend:
■ *Applicable to majority of fleet* | ☐ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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Please select a course

Course ID# & Title	PLATFORM																					UPGRADE																						Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																			Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
AERODERIVATIVE GAS TURBINES - CONTINUED																																													
O-AER10305 (*page 52*) Gas Turbine - LM6000 Level 2 Hot Maintenance			■																																						■	■				

Legend:
■ *Applicable to majority of fleet* | ☐ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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Please select a course

Course ID# & Title	PLATFORM																					UPGRADE																								Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																					Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
HEAVY DUTY GAS TURBINES																																															
O-GAS12002 (*page 54*) Gas Turbine - 6, 7, 9, B, E, F Class Introduction to Maintenance Theory								■	■	■	■	■	■																																			
D-GAS12002 (*page 54*) Gas Turbine - 6, 7, 9, B, E, F Class Maintenance Familiarization - Distance Learning								■	■	■	■	■	■																																			
O-GAS22101 (*page 54*) Gas Turbine - Operation E-Class (Advanced)											■	■																																			
O-GAS22201 (*page 54*) Gas Turbine - Operation F-Class (Advanced)								■	■																																						
O-GAS12003 (*page 55*) Gas Turbine - 6, 7, 9, B, E, F Class Operation Familiarization								■	■	■	■	■	■																																			
D-GAS12003 (*page 55*) Gas Turbine - 6, 7, 9, B, E, F Class Operation Familiarization - Distance Learning								■	■	■	■	■	■																																			
O-GAS20401 (*page 56*) Gas Turbine - GT11, GT13E2, GT24/GT26 Routine Maintenance															■	■																																
O-GAS10102 (*page 56*) Gas Turbine - GT13E2 Mechanical Systems & Components																	■																														
O-GAS20101 (*page 56*) Gas Turbine - GT13E2 Inspection																	■																														
O-GAS10201 (*page 57*) Gas Turbine - GT26/GT24 Mechanical Systems & Components (Retractable EV Burner)															■	■																																

Legend:
■ *Applicable to majority of fleet* | ☐ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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Course ID# & Title	PLATFORM																						UPGRADE																								Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																						Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
HEAVY DUTY GAS TURBINES - CONTINUED																																																
O-GAS20201 (*page 57*) Gas Turbine - GT26 Inspection (retractable EV Burner)															■																																		
O-GAS32501 (*page 57*) Gas Turbine – Operation HA-Class (Advanced) ✧						■	■																																									

Legend:
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Course ID# & Title	PLATFORM																						UPGRADE																								Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																						Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
STEAM TURBINES																																																
O-GRL10501 (*page 58*) General - Practical Steam Turbine Maintenance (Brown Boveri Design)																						■																										
O-STM10703 (*page 58*) Steam Turbine - Maintenance Familiarization (GE design)																					■																										
D-STM10703 (*page 58*) Steam Turbine - Maintenance Familiarization (GE design) - Distace Learning																					■																										
O-STM20701 (*page 58*) Steam Turbine - D11 Operation (Advanced)																					■																										
O-STM10702 (*page 58*) Steam Turbine - D11, A10 Operation																					■																										
D-STM10702 (*page 58*) Steam Turbine - D11 Operation - Distance Learning																					■																										

Please select a course

Course ID# & Title	PLATFORM																					UPGRADE																								Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines														Other Major Equip-ment					Aeroderivative & Heavy Duty Gas Turbine Upgrade																					Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
HEAT RECOVERY STEAM GENERATORS																																															
O-BOI10301 (*page 59*) Heat Recovery Steam Generator (HRSG) - Operation & Inspection																								☐																								

Legend:
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Course ID# & Title	PLATFORM																										UPGRADE																				Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equipment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																		Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
GENERATORS																																																
O-GEN10701 (page 60) Generator - Generator Fundamentals																									■	■																						
D-GEN10701 (page 60) Generator - Generator Fundamentals - Distance Learning																									■	■																						

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Course ID# & Title	PLATFORM																						UPGRADE																								Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines														Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																						Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
CONTROLS AND EXCITATION																																																
W-CON13402 (*page 61*) Control System - Mark™ VIe CIMPLICITY™ ActivePoint™ - Online Series with Simulation						■	■	■	■	■	□	□	□								□		□	□	□	□	□	□	□	□	□	■	□	■	□	□	■	□	■	■	■	■	■	■	□	□	✓	
W-CON13403 (*page 61*) Control System - Mark™ VIe CIMPLICITY™ Projects - Online Series with Simulation						■	■	■	■	■	□	□	□								□		□	□	□	□		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	□	✓	
W-CON13404 (*page 61*) Control System – Mark™ VIe CIMPLICITY™ Advanced Viewer - Online Series with Simulation						□	□	□	□	□	■	■	■	■							□		□	□	□	□		□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	□	✓	
W-CON13405 (*page 61*) Control System - Mark™ VIe Foundation – Online Series with Simulation						■	■	■	■	■	■	■	■								■		□	□	□	□		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	✓	

Legend:
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	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines																Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																					Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
AERODERIVATIVE GAS TURBINES																																														
W-AER10101 (*page 62*) Aeroderivative Engine - LM2500 Familiarization	■	■					■		■		■		■		■		■		■					■					■		■		■		■				■				■	■				
W-AER10301 (*page 62*) Aeroderivative Engine - LM6000 Familiarization			■				■		■		■		■		■		■		■					■					■		■		■		■				■				■	■				

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	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equipment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																					Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
HEAVY DUTY GAS TURBINES																																															
W-GAS10703 (*page 63*) Gas Turbine Fundamentals (7F)								■																																							
W-GAS10906 (*page 63*) Gas Turbine Systems - Basics of Gas Turbine Combustion							■	■	■	■	■	■	■	■	■	■	■	■	■	■																												
W-GAS10908 (*page 63*) Gas Turbine Systems - Compressor Water Wash							■	■	■	■	■	■	■	■																																		
W-GAS10909 (*page 63*) Gas Turbine Systems - Cooling and Sealing Air							■	■	■	■	■	■	■	■																																		
W-GAS10910 (*page 63*) Gas Turbine Systems - Cooling Water							■	■	■	■	■	■	■	■																																		
W-GAS10912 (*page 63*) Gas Turbine Systems - Fire Protection, Heating and Ventilation							■	■	■	■	■	■	■	■																																		
W-GAS10913 (*page 63*) Gas Turbine Systems - Fuel and Atomizing Air Systems							■	■	■	■	■	■	■	■																																		
W-GAS10915 (*page 63*) Gas Turbine Systems - Hydraulic Oil, Trip Oil, and VIGV Systems							■	■	■	■	■	■	■	■																																		
W-GAS10917 (*page 64*) Gas Turbine Systems - Lube Oil Systems							■	■	■	■	■	■	■	■																																		
W-GAS10918 (*page 64*) Gas Turbine Systems - Steam and Water Injection							■	■	■	■	■	■	■	■																																		
W-GAS10903 (*page 64*) Gas Turbine - Inlet and Exhaust						■	■	■	■	■	■	■	■	■																																		

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(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
HEAVY DUTY GAS TURBINES - CONTINUED CONTINUED																																															
W-GAS12002 (page 64) Gas Turbine - Generator Hydrogen Control System		☐	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			■	■																					

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(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
STEAM TURBINES																																															
W-STM10703 (*page 65*) Steam Turbine Fundamentals																					■																										

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Course ID# & Title	PLATFORM																										UPGRADE																				Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																		Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
GENERATORS																																																
W-ELX10901 (page 66) Generator & Electrical - 3-Phase Power																									■	■																			□	■		
W-ELX10902 (page 66) Electrical - ACDC Motors																									□	□																			□	□		
W-GEN10701 (page 66) Generator & Electrical - Elements of Power Delivery																									■	■																						
W-GEN10703 (page 66) Generator - Generator Theory																									■	■																						
W-GEN10901 (page 66) Generator & Electrical - Hydrogen Gas Control System						■	■	■	■	■	■	■	■												■																							
W-GEN10801 (page 67) Generator & Electrical - Stator Winding Cooling System						■	■	■	■	■	■	■	■	■											■																							
W-ELX11701 (page 67) Excitation - Circuit and MCC Basics																																													■	■		
W-ELX11702 (page 67) Excitation - Generator Operation and Synchronization																									■	■																						
W-GEN11401 (page 67) Generator - Generator Fundamentals - Design and Construction																									■																							
W-GEN11402 (page 67) Generator - Introduction to Generator Product Line																									■	■																						
W-GEN11403 (page 67) Generator - Generator Inspection																									■	■																						

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Course ID# & Title	PLATFORM																						UPGRADE																								Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines																Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																						Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
GENERATORS - CONTINUED																																																
W-GEN10501 (*page 67*) Generator - Shaft Sealing System																									■																								
W-GEN10704 (*page 67*) Generator - Generator Fundamentals - Field Design and Construction						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□					■	□																							
W-GEN10706 (*page 68*) Generator - Generator Fundamentals - Stator Design and Construction						■	■	■	■	■	■	■	■	■	□	□	□	□	□	□					□	■																							
W-ELX11502 (page 68) Excitation - Generator Digital Systems	□	□	□	□	□	□		□		□	□	□	□												□																				□	□		
W-ELX11001 (page 68) Excitation - LCI Static Starter System Fundamentals						□	□	□	□	□	□		□		□	□	□	□	□	□	□	□			□	□																				□			
W-ELX10903 (page 68) Electrical - Electrical Troubleshooting																									■	■																				■	■		

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Course ID# & Title	PLATFORM																						UPGRADE																								Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines															Other Major Equip-ment					Aeroderivative & Heavy Duty Gas Turbine Upgrade																						Control & Excitation			
(Click on Course Title to download detailed course outline)	LM2500 / LM2500+	TM2500 / TM2500+	LM6000	LM9000	LMS100	7H	9H	7F	9F	6F	7E / EA	9E	6B	Fr5 / 3	GT24	GT26	13E	13D	11N	8C	Steam Turbine (legacy GE)	Steam Turbine (legacy Alstom)	Boiler	HRSG	Generator (legacy GE)	Generator (legacy Alstom)	PA / PC Uprate (Aero)	Advanced Gas Path (AGP)	DLN1.0	DLN1.0+	DLN2.0	DLN2.6	DLN2.6+	DLN2.6+ Flex Combustor	Fast Start	Opflex	Advanced Compressor	Flex Suite	H2 Fuel Blanding	Adv. Performance Package	XL/MXL/MXL2 Upgrade	13E2 Efficiency Optimizer	Flange to Flange	Repower Projects	Turbine Control System	Generator Protection System	During Course	Extension After Course
PRO-ACTIVE TRIP AVOIDANCE TRAINING (PATAT)																																																
W-GAS10928 (*page 69*) PATAT 2 - Plant Trip Reduction						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				■	■																							
W-GAS10929 (*page 69*) PATAT 3 - GT Exhaust Gas Thermocouple Installation						■	■	■	■	■	■	■	■	■																																			
W-GEN10710 (*page 69*) PATAT 4 - Generator Brush Inspection & Maintenance						□	□	□	□	□	□	□	□	□	□	□	□	□	□	□					■	■																							
W-GAS10930 (*page 69*) PATAT 5 - High Exhaust Temperature Spread						■	■	■	■	■	■	■	■	■																																			
W-GAS10931 (*page 69*) PATAT 6 - Lean Blowout						■	■	■	■	■	■	■	■	■																																			
W-BOI10401 (*page 70*) PATAT 7 - HRSG Operation and Maintenance																								■																								
W-BOI10402 (*page 70*) PATAT 8 - Drum Level 1: Overview - Introduction																								■																								
W-BOI10403 (*page 70*) PATAT 9 - Drum Level 2: Level Controls - Control Systems																								■																								
W-BOI10404 (*page 70*) PATAT 10 - Drum Level 3: Condensate and Feedwater Pump Systems																								■																								
W-BOI10405 (*page 70*) PATAT 11 - Drum Level 4: Bypass Systems																								■																								
W-GAS10932 (*page 71*) PATAT 12 - Bearing Lube Oil & Hydraulics						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■																											

Legend:
■ *Applicable to majority of fleet* | □ *Applicable to limited fleet* | ✧ *Recommended course for new equipment*

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APPLICABILITY MATRIX

The Applicability Matrix is for guidance purposes only, please contact your GE Vernova representative to discuss your particular needs.

Please select a course

Course ID# & Title	PLATFORM																					UPGRADE																										Simulator Access	
	Aeroderivative Gas Turbines					Heavy Duty Gas Turbines														Other Major Equip-ment						Aeroderivative & Heavy Duty Gas Turbine Upgrade																							Control & Excitation			
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PRO-ACTIVE TRIP AVOIDANCE TRAINING (PATAT) - CONTINUED																																																
W-GAS10933 (*page 71*) PATAT 13 - Compressor Bleed Valve System						■	■	■	■	■	■	■	■	■																																			
W-STM10705 (*page 71*) PATAT 14 - Steam Turbine Startup and Shutdown Procedures																					■																											
W-GAS10934 (*page 71*) PATAT 15 - Winterization						■	■	■	■	■	■	■	■	■							■			■	■																							
W-GAS10935 (*page 71*) PATAT 16 - Troubleshooting Liquid Fuel System Problems						■	■	■	■	■	■	■	■	■																																			
W-GAS10936 (*page 72*) PATAT 17 - Troubleshooting Gaseous Fuel System Problems						■	■	■	■	■	■	■	■	■																																			

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