THE ASSOCIATION OF SCIENCE AND ENGINEERING TECHNOLOGY PROFESSIONALS OF ALBERTA

Professional Technologist Sample Scopes of Practice

P.Tech.(Eng.) / P.Tech.(Geo.)

2025

Disciplines

Overview

The list of sample scopes of practice issued by the Joint Board of Examiners are examples only. The scope was issued with specific activities (tasks) and descriptions derived from the applicant's detailed experience spreadsheet exclusive to their experience. Your proposed scope of practice reflects the specific structure of the work or process, the applicable industries and if desired, an optional field of practice.

Biomedical engineering

- Within the discipline of biomedical engineering: evaluating and advising on clinical and biomedical engineering systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Chemical engineering

- Within the discipline of chemical engineering: designing, evaluating, preparing plans and specifications for, and reporting on corrosion mitigation and control programs using chemical inhibitors in the oil and gas industry that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of chemical engineering and field of practice of water treatment: reporting on and evaluating water treatment performance, advising on water treatment infrastructure design, directing the technical inspections of water treatment infrastructure and directing the operation of potable/ wastewater treatment systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of chemical engineering and field of practice of process management: advising on process safety reviews, hazards analysis and risk management; evaluating GHG emissions, and water chemical treatment that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of chemical engineering and field of practice of materials testing and inspection: evaluating technical data, inspection criteria and pressure and storage equipment for compliance, engineering corrosion control documents, and completing risk-based analysis as per API RP 580 Standard that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of chemical engineering: advising on and reporting on gas plant and pipelines operations and designing of process piping to ASME B31.3 and pipelines to Z662 (mechanical design) that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Civil engineering

- Within the discipline of civil engineering and field of practice of structural restoration: designing wood framed balconies for multi-family residential buildings; reporting on, advising on, preparing plans and specifications for and directing the construction of structural repairs for parking structures, tie-back roof anchors, concrete and wood framed balconies, multi-family residential and commercial buildings that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of civil engineering and the field of practice of municipal infrastructure: designing street lighting and evaluating and advising on development agreements, development permits and subdivision applications that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of civil engineering: advising on drainage infrastructure design drawings for infrastructure reliability, operation and longevity, lift station operational conditions, and solutions for lift station and control structure failures; directing the construction of lift station rehabilitation projects; and directing the technical inspection of sanitary, storm and combined influent lift stations, gates and control structures for construction completion; and evaluating structural and operational conditions on lift stations that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of civil engineering and the field of practice of oil and gas operations: reporting on and directing the construction of earth dykes, pump pads, and drain piping, and evaluating associated construction manuals that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of civil engineering and field of practice of water resources: designing, evaluating, reporting on, preparing plans and specifications for, directing the construction and technical inspection of open channel irrigation systems, raw water reservoirs, erosion control and associated hydraulic structures, pipes and site grading that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of civil engineering and field of practice of roadway design and transportation: reporting on, advising on, evaluating, designing, preparing plans and specifications for, and directing the construction and the technical inspection of rural and urban roadway earthworks, site grading, surface water management and collection systems under 25 km2 (open channel flow and culverts with a diameter up to 1500mm) that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of civil engineering and field of practice of materials testing and inspection: reporting on and directing the operation of a soils, concrete and asphalt lab, directing the technical inspections of those materials, and the design of asphalt concrete mixes and subsoil evaluations that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of civil engineering: reporting on geotechnical investigations and classification of subsurface samples using modified unified soil classifications, advising on engineering recommendations for foundation, earthworks, road and pavement design and construction feasibility, designing grading plans to manage surface water for commercial and large industrial sites, designing earthen berm reservoirs based on previously completed geotechnical investigations, preparing plans and specifications for construction packages for earthen berm reservoirs with capacities from 50,000 m3 - 500,000 m3 that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Computer engineering

- Within the discipline of computer engineering: designing control system networks and preparing plans and specifications for control system software installations, upgrades, and migrations that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of computer engineering and field of practice of telecommunications: designing, reporting on, preparing plans and specifications for, and directing the maintenance of, including implementing computer and telecommunications switching and routing networks that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of computer engineering: design and implementation of an IT network that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Construction engineering

- Within the discipline of construction engineering: evaluating and reporting on residential, commercial and industrial building plans with respect to compliance with the National Building Code Alberta Edition Part 3 and Part 9 as part of a permitting process for an Authority Having Jurisdiction, that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of construction engineering and field of practice of building envelope engineering: evaluating, advising on, and reporting on building envelope systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of construction engineering: evaluating, advising on, reporting on, and directing the construction and technical inspection of highway infrastructure and related civil works including roads, bridges, culverts, ancillary concrete or steel structures, and water management infrastructure that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of construction engineering and the field of practice of building design: evaluating and reporting on building assemblies and structures; designing, preparing plans and specifications for, and directing the technical inspection of building repairs that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Electrical engineering

- Within the discipline of electrical engineering and field of practice of lighting and signals: reporting on, advising on, evaluating, preparing plans and specifications for, and directing the construction of roadway lighting projects that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of electrical engineering and field of practice of power generation, transmission, and distribution: evaluating, preparing plans and specifications for replacement projects which include power transformers rated up to 138kV-56 MVA, designing and directing the construction of electrical substations up to 138kV and distribution systems up to 25kV that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of electrical engineering and field of practice of railway signaling and transportation: preparing plans and specifications for signal sites, including field and equipment housing and associated electrical schematics, advising on requirements regarding the design and construction of both freight and light rail transit systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of electrical engineering: evaluating, designing, preparing plans and specifications for, directing the construction of, and the technical inspection of instrumentation, control and data communications systems, and low voltage electrical systems for industrial applications that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of electrical engineering and field of practice of building systems: designing, evaluating, reporting on, advising on, and preparing plans and specifications for electrical distribution and back up power systems up to and including 25kV, fire alarm and life safety systems, interior and exterior lighting, security and door access control systems, communication systems, control and instrumentation hardware, grounding and bonding of electrical equipment and systems, electrical equipment layouts and raceway routing that is the

routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Electronics engineering

- Within the discipline of electronics engineering: designing, preparing plans and specifications for, and directing the construction and technical inspection of automation equipment and systems, hardware and software verification/validation testing and defects resolution, reliability and environmental and safety design that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of electronics engineering: designing, evaluating, and preparing plans and specifications for commercial and industrial electronic sensors, power supplies, communication systems, and computer-controlled systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of electronics engineering and field of practice of telecommunications: designing, advising on, evaluating, directing the operation and implementation of outside plant fiber networks and the data protocol transported over the networks that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of electronics engineering: designing, advising on, preparing plans and specifications for, and directing the maintenance of visual messaging systems, public address systems, CCTV systems, communication systems equipment, operational control centers, point to point and point to multi-point wireless devices, both internal and external copper and fiber optic structured cabling for public transit that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Environmental engineering

- Within the discipline of environmental engineering and the field of practice of environmental liability management: reporting on environmental site assessments of soil, groundwater and surface water; evaluating soil, groundwater and surface water chemistry data; designing groundwater collection systems for contaminated sites; and advising on the environmental management of contaminated sites that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of environmental engineering: reporting on, advising on, evaluating, preparing plans and specifications for, and directing the construction, technical inspection, maintenance, and operation of environmental oriented engineering projects related to municipal stormwater infrastructure and landfill gas systems and general landfill construction that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of environmental engineering and the field of oil and gas operations: advising on and reporting on air emissions, and evaluating, reporting on, and advising on contaminated soil and groundwater assessment, remediation and compliance, and directing the construction of environmental remediation systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of environmental engineering: advising on and reporting on Phase 1, 2 and 3 Environmental Site Assessments, remediation, delineation, risk management of contaminated site and sampling programs including soil, air, surface water, groundwater, drilling waste and hazardous building material assessments; designing environmental sampling, monitoring and remediation programs; evaluating laboratory analytical results for soil, groundwater, surface water, air, drilling waste and hazardous building material samples; and directing the technical inspection of oilfield, industrial, commercial, residential, agricultural and natural lands including soil,

water, air, drilling waste and building material sampling and monitoring programs for environmental assessment purposes that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Environmental geology

- Within the discipline of environmental geology and field of practice of remediation: evaluating baseline data, soil type, biochemistry, hydrogeology, and remedial options; reporting on environmental assessments and remediation programs, guideline selection using land use, grain size, and pathway elimination relating to Alberta Tier 1 and Tier 2 Guidelines; and advising on contaminant plume fate and transport, conceptual site modeling, and associated liability that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of environmental geology in the field of practice of contaminant investigation and remediation: exploring, interpreting and reporting on soil and groundwater physical and contaminant properties, and advising on environmental management and remediation for soil and groundwater contamination that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of environmental geology and the field of practice of environmental liability management: reporting on environmental site assessments of soil, groundwater and surface water; evaluating soil, groundwater and surface water chemistry data; designing groundwater collection systems for contaminated sites; and advising on the environmental management of contaminated sites, that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Geomatics engineering

- Within the discipline of geomatics engineering and field of practice of oil and gas operations: preparing plans and specifications and advising on drawings for pipeline layout that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of geomatics engineering and field of practice of oil and gas operations: evaluating and reporting on the accuracy of survey control networks that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Hydrogeology

- Within the discipline of hydrogeology, in the field of practice of groundwater supplies: preparing plans and specifications for and advising on hydrogeological evaluations and exploration programs, groundwater resource development, water well drilling, groundwater pumping, and groundwater monitoring systems, water well reclamation, aquifer testing, *Water Act* license applications and requirements, and water sampling; directing the construction, operations, and maintenance of water wells and associated pumping, diversion, and monitoring equipment; and reporting on collected hydrogeological information and project field data, water laboratory analysis, water well survey results, *Water Act* license applications and requirements, and preparing technical water use reports that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of hydrogeology: reporting on Phase II and III environmental assessments, hydrogeological evaluations and water well testing; interpreting aquifer test analysis, laboratory analytical results and environmental assessment field data; and exploring and evaluating that includes conducting environmental assessments, soil and groundwater sampling and collecting hydrogeological data that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of environmental geology and field of practice of remediation: evaluating baseline data, soil type, biochemistry, hydrogeology, and remedial options; reporting on environmental assessments and remediation programs, guideline selection using land use, grain size, and pathway elimination relating to Alberta Tier 1 and Tier 2 Guidelines; and, advising on contaminant plume fate and transport, conceptual site modeling, and associated liability, that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Industrial engineering

- Within the discipline of industrial engineering: designing and reporting on industrial engineering technology projects, including implementation of safety and loss management systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Instrumentation engineering

- Within the discipline of instrumentation engineering: advising on and evaluating field sizing and material selection for appropriate control valves, pressure safety valves, regulators and emergency shut down valves for oil and gas industries that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of instrumentation engineering: evaluating logic control strategies, control narratives, P&IDs, datasheets, control valve sizing, preparing plans and specifications for commissioning instrumentation systems that is the routine application of industry recognized codes, standards, and practices using established engineering methods or applied science principles of problem solving.

- Within the discipline of instrumentation engineering: designing and preparing plans and specifications for process instrumentation systems and technical lists, and directing the construction of instrumentation, which includes configuration and commissioning of the physical devices and configuration of instruments for the oil and gas industry that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of instrumentation engineering and field of practice of oil and gas operations: designing, preparing plans and specifications for, evaluating, and directing the maintenance of automation, instrumentation, and process control systems with respect to DCS, SCADA, and PLC systems including data communication systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of instrumentation engineering: evaluating, advising on, and directing the construction and maintenance of equipment and procedures for the implementation of instrumentation, tubing systems, process control systems, safety shut down systems and low voltage power systems up to 60VDC for upstream oil and gas facilities, gathering systems and well sites that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Materials engineering

- Within the discipline of materials engineering: evaluating, preparing technical specifications, inspection, analysis and reporting on the use of metallic and non-metallic materials that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of materials engineering and the field of practice of oil, gas and petrochemical industries: evaluating and preparing plans and procedures for inspection programs for the technical inspection of pressure equipment and piping systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of materials engineering and field of practice of asset integrity: evaluating destructive and non-destructive testing results on pipelines and associated equipment, advising on the technical inspection of pipelines and associated equipment, advising on new pipeline design incorporating pipeline integrity considerations, advising on the maintenance of pipeline systems to maximize reliability that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of materials engineering and the field of practice of materials testing and inspection and/or oil and gas operations: directing the technical inspection of pressure retaining equipment, structural steel, raw materials, and associated components, evaluating welder performance and ability to deposit sound metal, advising on and reporting on quality control and welding integrity, and preparing plans and specifications for welding procedures, equipment repairs, and non-destructive evaluation that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of materials engineering and field of practice of oil and gas operations, and materials testing and inspection: evaluating materials suitability for wellhead and pipeline operations, generating welding procedures for general fabrication and pressure containing equipment, and preparing plans and specifications for the manufacturing of wellhead and pipeline equipment that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Mechanical engineering

- Within the discipline of mechanical engineering: reporting on, advising on, evaluating, designing, preparing plans and specifications for, and directing the construction of water and wastewater treatment facilities for oil and gas processes, inclusive of pumping stations and piping systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of mechanical engineering: designing, advising on, evaluating, reporting on and directing the construction of rotating and static equipment including centrifugal pumps, air and gas compressors, and heat exchangers relating to pressure equipment, HVAC, and fire protection and detection systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of mechanical engineering: designing, preparing plans and specifications for, and advising on structural skids for process equipment packages that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of mechanical engineering: designing, evaluating, reporting on, advising on, preparing plans and specifications for, and directing the construction and maintenance of welded assemblies for worker platforms, scaffolds, and related equipment; storage, material handling and lifting equipment; internal combustion and electric powered hydraulic units, and designing hydraulic systems and structural components for hydraulic power units and well servicing equipment and that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of mechanical engineering and field of practice of fire protection: advising on, preparing plans and specifications for, designing, evaluating, and reporting on fire suppression systems for industrial, commercial, and residential facilities that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Metallurgical engineering

- Within the discipline of metallurgical engineering and field of practice of oil and gas operations: preparing plans and specifications for, directing the construction of, evaluating, reporting on, and directing the technical inspection of upstream and downstream pressure equipment at wells and facilities, inclusive of pressure vessels, pressure safety valves, pressure piping systems and tanks that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of metallurgical engineering and field of practice of oil and gas operations: directing the construction and technical inspection of HVP pipelines and facility systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of metallurgical engineering: designing, evaluating, reporting on, and advising on welding processes and procedures that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of metallurgical engineering and field of practice of oil and gas operations: advising on, evaluating, reporting on, preparing plans and specifications for, and directing the technical inspection of petrochemical pressure equipment inclusive of; pressure vessels, pressure safety valves, pressure piping systems and tanks according to local regulations that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Petroleum engineering

- Within the discipline of petroleum engineering: designing and directing the construction of and preparing plans and specifications for oil and gas wellsite facilities and pipeline systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of petroleum engineering and field of practice of pipeline systems: advising on, evaluating and reporting on chemical and integrity programs on oil and gas pipeline corrosion inhibition systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of petroleum engineering and field of practice of oil and gas operations: directing the operation of servicing of high pressure, sour oil and gas wells, designing surface and downhole artificial lift equipment, advising on subsurface chemical applications, and directing the maintenance of downhole pumping systems and technical inspection of failed downhole pumping equipment that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of petroleum engineering: evaluating and reporting on hydrocarbon reserves and resources, and designing and directing the operation of waterflood processes for unconventional resource development that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of petroleum engineering and field of practice of oil and gas operations: designing, preparing plans and specifications for, and directing the construction of oil and gas processing systems including oil batteries, compressor stations, gas plants, gathering and disposal pipelines and oil and gas waste facilities up to 42.55 MPa. that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of petroleum engineering and field of practice of oil and gas operations: advising on hydraulic fracturing stimulation data loader designs and delivery process development, reporting on quality and

integrity of Canadian well and production content that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Petroleum geology

- Within the discipline of petroleum geology: collecting, processing, quality assessment, interpretation and evaluation of geological, geophysical and engineering data pertinent to reservoir evaluation (both conventional and unconventional), which may include but is not limited to; geological strip logs, hydrocarbon test results, core laboratory results, geological and geophysical maps and cross-sections and geophysical logs, using petrophysical, petrogeological and basic engineering techniques to evaluate hydrocarbon reserves and resources in place (both conventional and unconventional) that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of petroleum geology and field of practice of oil and gas exploration: exploring basins to identify new oil plays, interpreting the depositional environment of geologic formations, evaluating producing horizons, and advising on drilling strategies, completions, and land tenure that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of petroleum geology: geological interpretation, evaluation and reporting on oil and gas reservoirs within the Western Canadian Sedimentary Basin using petrophysical, petrological and geological mapping techniques that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of petroleum geology and field of practice of oil and gas operations: evaluating, reporting and advising on the operations of oil and gas well drilling operations that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

Software engineering

- Within the discipline of software engineering: evaluating and reporting on systems integration including implementation and testing of network communications, information assurance and tactical data system elements for military and commercial communication systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

- Within the discipline of software engineering: designing the development of software applications for ultrasonic non-destructive testing tools in the oil and gas industry that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.