			CFU	max CFU			
Code	Path	Sub-path	Mandatory	Recommended	Optional	Total	Description of mandatory modules (see the detailed spreadsheets)
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 & Packaging	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 involv 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.

01.01.04.01	Design Engineering	Turbomachinery Package & Auxiliary	3	1,5	2,5	7	This comprehensive training program equips participants with theoretical knowledge and practical skills across auxiliary systems of Baker Hughes' product portfolio (Gas Turbines - GT, Steam Turbines - ST, Centrifugal Compressors - CECO, Reciprocating Compressors - RC). The auxiliary systems of turbomachinery equipment are all the surrounding components allowing machine operation, since providing oil to the bearings, air, fuel, water for cooling and utilities, fire detection and suppression systems, etc. The participants will explore the main design criteria, operating principles, components, and applications of GT, ST, CECO, RC products; students will acquire the main knowledge about the foundation and baseplate fundamentals of turbomachinery equipment with some practical examples of main used design solutions; the rotordynamics design criteria and some test studies of turbomachinery trains, with an overview of Baker Hughes's internal tools for design verification. The program provides information to participants about all the minimum required document know-how to understand turbomachinery architecture, schematic diagrams, system functionality and operating information; a case study of component sizing will be held and assigned to participant as practical exercise, to reflect real case study. Practical, on-the-job training (OJT) provides hands-on experience with design engineers on the most common disciplines used to manage project execution: FEM, CFD, Acoustics, Component design selection are some examples of dedicated studies that will be held during the program, with real test cases. Safety and compliance are reinforced through HSE training, aimed at fostering a healthier work environment, reducing risks, and enhancing workforce wellbeing. Finally, the technical management and systems engineering module blends three perspectives—customer needs, product development, and contract execution—to help students understand how engineering decisions are shaped by business goals and operational realities. The mandatory activities introduce students to the development of an industrial project—from the first customer idea to the final product in operation—by exploring how technical development, commercial strategy, and execution planning work together. Through the additional activities, participants can engage with real-world examples and simulations of the contents presented through the course and to attend dedicated training elements for specific methodologies relevant to how products are conceived, designed, integrated, and delivered within complex project environments. The final assessment is comprised of intermediate evaluations and a final presentation to a board consisting of Baker Hughes Engineering representatives where participants will demonstrate what they have learned throughout the course.
01.01.04.02	Design Engineering	Compressor & Radial Expander Desig	3	1	2,5	6,5	A comprehensive training program focused on the technical design of BH centrifugal and reciprocating compressors. Key topics include the complete machine design process—from selection to assembly—with an overview of the industrial processes in which these compressors are applied. The training features in-depth sessions on assembly, rotor dynamics, vibrations, dry gas seal (DGS), and active magnetic bearing (AMB) design. These sessions cover international standards, design approaches, monitoring methods, and operating principles. The program combines theoretical and practical learning, including classroom instruction and hands-on sessions in the BH workshop. Participants will observe rotor balancing and the assembly of AMB and centrifugal compressors, gaining insight into the critical aspects of each phase. They will also learn how to use BH analysis tools for rotordynamics design and understand the criteria for selecting AMB and DGS. Safety and compliance are reinforced through HSE training, aimed at fostering a healthier work environment, reducing risks, and enhancing workforce wellbeing. Finally, the technical management and systems engineering module blends three perspectives—customer needs, product development, and contract execution—to help students understand how engineering decisions are shaped by business goals and operational realities. The mandatory activities introduce students to the development of an industrial project—from the first customer idea to the final product in operation—by exploring how technical development, commercial strategy, and execution planning work together. Through the additional activities, participants can engage with real-world examples and simulations of the contents presented through the course and to attend dedicated training elements for specific methodologies relevant to how products are conceived, designed, integrated, and delivered within complex project environments. The final assessment is comprised of intermediate evaluations and a final presentation to a board consisting of Baker Hughes Engineering representatives where participants will demonstrate what they have learned throughout the course.
01.01.04.03	Design Engineering	Turbine Design	3,5	0,5	2	6	The path is aimed to train the future turbomachinery design engineers. The focus is on the gas turbines and steam turbines design. The first modules include gas and steam turbines focusing on their principles, components, Baker Hughes models and/or families, and their applications. Part of the learning is an introduction to technical management & systems engineering fundamentals in the Baker Hughes engineering organization. With these foundations the main challenges of the design phase of a turbine are covered, including but not limited to, aerodynamic design, the combustion system, the operability of the machine and key disciplines like rotordynamic, airfoils design and aeromechanics. The courses will be completed with tutorials and exercises. The Combustion modules includes the peculiarities of the energy transition fuels like Hydrogen, pollutants formation and the design features of the Baker Hughes gas turbine combustion systems. The advantages and disadvantages of each one of them and their impact on engine operability and control system will be covered during the operability course. The program integrates theoretical, tutorials and practical learnings, including not only classroom lessons, but also hands-on sessions in the workshop. Participants will observe rotor balancing and the assembly phases of a gas turbine, giving soundness to the learnings and design criteria acquired during the lessons and tutorials. Finally, Life Cycle Assessment will be addressed by mean of a specific module divided in two parts, the first on LCA methodology and application; the second consisting in an exercise in working groups, the participants will be able to perform an LCA study, from goal and scope definition, data collection, impact assessment and interpretation. Safety and compliance are reinforced through HSE training, aimed at fostering a healthier work environment, reducing risks, and enhancing workforce wellbeing. Finally, the technical management and systems engineering module blends three perspectives—customer needs, product development, and contract execution—to help students understand how engineering decisions are shaped by business goals and operational realities. The mandatory activities introduce students to the development of an industrial project—from the first customer idea to the final product in operation—by exploring how technical development, commercial strategy, and execution planning work together. Through the additional activities, participants can engage with real-world examples and simulations of the contents presented through the course and to attend dedicated training elements for specific methodologies relevant to how products are conceived, designed, integrated, and delivered within complex project environments.