

Code	Path	Sub-path	CFU		max CFU		Description of mandatory modules (see the detailed spreadsheets)
			Mandatory	Recommended	Optional	Total	
01.01.01.01	Supplier Quality Engineer	Non conformity path	3,5	2	2,5	8	Students will complete various technical, safety, and quality-focused modules. These include familiarization with Baker Hughes machinery and equipment (covering turbines, compressors, climate technology, and control panels). They will engage in supplier quality management practices, including handling deviations, non-conformities, and supply chain collaboration under expert guidance. An ISO 9000 overview introduces ISO 9001:2015 quality management principles, the audit process, and continuous improvement strategies. Health, Safety, and Environment (HSE) mandatory training is also included, alongside a visit to manufacturing facilities for hands-on experience with processes. Participants will develop skills in HSSEQ investigations, covering problem-solving, root cause analysis, and corrective/preventive action planning. A Non-Destructive Testing (NDT) course offers insights into techniques like Dye-Penetrant, Ultra-Sonic, and Magnetoscopic testing, with practical exposure in workshops and labs. Regulatory training includes European directives (ATEX, PED, etc.) and CE Marking, complemented by Environmental Technical Regulation & Standards (Env TR&S) modules on compliance auditing. A structured "Non-Conformities" path focuses on competency in analyzing and addressing non-conformity reports.
01.01.01.02	Supplier Quality Engineer	Auditor path	3	2,5	2	7,5	The path aim to develop technical, quality, and compliance expertise. Students engage in familiarization with Baker Hughes equipment (e.g., turbines, compressors, control panels) and participate in training led by Supplier Quality Experts (SQE) to manage supplier quality, deviations, and non-conformities. A curriculum on self-auditing includes virtual sessions and a final examination, equipping students to audit processes, systems, and products effectively. An ISO 9000 module focuses on ISO 9001:2015, exploring quality management systems, audit procedures, and the importance of continuous improvement. Students also undergo HSE (Health, Safety, and Environment) mandatory training and manufacturing site visits to gain hands-on experience with processes and Non-Destructive Testing (NDT) methods, such as Dye-Penetrant, Ultra-Sonic, and Magnetoscopic tests. A detailed auditing course teaches audit fundamentals (e.g., requirements, evidence, CAPA), surveillance planning, execution, and reporting. Real-world audits are conducted under SQE supervision to reinforce learning. Training on European Community regulations and CE Marking (e.g., ATEX, PED) is also included, along with environmental regulations (Env TR&S) and their connection to ISO 9001. Lastly, the "Audit Findings" and "Non-Conformities" paths focus on applying learned concepts to evaluate supplier performance and analyze deviations comprehensively.
01.01.02.01	COE Assembly & Pacchaging	Manufacturing Engineer Turbomachinery. CC-ST Assembly Custom	3,5	0	1	4,5	The modules provide a comprehensive training program focused on the technical, operational, and safety aspects of BH centrifugal compressors and related processes. Key topics include rotor dynamics, assembly procedures, calibration fundamentals, thread and hole inspection, workholding, and HSE (Health, Safety, and Environment) practices. The program integrates theoretical and practical learning, such as classroom training on rotor dynamics, functional test benches, and machining principles, alongside hands-on sessions in workshops to observe balancing, alignment, and performance tests. Participants learn how to develop assembly cycles, check plans, and design lifting fixtures and tools based on customer requirements and specifications. Additionally, modules emphasize the importance of calibration and traceability in measurement, the inspection of threads and holes, and the selection of machining tools for quality assurance. Safety and compliance are reinforced through HSE training to foster a healthier work environment, reduce risks, and enhance workforce wellbeing.
01.01.02.02	COE Assembly & Pacchaging	Manufacturing Engineer Turbomachinery : GT Assembly Flow	3	2	1	6	This comprehensive training program equips students with essential technical and operational knowledge for industrial applications in oil and gas. Key modules include gas turbines focusing on their principles, components, Baker Hughes models, and industry applications. Students gain insight into engineering decisions, linking customer requirements to material procurement, manufacturing, assembly, and maintenance. Safety is emphasized through HSE policies, hazard analysis, Lockout/Tagout procedures, and compliance with OSHA and local regulations. Practical training encompasses shopfloor assembly, machining, vibration analysis, and rotor dynamics, including balancing and overspeed testing. Hands-on activities involve creating assembly cycles, defining operational sequences, and selecting tools, clamping, and workholding devices to ensure precision and efficiency. The course also explores environmental impacts, risk prevention, and real-world diagnostic cases, fostering critical thinking. Students learn to integrate theoretical principles with practical skills to improve productivity, safety, and quality in manufacturing and maintenance operations.
01.01.02.03	COE Assembly & Pacchaging	Manufacturing Engineer Turbomachinery: MC Packaging	3	0,5	0,5	4	This training program provides a comprehensive understanding of critical machinery and processes in the oil and gas industry, and specifically moto-compressor skids. Key modules include the operating principles, components, and applications of centrifugal compressors, centrifugal pumps, gas turbines, steam turbines, and reciprocating compressors, with a focus on Baker Hughes models. Safety is prioritized through detailed training on OSHA-compliant Lockout/Tagout procedures, hazard control, and comprehensive HSE policies, covering risk prevention, PPE use, emergency protocols, and environmental impact management. Practical skills are honed through activities such as drafting and executing assembly routings, inspection plans, and time configurations for mechanical and electrical tasks. Students gain hands-on experience in welding, painting, baseplate leveling, DBSE alignment, and cable field connections, supported by classroom theory and workshop applications. The course also introduces non-destructive testing methods, offering insights into quality control. Participants learn to integrate technical knowledge with operational efficiency, emphasizing safety, quality, and productivity in manufacturing and assembly processes.
01.01.03.01	COE Machining & Fabrication	Manufacturing Engineer Turbomachinery: Manufacturing Technology - Rotor - CC Impeller	3	1,5	0,5	5	This training program covers key topics in industrial machinery, manufacturing processes, emphasizing both theoretical understanding and hands-on application, especially for centrifugal compressor rotors. Students learn the principles, components, and Baker Hughes models of steam turbines and reciprocating compressors, along with their oil & gas applications. Safety training includes OSHA-compliant Lockout/Tagout procedures, emphasizing hazardous energy control, and comprehensive HSE policies focused on risk prevention, emergency response, and environmental impact. The program includes a deep dive into manufacturing processes, such as machining, turning, milling, and plunge EDM, with classroom training and on-the-job learning to master impeller production. Participants learn cycle development, tooling selection, and heat treatment planning, alongside inspection plan creation. Key modules address clamping basics, additive manufacturing, and the application of digital tools like MES and MOM for production management. Routing and part programming tasks ensure students gain practical skills in optimizing production efficiency, accuracy, and compliance with Baker Hughes standards. Final Test involve executing a complete routing for a CC/ST assembly starting from given job specifications and applicable drawings (including Inspection Plans) and creation of time configuration for mechanical and electrical activities.
01.01.03.02	COE Machining & Fabrication	Manufacturing Engineer Turbomachinery: Manufacturing Technology - Stator - Casing	3	0,5	0,5	4	This training program provides comprehensive education in machinery principles, manufacturing processes, safety standards, and digital tools, emphasizing both theoretical knowledge and practical application, with focus on Participants will gain an understanding of the operating principles, main components, and Baker Hughes models of centrifugal compressors, centrifugal pumps, steam turbines, and reciprocating compressors, as well as their applications in the oil and gas industry. The program also includes critical safety training on OSHA-compliant Lockout/Tagout procedures, focusing on hazardous energy control, and HSE policies emphasizing risk prevention, emergency response, and environmental awareness. Key manufacturing topics include metrology processes, technical drawing analysis, and machining sequence development (routing). Participants will learn to define machining cycles, inspection plans, and tooling requirements based on raw and finished components. Detailed modules on milling, turning, clamping, and additive manufacturing ensure a strong grasp of advanced manufacturing techniques and the ability to manage machine tools effectively. Practical elements include on-the-job training (OJT) with engineers and shopfloor personnel to apply theoretical knowledge in real-world settings. Training covers process simulations, CAD/CAM programming, and managing operations for efficient production. The integration of digital tools (MES, MOM, MIC/SMART FACTORY) teaches participants how to collect and analyze data for continuous improvement and monitor key performance metrics such as OEE. Final assessments involve developing machining routings and detailed operational plans that meet industry standards, ensuring readiness for practical industrial challenges.
01.01.03.03	COE Machining & Fabrication	Manufacturing Engineer Turbomachinery: Manufacturing Technology Rotor GT Wheel	3	1,5	1	5,5	This comprehensive training program equips participants with theoretical knowledge and practical skills across machinery operations, safety standards, manufacturing processes, and digital tools, with a strong emphasis on industrial applications. Participants will explore the operating principles, components, and applications of gas turbines and specifically Gas Turbine rotors, but also centrifugal compressors, and centrifugal pumps, focusing on Baker Hughes models and their roles in the oil and gas industry. The program includes essential safety training on OSHA-compliant Lockout/Tagout procedures to ensure safe energy control during maintenance. It also covers HSE policies, risk prevention, emergency response, environmental impact, and compliance with Legislative Decree 81/08, promoting a culture of safety and awareness. Key manufacturing topics include an introduction to non-destructive testing techniques, the principles of electro-discharge machining, and advanced topics in milling, turning, and clamping. Participants will develop skills in analyzing technical drawings, defining machining routings, selecting tools, and creating inspection plans to meet industrial standards. Practical, on-the-job training (OJT) provides hands-on experience with manufacturing engineers and shopfloor personnel, covering machining processes, CNC programming (CAD/CAM), and operational risk mitigation. Specialized training sessions on additive manufacturing and digital tools (MES, MOM, MIC/SMART FACTORY) teach participants to manage workflows, track efficiency, and drive continuous improvement. The final assessment challenges participants to design machining routings, detail operations, and optimize handling and clamping based on real-world industrial specifications, ensuring readiness for manufacturing environments.