

## CHEMICAL ENGINEERING

1	Chemical	Within the discipline of chemical engineering: design, planning and analysis of the operation, control and optimization of industrial water treatment and crude oil wastewater treatment 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.
2	Chemical	Within the discipline of chemical engineering: design, planning and analysis of the operation, control and optimization of industrial water treatment and crude oil wastewater treatment 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.
3	Chemical	Within the discipline of chemical engineering: design, planning and analysis of the operation, control and optimization of industrial water treatment and crude oil wastewater treatment 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.
4	Chemical	Within the discipline of chemical engineering: evaluate, advise, planning and analysis of the operation, control and optimization of gas processing and treating 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.

## CIVIL ENGINEERING

1	Civil	Within the discipline of civil engineering: designing (concept, functional, preliminary and detailed design), preparing contract documents, project management, and construction supervision and inspection for urban and rural roadways that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.
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2	Civil	Within the discipline of civil engineering: managing, reporting on, and directing the development and construction of civil engineering works including design of roads, light rail track, site grading, storm/sanitary sewers and earthworks 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.
3	Civil	Within the discipline of civil engineering: managing and directing the maintenance and operation of highway infrastructure, and roadside development control 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
4	Civil	Within the discipline of Civil Engineering: Design and specify structures for the construction of aerial and underground electrical utility distribution 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.

5	Civil	Within the discipline of civil engineering; managing, designing, reporting and directing the construction of roadways and related drainage works 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.
6	Civil	Within the discipline of civil engineering: managing, reporting on, advising on, evaluating, designing, preparing plans, contract documents and technical specifications for and construction of roadways, water distribution systems, sanitary sewage collection systems, storm water management and collection systems, site grading and shallow utility coordination 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.
7	Civil	Within the discipline of civil engineering: geometric design, estimating and preparing contract plans for construction of roadways 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.
8	Civil	Within the Discipline of Civil Engineering: Project management of engineering, procurement and construction of gas, oil and pipeline 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.
9	Civil	Within the discipline of Civil Engineering: evaluating the design of and advising on water distribution systems, sanitary sewer collection systems and overland drainage and storm water management systems for municipal approval of new subdivisions and existing communities 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.

10	Civil	Within the discipline of civil engineering: applied geotechnical services for construction, operation and maintenance of pipeline corridors and related 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.
11	Civil	Within the discipline of Civil Engineering: project management for the construction of civil related works, including review of quality assurance, review for constructability of site grading, storm drainage systems, water supply, sanitary sewer, roads, rail and shallow utilities 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.
12	Civil	Within the discipline of Civil Engineering: design, inspect, specify, advise, evaluate and report on engineered wood products 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.
13	Civil	Within the discipline of civil engineering: evaluate and assess the design proposals of storm and sanitary collection and drainage systems in accordance with City of Edmonton Drainage Services Environmental Management System (ISO 14001) 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.
14	Civil	Within the discipline of civil engineering: design, reporting on, directing the development/construction of roadways and right-of-ways: earthworks, rural and urban roadways, site grading for surface drainage, water supply, sanitary sewage collection systems, storm water collection systems, and storm water 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.

15	Civil	Within the discipline of civil engineering: design of concrete mixtures, inspection, review and reporting of hardened concrete properties and associated 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.
16	Civil	Within the discipline of civil engineering: design, procurement and construction supervision of municipal civil engineering works including water distribution, sanitary and storm sewers, urban and rural roads and earthworks 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.
17	Civil	Within the discipline of civil engineering: design and construction supervision of municipal water mains and sewers, water and wastewater facilities including maintenance and operation 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
18	Civil	Within the discipline of civil engineering: design, test and analyze PVC Window and Sliding Glass Door Systems for the effect of wind loads 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
19	Civil	Within the discipline of civil engineering: design and construction supervision of irrigation channels, irrigation pipelines and associated hydraulic structures that is the routine application of industry codes, standards, procedures, and practices, using established engineering or applied science principals and methods of problem solving.
20	Civil	Within the discipline of civil engineering; design, contract administration and implementation of water and wastewater treatment 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

21	Civil	Within the discipline of civil engineering: designing, estimating and preparing contract plans and documents for roads and highways and storm water drainage collection 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.
22	Civil	Within the discipline of civil engineering: design and implement geometric and roadside safety designs for roadways and earthworks 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.
23	Civil	Within the discipline of civil engineering: evaluating the design of and advising on municipal water, sanitary and storm service connections 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.
24	Civil	Within the discipline of civil engineering: planning, designing and inspection of roadway, water main & sewer construction 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.
25	Civil	Within the discipline of civil engineering; design, reporting on and inspection of pipelines carrying water or wastewater, hydraulic design of open channels and related structures, as well as contract administration 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.
26	Civil	Within the discipline of civil engineering: design and inspection of storm water management, site grading, water, sanitary, storm servicing and roadways for onsite residential and commercial developments 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.

27	Civil	Within the discipline of civil engineering: develop construction specifications and managing, reporting on and directing construction for residential and commercial electrical utility projects that utilizes the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
28	Civil	Within the discipline of civil engineering: design of residential and commercial subdivisions including roads, water, sewer and drainage 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.
29	Civil	Within the discipline of civil engineering: soil, concrete and asphalt testing and analysis, foundation and pavement design, and construction review and reporting for commercial buildings, roadways, residential, commercial and industrial 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.
30	Civil	Within the discipline of civil engineering: design and inspection of storm water management, site grading, water, sanitary, storm servicing and roadways for onsite residential, commercial, and industrial developments 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.
31	Civil	Within the discipline of civil engineering: analysis, design and preparation of contract documents, in the design of open web steel joists and joist girders, and steel deck 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.
32	Civil	Within the discipline of civil engineering: managing, reporting on and development of maintenance, operations and capital programs for municipal works and services that is the routine application of industry recognized codes, standards, procedures and principles and method of problem solving.

33	Civil	Within the discipline of civil engineering: reporting on, evaluating, designing, preparing contract documents and technical specifications for the construction of municipal roads and multi-use trails, inclusive of related storm drainage systems and site grading, and advising on shallow utility coordination that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.
34	Civil	Within the discipline of civil engineering: the design and evaluation of water distribution systems, sanitary sewer collection systems, overland drainage, storm drainage minor collection systems for new subdivisions and existing communities utilizing industry recognized codes, standards, procedures and established engineering or applied science principles and methods of problem solving.
35	Civil	Within the discipline of civil engineering: design urban and rural roads and storm and sanitary sewer systems and site grading for land development servicing, 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.
36	Civil	Within the discipline of civil engineering: design urban and rural roads and storm and sanitary sewer systems and site grading for land development servicing, 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.
37	Civil	Within the discipline of civil engineering: report on and inspection for maintenance and operation and design of municipal water supply, wastewater and storm drainage systems and roads, 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.
38	Civil	Within the discipline of civil engineering: design and review roadway designs 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



39	Civil	Within the discipline of civil engineering: evaluating and advising on the geometric design of roadways for municipal approval of new subdivisions and existing communities that is routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
40	Civil	Within the discipline of civil engineering: design, procurement and construction supervision of municipal civil engineering works including water distribution, sanitary and storm sewers, storm water management, shallow utilities, urban and rural roads, and site grading that is in the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving
41	Civil	Within the discipline of civil engineering: inspection of site grading for on-site residential and commercial developments 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.
42	Civil	Within the discipline of civil engineering; design, equipment and material specification, direction and surveillance of construction and maintenance, reporting on, and project management of oil and gas surface 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.
43	Civil	Within the discipline of civil engineering: design of shelters, platforms and mounts to receive antennas and telecommunications 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.
44	Civil	Within the discipline of civil engineering: planning, design, and contract administration, including the preparation of contract documents, specifications and engineering plans for airport rehabilitation and expansion projects that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.

45	Civil	Within the discipline of civil engineering: maintenance, inspection and design checking of municipal infrastructure for local roads, storm water collection and management systems and private small parcel individual sewage treatment and water supply systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.
46	Civil	Within the discipline of civil engineering: inspection, reporting and advising on the construction and maintenance of pedestrian and vehicular bridge structures 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.
47	Civil	Within the discipline of civil engineering: develop, design and deliver courses for students at the civil engineering technology level 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.
48	Civil	Within the discipline of civil engineering: project management for the construction of civil related works, including review of quality assurance, review for constructability of site grading, storm drainage systems, water supply, sanitary sewer, roads, rail and shallow utilities 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.
49	Civil	Within the discipline of civil engineering: designing preparing plans, contract documents, project management, construction supervision and inspection for water treatment and pumping facilities, water distribution systems, sanitary sewage collection systems, site grading and shallow utility coordination that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.

50	Civil	Within the discipline of civil engineering: managing, reporting on, advising on, evaluating, designing, preparing plans, contract documents and technical specifications for and construction of open channels, irrigation pipelines and associated hydraulic structures; roads; water supply, treatment and distribution; sewage and storm drainage collection and treatment systems; site grading and shallow utility coordination 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.
51	Civil	Within the discipline of civil engineering: design, reporting on, directing the development/construction of roadways and right-of-ways: earthworks, rural and urban roadways, site grading for surface drainage, sanitary sewage collection systems, water distribution systems, storm water collection systems and shallow utilities, 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.
52	Civil	Within the discipline of civil engineering; managing, reporting on and directing the design of roads, site grading and earthworks 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.
53	Civil	Within the discipline of civil engineering: planning, designing and reporting on sanitary and storm water collection systems, water distribution systems and site development for residential, commercial and industrial land development 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.
54	Civil	Within the discipline of civil engineering: manage, report on and direct the development of engineering design activities including the preparation of contract documents for industrial type buildings, pipeworks, foundations, site preparation and earthwork, underground sewer system and associated infrastructure work in the oil and gas and petrochemical 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.
55	Civil	Within the discipline of civil engineering: create, prepare, plan, and deliver course material, present design information and technical specifications, demonstrate procedures and methods for analysis for students at the civil engineering technology level 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.
56	Civil	Within the discipline of civil engineering: soil, concrete and asphalt testing and analysis; foundation and pavement design; and, construction review and reporting for commercial buildings, roadways, residential, commercial and industrial 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.
57	Civil	Within the discipline of civil engineering; managing, reporting on and development of maintenance, operations and capital programs for municipal works utilizing the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
58	Civil	Within the discipline of civil engineering; managing, reporting on and development of maintenance, operations and capital programs for municipal works utilizing the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
59	Civil	Within the discipline of civil engineering: designing, reporting on, advising on, preparing plans, contract documents, technical specifications for, evaluating, and managing the construction of roadways, sanitary sewage collection systems, water distribution systems, storm water management and collection systems, shallow utility coordination, and site grading that is the routine application of industry recognized codes, standards, procedures and practices using engineering or applied science principles and methods of problem solving.

60	Civil	Within the discipline of civil engineering; prepare designs, estimates, contract documents and conduct construction inspection of roads, highways and site improvements that is the routine application Within the discipline of civil engineering: managing and directing the design, construction, maintenance and operation of highway infrastructure, and roadside development control 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. of industry recognized codes, standards, procedures and practices using engineering or applied science principles and methods of problem solving.
61	Civil	Within the discipline of civil engineering: managing and directing the design, construction, maintenance and operation of highway infrastructure, and roadside development control 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.
62	Civil	Within the discipline of civil engineering: design of wood, concrete and steel beams and columns and concrete foundation walls, as well as the construction review, evaluation and reporting on the structural aspects of residential and commercial construction that is the routine applications of industry recognized codes, standards, procedures and practice using established engineering or applied science principles and methods of problem solving.
63	Civil	Within the discipline of civil engineering: evaluating the design of; and advising on proposed land use, subdivision, development, site servicing proposals for municipal approval of both new subdivisions and existing communities within the City of Calgary that is the routine applications of industry recognized codes, standards, procedures and practice using established engineering or applied science principles and methods of problem solving.

64	Civil	Within the discipline of civil engineering: design, inspect, report on construction of single and mutli-family residential and commercial (under 1000 square meters in total occupied area) wood structures and concrete foundations 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.
65	Civil	Within the discipline of civil engineering: soil, concrete and asphalt testing and analysis, foundation and pavement design, and construction review and reporting for commercial buildings, roadways, residential, commercial and industrial 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.
66	Civil	Within the discipline of civil engineering: soil, concrete and asphalt testing and analysis; geotechnical aspects of foundation and pavement design, construction reviews and reporting for commercial buildings, roadways, residential, commercial and industrial 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.
67	Civil	Within the discipline of civil engineering: inspection, testing and report of hardened concrete and associated materials, design of concrete mixtures that is the application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
68	Civil	Within the discipline of civil engineering; design and specification of structures for the construction of aerial and underground electrical utility distribution 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.

69	Civil	Within the discipline of civil engineering : designing, evaluating, directing the development of civil engineering works including site grading, roadway designs, water distribution, sanitary sewage collection system, storm water management and collections systems within residential, commercial and business developments that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.
70	Civil	Within the discipline of civil engineering: plan, manage, report on, evaluate and design non process infrastructure for remote oilfield 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.
71	Civil	Within the discipline of civil engineering: managing, preparing technical specifications, evaluating the design, advising on, construction supervision and inspection of roadway systems, water distribution systems, sanitary sewer collection systems, overland drainage, site grading and storm water management systems for residential and commercial developments for municipal approvals that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied sciences principles and methods of problem solving.
72	Civil	Within the discipline of civil engineering: managing, reporting on, advising on, evaluating, designing, preparing plans, contract documents and technical specifications for and construction of roadways, water distribution systems, sanitary sewage collection systems, storm water management and collection systems, 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.
73	Civil	Within the discipline of civil engineering: design, estimating, prepare contract documents and technical specifications and documents, for land development and site servicing development which includes water distribution systems, sanitary collection and management systems, site

		grading; stormwater management and collection systems, erosion controls, roadway layout and geometric design, hard and soft surfacing design, that is the routine application of industry recognized codes, standards, procedures and principles and method of problem solving.
74	Civil	Within the discipline of civil engineering: preparing and administering contract documents and technical specifications, evaluating the design of and advising the constructability of, estimating, project management, budget estimating, reporting and directing construction, review of quality assurance of urban and rural roadways, including related site grading, coordination of utilities, storm/sanitary sewers and earthworks that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.
75	Civil	Within the discipline of civil engineering: manage, reporting on, advising on, evaluating, designing, preparing plans, and technical specifications for the following: construction of roadways; topographical/construction surveys with earthwork quantities; water distribution systems for a subdivision/project; design of open channels/closed pipe storm water system(s) and appurtenances with related structures; sanitary sewer collection systems for urban, commercial and industrial uses; 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.
76	Civil	Within the discipline of civil engineering: evaluation, design and construction review of building envelope systems and analysis of building code classifications, egress and fire separations that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.
77	Civil	Within the discipline of civil engineering: managing, reporting on, advising on, evaluating, designing, preparing plans, contract documents and technical specifications for and construction of roadways, water distribution systems, sanitary sewage collection systems, storm water management and collection systems, site grading and shallow utility coordination 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.
78	Civil	Within the discipline of civil engineering; design and construction inspection of roadways, earthworks and site grading and the construction inspection of underground utilities, water distribution systems, sanitary sewer systems and storm sewer 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.
79	Civil	Within the discipline of civil engineering: evaluating, reporting on, designing, preparing plans, specifying and construction supervision for site grading and earthworks, roadways, water distribution, sanitary sewer collection, storm water drainage and management for municipal and land development 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.
80	Civil	Within the discipline of structural engineering: design, prepare contract documents and construction supervision for modular wood framed structures that is the routine application of industry recognized codes, standards, procedures and practices using established engineering, applied principles and methods of problem solving.
81	Civil	Within the discipline of civil engineering; design (including geometric, conceptual , preliminary and detailed design), report on, manage, prepare plans for the construction of urban arterial roadways 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.
82	Civil	Within the discipline of civil engineering: analysis, inspection, design and preparation of contract documents for building envelope systems of non-industrial 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.

83	Civil	Within the discipline of civil engineering: prepare contract documents, project management and construction supervision for urban and industrial roadways that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principals and methods of problem solving.
84	Civil	Within the discipline of civil engineering; evaluate, design, prepare contract documents, report on and supervise construction of culverts, standard bridges, open channels, and the associated roadways 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.
85	Civil	Within the discipline of civil engineering: designing, preparing plans and contract documents and construction supervision for municipal infrastructure including utility coordination, earthworks, sanitary sewer, storm sewer, water main and road construction that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.
86	Civil	Within the discipline of civil engineering: evaluation of design, estimating, project management and construction traffic management for roads and highways 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.
87	Civil	Within the discipline of civil engineering: design, reporting on and directing the construction of roadway infrastructure, water distribution and sanitary and stormwater collection systems that is 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.
88	Civil	Within the discipline of civil engineering: soil, concrete and asphalt testing and analysis; foundation and pavement design; and, construction review and reporting for commercial buildings, roadways, residential, commercial and industrial development. That is the routine

		application of industry recognized codes, standards, procedures and practices using established engineering or applied science principals and methods of problem solving.
89	Civil	Within the discipline of civil engineering: preparation of technical specifications, contract administration and inspection, reporting on, evaluating, and advising on the construction of bridges and bridge structures, that is 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.
90	Civil	Within the discipline of civil engineering: managing and directing the maintenance and operation of highway infrastructure and roadside development as well as inspection, reporting and advising on the construction and maintenance of pedestrian and vehicular bridge structures 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.
91	Civil	Within the discipline of civil engineering: design of concrete mixtures, inspection, review and reporting of hardened concrete properties and associated 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.
92	Civil	Within the discipline of civil engineering: design and review of engineered wood products (floor, roof and tall wall systems) and their associated connections, for multi- and single-family residential and light commercial buildings utilizing proprietary and industry-available design software 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.
93	Civil	Within the discipline of civil engineering: planning, designing, project management and compliance inspection of airfield infrastructure and related civil works 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.
94	Civil	Within the discipline of civil engineering: designing, preparing contract documents, project management, and construction supervision and inspection for urban roadways that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.
95	Civil	Within the discipline of civil engineering: managing, reporting on, advising on, evaluating, designing, preparing plans, contract documents and technical specifications for and construction of roadways, water distribution systems, sanitary sewage collection systems, storm water management and collection systems, site grading and shallow utility coordination 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.
96	Civil	Within the discipline of civil engineering: develop, design and deliver course material , present design procedures and specifications for analysis for students at the civil engineering technology level that is in the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
97	Civil	Within the discipline of civil engineering; design and construction inspection of roadways, storm water management and collection systems and site grading that is in the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
98	Civil	Within the discipline of civil engineering; inspection, design approval of municipal infrastructure for new subdivisions including roads and other utilities and construction project management of municipal 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.

99	Civil	Within the discipline of civil engineering: surveying, design, construction supervision and contract administration, including the preparation of contract documents, specifications and engineering plans for civil engineering works including site grading, earthworks, water distribution, sanitary and storm sewers, urban and rural roads 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.
100	Civil	Within the discipline of civil engineering: planning, designing, managing, evaluating, inspecting, specifying, advising, project management, construction supervision, and contract administration, including the preparation of contract documents, technical specifications, and engineering plans for modular, residential, commercial and industrial buildings, in accordance with Alberta Building Code 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.
101	Civil	Within the discipline of civil engineering: reporting on, managing, planning and design of municipal roads and related infrastructure for construction and maintenance that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.
102	Civil	Within the discipline of civil engineering; evaluating, inspecting, preparing contract documents, project management and construction inspection of bridges and culverts 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.
103	Civil	Within the discipline of Civil Engineering: design and prepare specifications for municipal roads, parking lots and multi-use trails, and associated 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.

104	Civil	Within the discipline of civil engineering: geometric design, estimating and preparing contract plans for construction of roadways 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.
105	Civil	Within the discipline of civil engineering: inspection, reporting and advising on the construction and maintenance of pedestrian and vehicular bridge structures 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.
106	Civil	Within the discipline of civil engineering: design and inspection of storm water management, site grading, water, sanitary, storm servicing and roadways for onsite residential and commercial developments 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.
107	Civil	Within the discipline of civil engineering: design and drawing production, contract documentation and specifications, project management and construction supervision for projects including urban and rural roadways, gravity sanitary and stormwater systems, water mains, overland drainage, site grading and servicing, 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.
108	Civil	Within the discipline of civil engineering; design, contract administration and implementation of water and wastewater treatment 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.
109	Civil	Within the discipline of civil engineering: managing, reporting on, advising on, evaluating, designing, preparing plans, contract documents and technical specifications for construction of roadways, water distribution systems, sanitary sewer sewage collection systems, storm water

		management and collection systems, site grading and shallow utility coordination 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.
110	Civil	Within the discipline of civil engineering: design, reporting on, directing the development/construction of roadways and right-of-ways: earthworks, rural and urban roadways, site grading for surface drainage, water supply, sanitary sewage collection systems, storm water collection systems, and storm water 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.
110	Civil	Within the discipline of civil engineering: reviewing plans for constructability, preparing contract documents and technical specifications, estimating, tendering, project management, review of quality assurance, for urban and rural roadways including but not limited to grading, storm/sanitary sewers, water distribution systems, shallow utility coordination, base courses, asphalt, concrete flatwork and landscaping that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.
111	Civil	Within the discipline of civil engineering: evaluate and assess the design proposals of storm and sanitary collection and drainage systems in accordance with City of Edmonton Drainage Services Environmental Management System (ISO 14001) 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.
112	Civil	Within the discipline of civil engineering; reviewing design drawings for constructability and preparing contract documents and specifications for construction of site grading, storm, sanitary and water distribution systems, roads and shallow utilities 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.

113	Civil	Within the discipline of civil engineering: managing, evaluating, reporting, and directing the roadside development, design critiquing, construction, operation and maintenance of civil engineering infrastructure including roads, bridges, culverts, site grading, and earthworks 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.
114	Civil	Within the discipline of civil engineering; structural design and layout for oil, gas and pipeline 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.
115	Civil	Within the discipline of civil engineering: Designing (Hydraulic and geometric), planning, estimating, managing, reporting on, advising on, evaluating, preparing plans, contract document and technical specifications for and construction inspection of water distribution systems, sanitary sewage collection system, storm water management and collection system, road and earth work, site grading and shallow utility coordination 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.
116	Civil	Within the Discipline of Civil Engineering: Managing, reporting on, and directing the development and construction of civil engineering works including roads, site grading, storm/sanitary sewers, earthworks, neighbourhood improvements 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.
117	Civil	WITHIN THE DISCIPLINE OF CIVIL ENGINEERING: PROJECT MANAGEMENT FOR THE CONSTRUCTION OF CIVIL RELATED WORKS, INCLUDING PLANNING, REPORTING ON, EVALUATION, PREPARING CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS, PROCUREMENT, AND CONSTRUCTION SUPERVISION OF MUNICIPAL CIVIL ENGINEERING WORKS INCLUDING WATER DISTRIBUTION, SANITARY AND STORM SEWERS, URBAN AND RURAL ROADS AND EARTHWORKS 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.
118	Civil	Within the discipline of civil engineering: soil, concrete and asphalt testing and analysis, foundation and pavement design, for commercial buildings, roadways, residential, commercial and industrial 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.
119	Civil	Within the discipline of civil engineering: construction procurement, contract document and technical specification preparation, contract administration for the construction of civil related works, storm drainage systems, water and wastewater facilities, water mains and pipelines, sanitary sewer, roads and shallow utilities 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.
120	Civil	Within the discipline of Civil Engineering: Design, evaluation and delivery of land development and municipal projects consisting of watermains, stormwater management, sanitary sewers, and transportation systems throughout Alberta 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.
121	Civil	Within the discipline of civil engineering: applying energy savings solutions for water distribution systems, managing water meter programs, preparing water distribution system audits, applying dechlorination solutions and implementing unidirectional flushing programs that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied principles and methods of problem solving.

### **CONSTRUCTION ENGINEERING**

1	Const.	Within the discipline of construction engineering: general contracting project management of
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		non-industrial building 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.
2	Const.	Within the discipline of construction engineering: general contracting project management of commercial and light industrial building 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.
3	Const.	Within the discipline of Construction Engineering : general contracting project management of non-industrial building construction that is the routing application of industry recognized codes, standards, procedures, and practices using established engineering or applied science principles and methods of problem solving.
4	Const.	Within the discipline of construction engineering; general contracting project management of non industrial building 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.
5	Const.	Within the discipline of construction engineering: plan, schedule and supervise construction in water distribution and municipal water supply 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.

### **CONSTRUCTION MANAGEMENT**

1	Const. Mang..	Within the discipline of construction management: plan, schedule and supervise construction in the energy sector 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.
2	Const.	Within the discipline of construction management: plan, schedule and supervise construction in

	Mang.	the commercial and industrial sector 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.
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### **ELECTRICAL ENGINEERING**

1	Electrical	Within the discipline of electrical engineering: design of electrical systems (up to 15kV) and instrumentation for commercial and industrial 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.
2	Electrical	Within the discipline of electrical engineering: power system ,modeling and simulation 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.
3	Electrical	Within the discipline of Electrical Engineering: design, specify and implement voice and data distribution systems, both wired and wireless, for petrochemical facilities that is the routine application of industry recognized codes, standards, procedures and practices using engineering or applied science principles and methods of problem solving.
4	Electrical	Within the Discipline of Electrical Engineering: process automated control design, distributed control system design/programming/commissioning, safety system design, computer-integrated controls, 24Vdc automation control panels /junction boxes design, specify and purchase instrumentation and automation equipment, and management/strategies focusing on the automation of industrial processes 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.

5	Electrical	Within the discipline of Electrical Engineering: the design and implementation of instrumentation and control systems for industrial applications that is the routine application of industry recognized codes, standards, procedures and practices using established engineering
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		or applied science principles and methods of problem solving.
6	Electrical	Within the discipline of Electrical Engineering: design, project management, programming and configuring low voltage electronic and control 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.
7	Electrical	Within the discipline of Electrical Engineering: design and implementation of less than 750 volt AC power systems and instrumentation and control systems for industrial 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.
8	Electrical	Within the discipline of Electrical Engineering: planning, design analysis and implementation of up to 25kV systems related to industrial 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.
9	Electrical	Within the discipline of Electrical Engineering: planning, design, and analysis of up to 25 kV AC systems sourced by remote power diesel generation 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.
10	Electrical	Within the discipline of Electrical Engineering: design, startup and operations of instrumentation and control systems in the oil and gas industry that is the routine application of industry recognized codes, standards, procedures and practice using established engineering or applied science principles and methods of problem solving.

11	Electrical	Within the discipline of electrical engineering: planning, design and specification for instrumentation, control systems and associated wiring (120 VAC and less) including control system programming 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.
12	Electrical	Within the discipline of electrical engineering: design, configuration, analysis, and measurement of instrumentation control systems for natural gas manufacturing 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.
13	Electrical	Within the discipline of electrical engineering: design of instrumentation and control systems for industrial 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.
14	Electrical	Within the discipline of Electrical Engineering: planning, design, analysis, maintenance and implementation of low and medium voltage distribution, lighting, control and communication systems as they apply to commercial, industrial, and oil & gas 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.
15	Electrical	Within the discipline of Electrical Engineering: integrate AC/DC power systems, develop and design maintenance techniques and standards for transport, switching and power equipment used in the telecom environment 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.

16	Electrical	Within the discipline of Electrical Engineering: project management, design, specification and installation of instrumentation and control systems for industrial 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.
17	Electrical	Within the discipline of Electrical Engineering: plan, design, and implementation of instrumentation and control and safety shutdown systems for petrochemical, oil and gas 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.
18	Electrical	Within the discipline of electrical engineering: planning, design and analysis of low voltage (<600VAC) control, lighting and heat tracing 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.
19	Electrical	Within the discipline of Electrical Engineering: planning, design, specification and maintenance of low voltage power and control systems in industrial 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.
20	Electrical	Within the discipline of Electrical Engineering: design, specification, analysis and report for electrical control systems in industrial facilities and residential 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
21	Electrical	Within the discipline of Electrical Engineering: Planning, design, specification, analysis and manage low voltage commercial electrical control and power distribution 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.

22	Electrical	Within the discipline of Electrical Engineering: Design, analysis, and implementation of instrumentation and electrical control systems for natural gas, petroleum, industrial and manufacturing facilities including the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
23	Electrical	Within the Discipline of Electrical Engineering: Design of Instrumentation and Control Systems, including Safety Instrumented 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.
24	Electrical	Within the discipline of electrical engineering: develop and approve detailed engineering design plans for the provisioning of access transport network telecommunication 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.
25	Electrical	Within the discipline of electrical engineering: planning, design, specification, analysis and management of low voltage and extra-low voltage commercial electrical control and power distribution 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
26	Electrical	Within the discipline of electrical engineering: Design and implementation of low and medium voltage (up to 5 kV) electrical power systems and control systems for industrial facilities.
27	Electrical	Within the discipline of electrical engineering: design of network infrastructure to support telecommunication 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

28	Electrical	Within the discipline of electrical engineering: planning, designing, implementation, specification and analysis of electrical and electronic control systems, data acquisition and communication systems, both wired and wireless, 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
29	Electrical	Within the discipline of electrical engineering: design of electrical systems (up to 25kV) for oil and gas, petrochemical and industrial facilities that is the routine application of industry recognized codes, standards, procedure and practices using established engineering or applied science principles and methods of problem solving.
30	Electrical	Within the discipline of Electrical Engineering: plan, design and analysis of 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.
31	Electrical	Within the discipline of electrical engineering: planning, design, analysis and reporting on low voltage Programmable Logic Controller (PLC) systems for residential, commercial and industrial 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.
32	Electrical	Within the discipline of electrical engineering: Reporting on, planning, designing, evaluating, commissioning, auditing and start up of low voltage EHT systems up to 600 V related to industrial facilities, through the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.



33	Electrical	Within the discipline of electrical engineering: design, specification and implementation of overhead and underground line distribution systems up to 25kV, including street lighting 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.
34	Electrical	Within the discipline of electrical engineering: planning, design, specification, and implementation of power systems up to 25 kV for oil & gas and industrial 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.
35	Electrical	Within the discipline of electrical engineering: design and review of Standby UPS Power Supply systems for use in the Hybrid Fibre Coax (HFC) and Fibre Optic plant 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
36	Electrical	Within the discipline of electrical engineering: designing, construction supervision and maintenance of electrical high voltage distribution systems and street lighting 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.
37	Electrical	Within the discipline of electrical engineering: design, planning and specification of commercial/industrial fire alarm and life safety systems, data communications infrastructures and associated power and distribution 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.

38	Electrical	Within the discipline of electrical engineering: design, planning, analysis, implementation and assembly of low voltage control systems for commercial and industrial motor control centres that is the routine application of the industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving
39	Electrical	Within the discipline of electrical engineering: design of electrical underground residential distribution and street lighting 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.
40	Electrical	Within the discipline of electrical engineering: planning, design, implementation and maintenance of street lighting systems that is the routine application of industry recognized codes, standards, procedure and practices using established engineering or applied science principles and methods of problem solving.
41	Electrical	Within the discipline of electrical engineering: planning, design, specification, implementation and maintenance of low voltage and electrical heat tracing for oil and gas facilities that is the routine application of industry recognized codes, standards, procedure and practices using established engineering or applied science principles and methods of problem solving.
42	Electrical	Within the discipline of electrical engineering: design, planning, specification, analysis and implementation of EMS (energy management system) and SCADA (supervisory control and data acquisition) systems, and transmission reliability standards that is the routine application of industry recognized codes, standards, procedure and practices using established engineering or applied science principles and methods of problem solving.

43	Electrical	Within the discipline of electrical engineering: design and implementation of power systems up to 25kV, control systems, fugitive emissions studies & hazardous area classification for the oil & 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.
44	Electrical	Within the discipline of electrical engineering: design of electrical servicing for commercial, residential and industrial developments including street lighting services 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.
45	Electrical	Within the discipline of electrical engineering: design, planning, specification, maintenance and analysis of electrical equipment, protection, control and distribution systems that is the routine application of industry codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
46	Electrical	Within the discipline of electrical engineering: design and implementation of electrical heat tracing (EHT), programmable logic control and monitoring systems of EHT 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.
47	Electrical	Within the discipline of electrical engineering: design, planning, analysis and specification of electrical systems for 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.
48	Electrical	Within the discipline of electrical engineering: design, implementation and analysis of low and medium voltage power distribution and associated control systems for oil and gas 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.

49	Electrical	Within the discipline of electrical engineering: planning, design, specification and analysis of power distribution systems for commercial, industrial and institutional 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.
50	Electrical	Within the discipline of electrical engineering: design and testing of electrical products to published national and international compliance requirements, 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.
51	Electrical	Within the discipline of electrical engineering: design specification and implementation of process automated control and distributed control system focusing on the automation of industrial processes 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.
52	Electrical	Within the discipline of electrical engineering: planning, design, implementation and specification of electrical systems (up to 15kV) in commercial and industrial 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.
53	Electrical	Within the discipline of electrical engineering: design, specification, implementation and analysis of electric utility transmission, substation and distribution 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.
54	Electrical	Within the discipline of electrical engineering: design, implementation and analysis of low, medium and high voltage power equipment and systems within power generation 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.

55	Electrical	Within the disciplines of electrical engineering: the design of lighting, low voltage power systems, fire alarm and emergency lighting systems for commercial, residential, and multi family 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.
56	Electrical	Within the discipline of electrical engineering: design of medium and low voltage power, control and instrumentation systems for oil and gas production and storage facilities that is the routine application of industry recognized codes, standards, procedures and principles and method of problem solving.
57	Electrical	Within the discipline of electrical engineering: design and implementation of low and medium voltage electrical power systems, instrumentation and control systems for industrial facilities that is the routine application of industry recognized codes, standards, procedures and principles and method of problem solving.
58	Electrical	Within the discipline of electrical engineering: design, planning and specification of instrumentation and control systems for AC and DC systems up to 5kV, including hazardous area classifications and associated fugitive emissions studies 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.
59	Electrical	Within the discipline of electrical engineering: planning, design and specification for instrumentation, control systems and associated wiring (120 VAC and less) including control system programming 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.

60	Electrical	Within the discipline of electrical engineering: design, planning and implementation of low voltage electrical systems in 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.
61	Electrical	Within the discipline of electrical engineering: design, planning, specification of low voltage lighting, safety and security automated control and distributed systems in commercial, industrial and institutional 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.
62	Electrical	Within the discipline of electrical engineering: design and analysis of low voltage distribution and control systems as they apply to commercial, industrial and oil & gas 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.
63	Electrical	Within the discipline of electrical engineering: the design of modular thermoelectric generation 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.
64	Electrical	Within the discipline of electrical engineering: design and specification of structures for the construction of aerial and underground electrical utility distribution 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.

65	Electrical	Within the discipline of electrical engineering: design, analysis, specification and commissioning of distribution electrical systems up to and including 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.
66	Electrical	Within the discipline of electrical engineering: design and specification of structures for the construction of aerial and underground electrical utility distribution 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.
67	Electrical	Within the discipline of electrical engineering: design, specification, implementation and analysis of electric utility transmission, substation and distribution 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.
68	Electrical	Within the discipline of electrical engineering: planning, design, implementation and specification of electrical systems (up to 25kV) in commercial and industrial 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.
69	Electrical	Within the discipline of electrical engineering: planning, design and implementation of electrical infrastructure used in the distribution of electricity 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.
70	Electrical	Within the discipline of electrical engineering: planning, design, specification and commissioning for instrumentation, control and safety systems, and associated wiring (280 VAC and less, including 24DC) including control system programming 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.
71	Electrical	Within the discipline of electrical engineering: design, analysis and implementation of low

		voltage portable DC power sources for gas detection apparatus and related electrical components 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.
72	Electrical	Within the discipline of electrical engineering: planning, design, analysis, maintenance and implementation of protection and control systems in utility 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.
73	Electrical	Within the discipline of electrical engineering: design, analysis, specification, implementation and maintenance of sacrificial cathodic protection systems for below grade transmission pipelines 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.
74	Electrical	Within the discipline of electrical engineering: design, specification, implementation and analysis of electric utility transmission, substation and distribution 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.
75	Electrical	Within the discipline of electrical engineering: develop and design of maintenance techniques and standards for transport, switching and power systems under 120 volts used in the telecommunications 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.
76	Electrical	Within the discipline of electrical engineering: the design and implementation of corrosion protection 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.
77	Electrical	Within the discipline of electrical engineering: planning, specification and maintenance of low



		and medium voltage equipment, instrumentation and control systems for power generation 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.
78	Electrical	Within the discipline of electrical engineering: project management, planning, design, analysis, maintenance and implementation of low and medium voltage distribution, lighting and control systems as they apply to commercial, industrial, and oil & gas 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.
79	Electrical	Within the discipline of electrical engineering: planning, design, specification and analysis of power distribution and photovoltaic generation systems for residential, commercial, industrial and institutional 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.
80	Electrical	Within the discipline of electrical engineering: reporting on, planning, designing, evaluating and auditing of low voltage EHT systems up to 600 V related to industrial 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.
81	Electrical	Within the discipline of electrical engineering: planning, design, commissioning, and trouble shooting of electrical systems (up to 240kV) for commercial and industrial 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.
82	Electrical	Within the discipline of electrical engineering: design and specification of aerial and underground electrical utility 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.

83	Electrical	Within the discipline of electrical engineering: design, specification, project coordination and management, evaluating, auditing and reporting on electrical equipment and systems for oil and gas petrochemical and industrial facilities 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.
84	Electrical	Within the discipline of electrical engineering: planning, design, specification, implementation and project management of electric utility substation systems up to 240kV 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.
85	Electrical	Within the discipline of electrical engineering: project management, specification and design, construction management and commissioning of medium and low voltage power, lighting, electrical heat tracing, for oil and gas production and storage facilities that is the routine application of industry recognized codes, standards, procedures and principles and method of problem solving.
86	Electrical	Within the discipline of electrical engineering: design and manage development of low voltage analog and digital electronic components 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.
87	Electrical	Within the discipline of electrical engineering: design, planning, and specification of electrical heat tracing (EHT) circuits and applicable monitoring systems 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.
88	Electrical	Within the discipline of electrical engineering: design, specification, implementation and analysis of electric utility transmission 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.

89	Electrical	Within the discipline of electrical engineering: planning and implementation of clinical and biomedical 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.
90	Electrical	Within the discipline of electrical engineering: design and management of information technology network and security 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.
91	Electrical	Within the discipline of electrical engineering: design and implementation of electrical heat tracing (EHT), programmable logic control and monitoring systems of EHT 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.
92	Electrical	Within the discipline of electrical engineering: design, specification, implementation and analysis of electric utility transmission, substation and distribution 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.
93	Electrical	Within the discipline of electrical engineering: design, planning and implementation of low voltage electronic systems that is the routine application of industry recognized codes, standards, procedure and practices using established engineering or applied science principles and methods of problem solving.
94	Electrical	Within the discipline of electrical engineering: the design and implementation of wireless telecommunication 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.
95	Electrical	Within the discipline of electrical engineering: design and implementation of low voltage printed

		circuit boards (PCB) 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.
96	Electrical	Within the discipline of electrical engineering: planning, design, specification, implementation and maintenance of low voltage electrical heat tracing for oil and gas facilities that is the routine application of industry recognized codes, standards, procedure and practices using established engineering or applied science principles and methods of problem solving.
97	Electrical	Within the discipline of electrical engineering: design, programming and configuring of low voltage electronic and control 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.
98	Electrical	Within the discipline of electrical engineering: planning, design and analysis of low voltage (<600VAC) control, lighting and heat tracing 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.
99	Electrical	Within the discipline of electrical engineering: planning, design analysis and implementation of up to 25kV systems related to industrial 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.
100	Electrical	Within the discipline of electrical engineering: planning, design, implementation and specification of electrical systems (up to 15kV) in commercial and industrial 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.
101	Electrical	Within the discipline of electrical engineering: design and implementation of electrical heat tracing (EHT), programmable logic control and monitoring systems of EHT 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.
102	Electrical	Within the discipline of electrical engineering: design, installation, commissioning and analysis of instrumentation for petrochemical, oil and gas, industrial 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.
103	Electrical	Within the discipline of electrical engineering: planning, design and analysis of low voltage (<600VAC) control, lighting and heat tracing 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.
104	Electrical	Within the discipline of electrical engineering: planning, design and analysis of low voltage (up to 600V) power, control, lighting and heat tracing systems in commercial and industrial 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.
105	Electrical	Within the discipline of electrical engineering: design specification and implementation of process automated control and distributed control 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.
106	Electrical	Within the discipline of electrical engineering: preparing network designs and specifications for coordination, implementation, maintenance and operation of telecommunication 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.
107	Electrical	Within the discipline of electrical engineering: planning, design, specification and maintenance of low voltage power and control systems in industrial 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.
108	Electrical	Within the discipline of electrical engineering: design, specification and implementation of overhead and underground line distribution systems up to 25kV, including street lighting 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. I would approve this applicant.
109	Electrical	Within the discipline of electrical engineering: design, planning and specification of commercial/industrial fire alarm and life safety systems, data communications infrastructures and associated power and distribution 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.
110	Electrical	Within the discipline of electrical engineering: planning, design, analysis and implementation of power utility distribution up to 25kV 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.
111	Electrical	Within the discipline of electrical engineering: planning, design, analysis, maintenance and implementation of distribution, lighting, life safety, and communication systems as they apply to high rise, commercial, institutional & 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.
112	Electrical	Within the discipline of electrical engineering, designing, evaluating, reporting on, constructing, and maintaining, instrumentation, controls, data communications 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.

113	Electrical	Within the discipline of electrical engineering: design of network infrastructure to support telecommunication 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.
114	Electrical	Within the discipline of electrical engineering: design, specification, implementation and analysis of electric utility transmission, substation and distribution 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.
115	Electrical	Within the discipline of electrical engineering: design, specification, implementation and analysis of electric utility transmission, substation and distribution 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.
116	Electrical	Within the discipline of electrical engineering: design, planning, analysis and specification of control panels for AC and DC power systems up to 4160V, including hazardous area classifications, associated fugitive emissions studies, and ETAP studies for industrial 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.
117	Electrical	Within the discipline of electrical: evaluate, analyze, report, specify and project manage electrical power systems in accordance with established codes and standards 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.
118	Electrical	Within the discipline of electrical engineering: planning, design, specification, implementation and maintenance of low voltage electrical heat tracing and monitoring systems up to 600V for oil and gas 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.
119	Electrical	Within the discipline of electrical engineering: design, specification and installation of low voltage electrical 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.
120	Electrical	Within the discipline of electrical engineering: planning, design, analysis, maintenance and implementation of low voltage electrical systems as they apply to industrial, and oil & gas 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.
121	Electrical	Within the discipline of electrical engineering: design of the layout, cable routing, lightning protection, grounding of medium to high voltage substation and electrical installations 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.
122	Electrical	Within the discipline of electrical engineering: design, analyze, report on, test and approve electrical and avionics systems of aeronautical products 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**

1	Electronics	Within the discipline of electronics engineering: electronic design, specification of wireline/downhole logging 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.
2	Electronics	Within the discipline of electronics engineering: design, planning and implementation of electronic systems and circuits that is the routine application of industry recognized codes, standards, procedure and practices using established engineering or applied science



		principles and methods of problem solving.

## ENVIRONMENTAL ENGINEERING

1	Env. Eng.	Within the discipline of Environmental Engineering: monitor and report on air, water and land resources; design for remediation and waste management of land resources 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.
2	Env. Eng.	Within the discipline of Environmental Engineering: Completion of environmental assessment and remediation work, including developing assessment and monitoring programs and design and construction inspection of 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.
3	Env. Eng.	Within the discipline of Environmental Engineering: Reclamation and Remediation for Upstream Oil & Gas 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.
4	Env. Eng.	Within the discipline of environmental engineering: design, conduct, assess, and report on soil and groundwater investigation and remediation within 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.
5	Env. Eng.	Within the discipline of Environmental Engineering: site assessment, remediation design and application, and environmental risk management that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods or problem solving.
6	Env. Eng.	Within the discipline of environmental engineering: coordinate, direct, design and manage environmental assessment and remediation activities for public lands and road projects, that is

		the routine application of industry recognized codes, standards, procedures and practice established engineering or applied science principals and methods of problem solving.
7	Env. Eng.	Within the discipline of environmental engineering: reporting on, advising on, evaluating, preparing plans and specifications for air emissions management for industrial 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
8	Env. Eng.	Within the discipline of environmental engineering: conduct phase 1, 2 & 3 environmental site assessments, environmental audits and regulatory compliance audits 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.
9	Env. Eng.	Within the discipline of environmental engineering: conduct phase I/II/III environmental site assessments, remediation plans and remediation programs that that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principals and methods of problem solving.
10	Env. Eng.	Within the discipline of environmental engineering: conduct phase I and II environmental site assessments, and environmental remediation 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.
11	Env. Eng.	Within the discipline of environmental engineering: conduct and report on Phase I and II environmental assessments within the upstream and downstream 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 or problem solving.
12	Env. Eng.	Within the discipline of environmental engineering: design and implement phase I/II/III environmental site assessments, remediation and reclamation projects, environmental risk management, waste management, and environmental auditing 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.

13	Env. Eng.	Within the discipline of environmental engineering: monitor and report on air, water and land resources; design for remediation and waste management of land resources 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.
14	Env. Eng.	Within the discipline of environmental engineering: monitor and report on air, water and land resources; design for remediation and waste management of land resources 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.
15	Env. Eng.	Within the discipline of Environmental Engineering: conduct phase I/II/III environmental site assessments, remediation plans and remediation programs 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.
16	Env. Eng.	Within the discipline of environmental engineering: completion of environmental assessment and remediation work, including developing assessment and monitoring programs and design and construction inspection of 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.
17	Env. Eng.	Within the discipline of environmental engineering: conduct phase 1, 2 & 3 environmental site assessments, environmental audits and regulatory compliance audits 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.

## **GEOLOGICAL ENGINEERING**

1	Petr. Geol.	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 applied science
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		principles and methods of problem solving.
2	Petr. Geol.	Within the discipline of petroleum geology: geological interpretation, evaluation, reporting and exploring on and for oil and gas reservoirs within the Western Canada Sedimentary Basin using petrophysical, petrological and geological techniques that is the routine application of industry recognized codes, standards and procedures and practices using established applied science principles and methods of problem solving.

## **GEOMATICS ENGINEERING**

1	Geomatics	Within the discipline of geomatics: design, manage and execute geophysical programs, global navigation satellite system surveying, land and geographic information system management, or the teaching thereof at a technical institute, 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.
2	Geomatics	Within the discipline of geomatics engineering: supervising and reporting on the densification and integration of geodetic survey control networks for the oil and gas industry, geophysical surveys and related quality control and quality assurance to ensure conformance to specifications.
3	Geomatics	Within the discipline of geomatics engineering: design, development, implementation, analysis and maintenance of geographical information systems and map content from geospatial information
4	Geomatics	Within the discipline of geomatics engineering: development, implementation, analysis and maintenance of 3D Laser Scanning 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.
5	Geomatics	Within the discipline of geomatics engineering: manage and execute geophysical exploration programs and precise location/measurements for construction utilizing global navigation satellite system surveying and land/geographic information system management, 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.
6	Geomatics	Within the discipline of geomatics engineering: technical project management, supervising, mentoring and reporting on field surveys and drafting projects 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.
7	Geomatics	Within the discipline of geomatics engineering: manage and execute geophysical exploration programs, utilizing global navigation satellite system surveying and land/geographic information system management, 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**

1	Hydrogeol.	Within the discipline of hydrogeology: manage, organize and report on the collection of data used for water well and aquifer evaluations. Collect, process and analyze data related to groundwater quality, spring flows, and groundwater levels and that is the routine application of industry recognized codes, standards, procedures and practices using established applied science principles and methods of problem solving.
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#### **INDUSTRIAL ENGINEERING**

1	Industrial	Within the discipline of industrial engineering: plan, design, report on and implement 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.
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#### **INSTRUMENTATION ENGINEERING**

1	Inst. Eng.	Within the discipline of Electrical Engineering: Design, installation, commissioning and
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		analysis of instrumentation for petrochemical 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.
2	Inst. Eng.	Within the discipline of instrumentation engineering: design, install and supervise the installation of instrumentation and controls, along with SCADA and DCS computing systems, and measurement system management, 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.
3	Inst. Eng.	Within the discipline of instrumentation engineering: design of instrumentation for oil and natural gas 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.
4	Inst. Eng.	Within the discipline of instrumentation engineering: design of instrumentation for chemical plants 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.
5	Inst. Eng.	Within the discipline of Instrumentation Engineering: Design, installation, commissioning and analysis of instrumentation for petrochemical 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.
6	Inst. Eng.	Within the discipline of instrumentation engineering: design, specification, and implementation of low voltage power, control and Instrumentation systems for industrial facilities utilizing the routine application of industry recognized codes, standards, procedures and practices using established engineering principles and methods of problem solving.
7	Inst. Eng.	Within the discipline of instrumentation engineering: planning, designing, specification and implementation of supervisory control and data acquisition systems 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.
8	Inst. Eng.	Within the discipline of instrumentation engineering: design of instrumentation and control systems for industrial 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
9	Inst. Eng.	Within the discipline of instrumentation engineering: design, planning, implementation, maintenance of control, safety shut down and data communication systems as related to the control of industrial processing and manufacturing 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.
10	Inst. Eng.	Within the discipline of instrumentation engineering: design, specification and implementation of instrument/analytical systems including fire and gas detection systems in industrial petrochemical plant 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
11	Inst. Eng.	Within the discipline of instrumentation engineering: design, planning, implementation, maintenance of control, safety shut down and data communication systems as related to the control of oil & gas production and pipeline systems that is the routine application of industry recognized codes, standards, procedures and practice using established engineering or applied science principles and methods of problem solving.

12	Inst. Eng.	Within the discipline of instrumentation engineering: design, specification, and implementation of low voltage power, control and Instrumentation systems for industrial facilities utilizing the routine application of industry recognized codes, standards, procedures and practices using established engineering principles and methods of problem solving.
13	Inst. Eng.	Within the discipline of instrumentation engineering: design & implementation of automation solutions for natural gas transmission 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.
14	Inst. Eng.	Within the discipline of instrumentation engineering: design, implementation, specification and analysis of control systems for both research and 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.
15	Inst. Eng.	Within the discipline of instrumentation Engineering: the design, implementation and maintenance of process control systems with respect to DCS and SCADA system within an oil and gas facility, that is the routine application of industry recognized codes, standards 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.
16	Inst. Eng.	Within the discipline of instrumentation engineering: design, implementation and commissioning of automation controls systems for natural gas & liquid transportation and industrial facilities within 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.



17	Inst. Eng.	Within the discipline of instrumentation engineering: design specification, implementation and maintenance of metering, control and safety shutdown, and data communication systems for oil & gas facilities, flow lines, 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.
18	Inst. Eng.	Within the discipline of instrumentation engineering: managing, planning, reporting, designing and specification for instrumentation and control systems for oil and gas 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.
19	Inst. Eng.	Within the discipline of instrumentation engineering: design and implementation of automation, instrumentation and control systems, including safety systems, for the hydrocarbon and chemical 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.
20	Inst. Eng.	Within the discipline of instrumentation engineering: design, planning, implementation, maintenance of control, safety shut down and data communication systems as related to the control of oil & gas production and pipeline systems that is the routine application of industry recognized codes, standards, procedures and practice using established engineering or applied science principles and methods of problem solving.
21	Inst. Eng.	Within the discipline of instrumentation engineering: application and specification of measurement and control instrumentation hardware for oil and gas 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.

22	Inst. Eng.	Within the discipline of instrumentation engineering: planning, design, specify and supervise the implementation of instrumentation, controls, safety shut down, and low voltage power systems for use in petrochemical 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.
23	Inst. Eng.	Within the discipline of instrumentation engineering: specify, design and supervise the installation of instrumentation and measurement management systems related to the petroleum 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.
24	Inst. Eng.	Within the discipline of instrumentation engineering: design and implementation of instrumentation for the petroleum industry that is the routine application of industry recognized codes, standards, procedures, and best practices using established engineering or applied science principles and methods of problem solving.
25	Inst. Eng.	Within the discipline of instrumentation engineering: design, specification, and implementation of low voltage power, control and Instrumentation systems for industrial facilities utilizing the routine application of industry recognized codes, standards, procedures and practices using established engineering principles and methods of problem solving.
26	Inst. Eng.	Within the discipline of instrumentation engineering: design of instrumentation for oil and natural gas 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.
27	Inst. Eng.	Within the discipline of instrumentation engineering: design of instrumentation for oil and natural gas 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.

28	Inst. Eng.	Within the discipline of instrumentation engineering: design, specification, and implementation of low voltage power, control and instrumentation systems for industrial facilities that is the routine application of industry recognized codes, standards, procedures and practices using established engineering principles and methods of problem solving.
29	Inst. Eng.	Within the discipline of instrumentation engineering: design, planning, implementation, maintenance of control, safety shut down and data communication systems as related to the control of industrial processing and manufacturing 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.
30	Inst. Eng.	Within the discipline of instrumentation engineering: the design, implementation and maintenance of process control systems with respect to DCS and SCADA systems within an oil and gas facility, 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.
31	Inst. Eng.	Within the discipline of instrumentation engineering: planning, designing, specification and implementation of supervisory control and data acquisition systems 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.
32	Inst. Eng.	Within the discipline of instrumentation engineering: design of instrumentation and control systems for industrial 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.
33	Inst. Eng.	Within the discipline of instrumentation engineering: design, specification and implementation of low voltage power, control and instrumentation systems for industrial facilities that is in the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.

34	Inst. Eng.	Within the discipline of instrumentation engineering: design, specification, project management, programming and implementation of automation, instrumentation and control systems, including safety systems (SIS), 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.
35	Inst. Eng.	Within the discipline of instrumentation engineering: design, specification, and implementation of low voltage power, control and Instrumentation systems for industrial facilities utilizing the routine application of industry recognized codes, standards, procedures and practices using established engineering principles and methods of problem solving.
36	Inst. Eng.	Within the discipline of instrumentation engineering: specification, design and implementation of instrumentation and control systems associated with oil and gas production and processing 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.

## **MATERIALS ENGINEERING**

1	Materials	Within the discipline of Materials Engineering: Provide technical services for use of non-metallic materials, including plastic pipe, protective coatings, seals and thermal insulation used for equipment and pipe applications within 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.
2	Materials	Within the discipline of materials engineering: design and development of methods for processing metals, and the development of corrosion protection methods, that is the routine application of industry recognized codes, standards, procedures and principles and method of problem solving.
3	Materials	Within the discipline of materials engineering: the application and assessment of non destructive Inspection techniques pertinent to corrosion control, new construction and

		maintenance programs, in the petroleum and petrochemical 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.
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3	Materials	Within the discipline of materials engineering: perform material selection of metallic and non-metallic piping, piping components and equipment for oil and gas production and refinery 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.
4	Materials	Within the discipline of materials engineering: design, analysis, evaluation and reporting on separation technologies within petroleum and natural gas processing 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.
5	Materials	Within the discipline of materials engineering: provide analysis and evaluation of plastic pipe, protective coatings, seals and thermal insulation used for equipment and pipe applications within 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.
6	Materials	Within the discipline of Geotechnical Engineering and Materials Testing: Performance of field and laboratory work for geotechnical investigations, materials testing, and construction related inspections. Analysis and reporting of the test results, quality assurance of the testing, supervision of testing services, and recommendations for related construction 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.
7	Materials	Within the discipline of materials engineering: the application and assessment of inspection techniques and test plans including Non destructive testing and visual examinations pertinent to corrosion control, new construction and maintenance programs, in the petroleum and petrochemical 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.
8	Materials	Within the discipline of materials engineering: conduct failure analysis investigations and/or material assessments used in the oil & gas/power generation 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.

### **MECHANICAL ENGINEERING**

1	Mechanical	Within the discipline of Mechanical Engineering: the design, application and assessment of corrosion control programs in petroleum and natural gas industry systems including wells, pipelines and 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.
2	Mechanical	Within the discipline of Mechanical Engineering: Design, test (destructive/non-destructive) and manufacture of down-hole drilling and completion tools as related to oil/gas wells 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.

3	Mechanical	Within the discipline of mechanical engineering: design and project management of oil and gas production 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
4	Mechanical	Within the discipline of mechanical engineering: inspection and development of quality assurance and control procedures for the operation and maintenance of power boilers and associated 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.
5	Mechanical	Within the discipline of mechanical engineering: design, inspection and testing of pump and compressor 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.
6	Mechanical	Within the discipline of mechanical engineering: design and coordinate construction and maintenance of atmospheric storage tanks, pressure vessels, piping and pipelines 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.
7	Mechanical	Within the discipline of mechanical engineering: reporting on, advising on, evaluating, engineering approval/evaluation of designs, preparing plans and specifications for preparing construction work packages for managing, directing the development, and construction of projects as it applies to industrial and chemical 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.



8	Mechanical	Within the discipline of mechanical engineering: a) investigation, analysis, and reconstruction of motor vehicle collisions, b) investigation and analysis of automotive part failures, c) investigation, analysis and assessment of walkway friction and facility code compliance 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.
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9	Mechanical	Within the Discipline of Mechanical Engineering: design of storage tanks, boilers, pressure vessels, fuel gas trains, piping structural skid/supports, flame arrestors, line heaters and secondary containment 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
10	Mechanical	Within the discipline of Mechanical Engineering: design, inspection, operation & project management of natural gas distribution 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.
11	Mechanical	Within the discipline of mechanical engineering: perform technical sizing, suitability, design, develop modifications and retrofits, and interpret performance data on industrial rotating equipment such as gas compression equipment, steam and gas turbines, process pumps, cooling fans, speed reducers, and gas engines 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
12	Mechanical	Within the discipline of mechanical engineering: design, evaluate, test and direct the production, modification and repair of type certified aircraft, rotorcraft, and aeronautical products 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.

13	Mechanical	Within the discipline of mechanical engineering: design of heating, ventilation, air conditioning and plumbing systems of commercial and institutional 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.
14	Mechanical	Within the discipline of mechanical engineering: planning, design, specification, analysis, maintenance and implementation of oil & gas piping, gathering systems, storage tanks and processing 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.
15	Mechanical	Within the discipline of Mechanical Engineering: design, specification, reporting on process equipment for Oil and Gas 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.
16	Mechanical	Within the discipline of mechanical engineering: design, evaluate and report on maintenance and operation programs for mechanical systems in buildings, the preparation of operation manuals and the development of staff training programs 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
17	Mechanical	Within the discipline of mechanical engineering: design of piping systems for oil and gas transportation and storage facilities, and the management supervision of projects from detailed design through start up associated with oil and gas transportation and storage facilities 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.
18	Mechanical	Within the discipline of mechanical engineering: design of material handling, transportation and storage systems and the design of process piping systems under ASME B31.3, 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.
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19	Mechanical	Within the discipline of instrumentation engineering: coordinate and design implementation of instrumentation and controls systems of oil and gas pipelines, facilities, well workovers, completions, 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.
20	Mechanical	Within the discipline of mechanical engineering: design, specification, analysis and maintenance of pressure equipment and pipelines at oil and gas facilities that it is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
21	Mechanical	Within the discipline of mechanical engineering: to design lifting components compliant with the ASME B30.20/BTH-01 specification, rigging arrangements and lifting plans complaint with ASME B30.1 to B30.28, 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.
22	Mechanical	Within the discipline of mechanical engineering: design, inspect, maintain, specify and report on pipeline surface steel structures for pig launchers, receivers and associated jigs and fixtures 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.
23	Mechanical	Within the discipline of mechanical engineering: the design, planning and implementation of conventional upstream heavy oil and gas 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.

24	Mechanical	Within the discipline of mechanical engineering: design and implementation of conventional upstream oil and gas 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.
25	Mechanical	Within the discipline of mechanical engineering: design, analysis, and the rehabilitation of pump stations and storage facilities for low and high vapour pressure liquid transportation 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
26	Mechanical	Within the discipline of mechanical engineering: design and implementation of pressure piping systems for upstream conventional oil & gas process facilities, flow lines 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.
27	Mechanical	Within the discipline of mechanical engineering: design of upstream oil and gas facilities, flow lines, 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.
28	Mechanical	Within the discipline of mechanical engineering: the design, planning, implementation and maintenance of boilers, pressure vessels, pressure piping and associated 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.

29	Mechanical	Within the discipline of mechanical engineering: design, conduct failure analysis and direct the construction, modification and maintenance of mechanical assemblies used in the drilling and resource service 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
30	Mechanical	Within the discipline of mechanical engineering: design, analysis, specification, and reporting on fire protection 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.
31	Mechanical	Within the discipline of mechanical engineering: planning, design and analysis of gas and liquid transportation pipelines, liquid pump stations, liquid storage terminals, gas compressor stations, and gas/liquid custody transfer measurement 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.
32	Mechanical	Within the discipline of mechanical engineering: design, implementation, maintenance and analysis of rotating equipment and associated systems and processes for natural gas processing and transportation 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.
33	Mechanical	Within the discipline of mechanical engineering: design of oil and gas drilling and service 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.

34	Mechanical	Within the discipline of mechanical engineering: design of HVAC, plumbing and fire protection systems and services of commercial, industrial, institutional 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.
35	Mechanical	Within the discipline of mechanical engineering: integrity management of pressure equipment, pressure piping, pipelines, tanks and associated petroleum production and refining 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.
36	Mechanical	Within the discipline of mechanical engineering: design of oil and gas processing equipment (vessel design in accordance to ASME Section 8 Div. 1 and process piping in accordance to ASME B31.3) 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.
37	Mechanical	Within the discipline of mechanical engineering: evaluation, design, and optimization of gas compressors and power generation systems, within 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.
38	Mechanical	Within the discipline of mechanical engineering: design, manufacture and recertification of oil and gas wellhead components and christmas tree assemblies 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.

39	Mechanical	Within the discipline of mechanical engineering: inspection and development of quality assurance and control procedures for pressure piping and vessels 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.
40	Mechanical	Within the discipline of mechanical engineering: design of upstream oil and gas production facilities and gathering 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.
41	Mechanical	Within the discipline of mechanical engineering: predictive based maintenance analysis, machinery and machinery systems reliability analysis, troubleshooting and root cause investigation that is the routine application of industry recognized codes, standards, procedures, and practices using established engineering or applied science principles and methods of solving problems.
42	Mechanical	Within the discipline of mechanical engineering: planning, design, specification, root cause failure analysis, maintenance and implementation of oil & gas piping, gathering systems, storage tanks and processing 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.
43	Mechanical	Within the disciplines of mechanical engineering: the design of HVAC and plumbing systems for commercial, residential, and multi family 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.

44	Mechanical	Within the discipline of mechanical engineering: to provide re-certifications on hoisting, handling, and pressure equipment for drilling and service rigs, 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.
45	Mechanical	Within the discipline of mechanical engineering: reporting on, advising on, evaluating, preparing, and managing both the design and construction drawings of piping systems and mechanical arrangements for oil and gas 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.
46	Mechanical	Within the discipline of mechanical engineering: managing, reporting on and development of maintenance, operations and capital programs for industrial facilities. Design and modification of railcar repair facilities and mechanical processes for industrial 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.
47	Mechanical	Within the discipline of mechanical engineering: design and evaluate pressure vessels under ASME Section VIII, division 1 that is the application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
48	Mechanical	Within the discipline of mechanical engineering; design of upstream oil and gas facilities and associated pipelines 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.
49	Mechanical	Within the discipline of mechanical engineering: design of oil and gas mobile service equipment, and design of gas compressor packages for low and high vapour pressure gas 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.



50	Mechanical	Within the discipline of mechanical engineering: layout, design, and specification of oil and gas piping, piping supports, and gathering 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.
51	Mechanical	Within the discipline of mechanical engineering: reporting on, advising on, engineering approval/evaluation of piping designs, preparing plans and specifications for construction work packages, design of piping systems under B31.1/B31.3 and pressure vessel piping in accordance Sec VIII Div. 1 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.
52	Mechanical	Within the discipline of mechanical engineering: design of drilling rig equipment and associated facilities, and performing associated rig surveys 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.
53	Mechanical	Within the discipline of mechanical engineering, designing welded steel storage tanks and storage tank components in accordance with API Standard 650 and 12F 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.
54	Mechanical	Within the discipline of mechanical engineering: design, advise on, evaluating, approving lift and critical lift plans, and project management of storage tank and pressure vessel construction and maintenance 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.
55	Mechanical	Within the discipline of mechanical engineering: the development, evaluation, design, and optimization of gas compressor packages utilized within 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.

56	Mechanical	Within the discipline of mechanical engineering: reporting on, advising on, evaluating, designing, preparing plans and specifications for packaged process plants for the oil & 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.
57	Mechanical	Within the discipline of mechanical engineering: design, specify and direct the construction, modification and maintenance of mechanical equipment and materials handling systems for industrial manufacturing 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.
58	Mechanical	Within the discipline of mechanical engineering: construction inspection, quality assurance and construction management of mining, and oil and gas production 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.
59	Mechanical	Within the discipline of mechanical engineering: design of upstream natural gas and oil processing facilities, gathering and transmission systems in conjunction with project management and coordination 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.
60	Mechanical	Within the discipline of mechanical engineering: design of storage and distribution systems for high and low pressure liquids and gases or combination thereof for modular thermoelectric generation 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.

61	Mechanical	Within the discipline of mechanical engineering: the design, application, and assessment of pipeline integrity management plans, including corrosion control programs, in petroleum and natural gas industry pipelines 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.
62	Mechanical	Within the discipline of mechanical engineering: the design of upstream oil and gas batteries, gathering pipeline systems and the development and implementation of integrity management programs, 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.
63	Mechanical	Within the discipline of mechanical engineering: the design of upstream oil and gas batteries, gathering pipeline systems and the development and implementation of integrity management programs, 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.
64	Mechanical	Within the discipline of mechanical engineering: the design of upstream oil and gas batteries, gathering pipeline systems and the development and implementation of integrity management programs, 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.
65	Mechanical	Within the discipline of mechanical engineering: design, planning and implementation of upstream heavy oil field facilities and conventional gas field facilities and associated gathering and distribution 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.

66	Mechanical	Within the discipline of mechanical engineering: design, maintain, and give engineering approval/evaluation on designs and process implementation plans for sulfur forming, processing and reclaiming 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.
67	Mechanical	Within the discipline of mechanical engineering: design of HVAC, plumbing and fire protection systems and services of commercial, industrial, institutional 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.
68	Mechanical	Within the discipline of mechanical engineering: planning, design, specification, analysis, maintenance and implementation of oil & gas piping, gathering systems, storage tanks and processing 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.
69	Mechanical	Within the discipline of mechanical engineering: design, development, specification, testing, analysis, reporting and modification of fuel cell technology 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.
70	Mechanical	Within the discipline of mechanical engineering: design of oil and gas drilling and service 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.
71	Mechanical	Within the discipline of mechanical engineering: design, and reporting on materials, component and product verification testing that is the routine application of industry recognized codes, standards, procedures and practices using the established engineering or applied science principles and methods of problem solving.

72	Mechanical	Within the discipline of mechanical engineering: design of oil, water and gas gathering and transmission pipeline systems that is in the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
73	Mechanical	Within the discipline of mechanical engineering: design and substantiation of repairs to aircraft structures 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.
74	Mechanical	Within the discipline of mechanical engineering: developing, reporting, advising, evaluating, influencing, directing, preparing plans and specifications; designing, analyzing, inspecting, monitoring and approving the project management of piping, pressure vessel, environmental assessment, remediation and reclamation; and plant infrastructure construction 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.
75	Mechanical	Within the discipline of mechanical engineering: design and construction review of process piping systems under ASME B31.3 and ASME B31.1 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.
76	Mechanical	Within the discipline of mechanical engineering: design and develop technical specifications and procedures for repairs, alterations and upgrades to stationary and rotating mechanical equipment in process 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.
77	Mechanical	Within the discipline of mechanical engineering: design of upstream oil and gas facilities, flow lines 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.

78	Mechanical	Within the discipline of mechanical engineering: design, specification and analysis of pressure piping and process systems integrity for upstream, downstream and pipeline assets 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.
79	Mechanical	Within the discipline of mechanical engineering: design, evaluate, test and direct the production, modification and repair of type certified aircraft, rotorcraft, and aeronautical products 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.
80	Mechanical	Within the discipline of mechanical engineering: reporting on, advising on, evaluating, engineering approval/evaluation of designs, preparing plans and specifications for preparing construction work packages for managing, directing the development, and construction of projects as it applies to oil and gas 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.
81	Mechanical	Within the discipline of mechanical engineering: (a) the design, implementation, and maintenance of aircraft related Ground Support Equipment, (b) making findings of compliance (for structural aspects only) to Canadian Aviation Regulations (CAR's) Part V, Subpart 21, and (c) Manufacturing Review Board activities under CAR's Part V, Subpart 61, 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.
82	Mechanical	Within the discipline of mechanical engineering: design and substantiation of repairs to aircraft structures 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.
83	Mechanical	Within the discipline of mechanical engineering: the design and commissioning of HVAC and applicable automation controls for 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.
84	Mechanical	Within the discipline of mechanical engineering: design, evaluate, test and direct the production, modification and repair of type certified aircraft, rotorcraft and aeronautical products 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.
85	Mechanical	Within the discipline of mechanical engineering: development and supervision of integrity management programs for the operation and maintenance of power boilers, heating boilers, pressure vessels, pressure piping, pipelines, tanks and associated 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.
86	Mechanical	Within the discipline of mechanical engineering: development and implementation of standards and procedures for the inspection and maintenance of power boilers, heating boilers, pressure vessels, piping and associated 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.
87	Mechanical	Within the discipline of mechanical engineering: design, implementation, maintenance, inspection and analysis of rotating equipment and associated systems and processes for gas processing and transportation 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.
88	Mechanical	Within the discipline of mechanical engineering: conduct predictive based maintenance, reliability, and operational analysis of rotating and reciprocating machinery 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.
89	Mechanical	Within the discipline of mechanical engineering: design of upstream oil and gas facilities, flow

		lines, 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.
90	Mechanical	Within the discipline of mechanical engineering; design of heating, ventilation, air conditioning and plumbing systems of commercial and institutional 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.
91	Mechanical	Within the discipline of mechanical engineering: design of process 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.
92	Mechanical	Within the discipline of mechanical engineering: design and implementation of conventional upstream oil and gas 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.
93	Mechanical	Within the discipline of mechanical engineering: design, manufacture of oil and gas wellhead components and christmas tree assemblies 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.
94	Mechanical	Within the discipline of mechanical engineering: design and project management of oil and gas production facilities that are the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
95	Mechanical	Within the discipline of mechanical engineering: perform technical sizing, suitability, design, develop modifications, testing and retrofits, and interpret performance data on pumps / piping systems under ASME B31.3 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.



96	Mechanical	Within the discipline of mechanical engineering: inspection of Boilers, pressure vessels, pressure piping, 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.
97	Mechanical	Within the discipline of mechanical engineering: design, manage and supervise the construction of oil & gas wellsites, field production facilities and associated pipelines 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.
98	Mechanical	Within in the discipline of mechanical engineering: Provide quality assurance, quality auditing, quality control and occupational Health & Safety compliance service 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.
99	Mechanical	Within the discipline of mechanical engineering: design, test and manufacture of casing cementing equipment and casing accessories as related to drilling oil/gas wells 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.
100	Mechanical	Within the discipline of mechanical engineering: the development, evaluation, design, and optimization of gas compressor packages utilized within the gas industry including process piping in accordance with ASME B31.1/B31.3 and pressure vessel piping in accordance ASME Section VIII, Division 1 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.
101	Mechanical	Within the discipline of mechanical engineering: reporting on, advising on, evaluating, engineering approval/evaluation of designs, preparing plans and specifications for preparing construction work packages for managing, directing the development, and construction of projects as it applies to industrial and chemical 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.
102	Mechanical	Within the discipline of mechanical engineering: design, inspection, operation & project management of natural gas distribution, HVAC, plumbing and fire protection systems and services of commercial, industrial, institutional, multi family 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.
103	Mechanical	Within the discipline of mechanical engineering: design and project management of engineering approval/evaluation of designs, procurement and construction supervision of oil and gas piping and modular process equipment that is routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
104	Mechanical	Within the discipline of mechanical engineering: reporting on, advising on, evaluating, engineering approval/evaluation of designs, preparing plans and specifications for oil & gas production 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.
105	Mechanical	Within the discipline of mechanical engineering: predictive based maintenance analysis, machinery and machinery systems reliability analysis, troubleshooting and root cause investigation that is the routine application of industry recognized codes, standards, procedures, and practices using established engineering or applied science principles and methods of solving problems.
106	Mechanical	Within the discipline of mechanical engineering: design of natural gas distribution, HVAC, plumbing and fire protection systems and services of commercial, industrial, institutional, multi family 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.
107	Mechanical	Within the discipline of mechanical engineering: design, evaluation, and approval of rigging

		including rigging devices and attachments; that are the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
108	Mechanical	Within the discipline of mechanical engineering: design of oil and gas processing equipment (vessel design in accordance to ASME Section 8 Div. 1, Process Piping in accordance to ASME B31.3) and Structural Skid of Oil and Gas Process Facilities as per CSA S16 Appendix D, Table D-1 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.
109	Mechanical	Within the discipline of mechanical engineering: Integrity management of pressure equipment, pressure piping, pipelines, tanks and associated petroleum production and refining 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.

## **METALLURGICAL ENGINEERING**

1	Metallurgic	Within the discipline of metallurgical engineering: design, specify, supervise and inspect the fabrication methods and weld procedures for the construction, repair or alteration of pressure equipment, pressure piping and related steel structures 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
2	Metallurgic	Within the discipline of metallurgical engineering: design and implement 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
3	Metallurgic	Within the discipline of metallurgical engineering: design and analysis of pressure piping and

		process equipment integrity for upstream and downstream oil and gas 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
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4	Metallurgic	Within the discipline of metallurgical/mechanical engineering: specify, supervise and inspect the fabrication methods and weld procedures for the construction, repair or alteration of pressure equipment, pressure piping and related steel structures 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.
5	Metallurgic	Within the discipline of metallurgical engineering: development, qualification, implementation, problem solving, providing technical advice on and review of welding 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.

## PETROLEUM ENGINEERING

1	Petroleum	Within the discipline of Petroleum Engineering: Economic evaluations of hydrocarbon reserves. Coordinate the development and implementation of oil and gas well drilling, abandonment, workover and completion projects as well as gathering pipelines and facility construction projects. Coordinate production operations of oil and gas wells, pipelines and 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.
2	Petroleum	Within the discipline of petroleum engineering: manage, design and implement completions, workovers, abandonments, of oil and gas wells, associated pipeline and facility construction projects; manage and coordinate completion and production operations of oil and gas wells and associated facilities that is the routine application of industry recognized codes, standards, procedures and practices using established or applied science principles and methods of problem solving.

3	Petroleum	Within the discipline of petroleum engineering: measurement and Instrumentation 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.
4	Petroleum	Within the disciplines of petroleum engineering: co-ordinate production operations of oil and gas wells and associated pipeline facilities; manage the design and construction of oilfield facility and pipeline installations 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.
5	Petroleum	Within the discipline of Petroleum Engineering: coordinate the development and implementation of oil and gas well workover and completion programs including wellsite gathering pipelines, facility construction projects and production 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.
6	Petroleum	With the discipline of petroleum engineering: Coordinate the development and implementation of oil and gas well completion and workover programs and associated pipeline facility projects, to optimize production of oil and gas assets, and to economically evaluate these assets 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.
7	Petroleum	Within the Discipline of Petroleum Engineering: Manage, design, coordinate and implement completion, workover and abandonment programs of oil and gas wells including associated pipeline and facility construction 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.
8	Petroleum	Within the discipline of Petroleum Engineering: Supervise, coordinate and implement all gas well completion projects, including abandonments, well-optimization, and workovers 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.
9	Petroleum	With in the discipline of petroleum engineering: design, optimize and implement oil and gas well completions and workover programs, 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.
10	Petroleum	Within the discipline of Petroleum Engineering: Managing and coordinating the development and production of new and existing oil and gas reservoirs that is the routine application of industry recognized codes, standards, procedures and practices using established or applied science principles and methods of problem solving.
11	Petroleum	Within the discipline of Petroleum Engineering: Supervise, coordinate and implement well completion projects, abandonments and workovers 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.
12	Petroleum	Within the discipline of petroleum engineering: design, analysis and implementation of completions, workovers and abandonments of conventional and unconventional gas wells 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
13	Petroleum	Within the discipline of petroleum engineering: the design, implementation, and supervision of oil and gas well completion, workover, and production enhancement 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.
14	Petroleum	Within the discipline of petroleum engineering: design and implementation of completion, work-over and abandonment projects for both conventional and non-conventional oil and gas wells 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.

15	Petroleum	Within the discipline of petroleum engineering: design and report on the specifications of directional oil and gas wellbore drilling 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.
16	Petroleum	Within the discipline of petroleum engineering: design and manage well workovers, abandonments and production operations for conventional operations in oil and gas 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.
17	Petroleum	Within the discipline of petroleum engineering: design and manage well work overs, abandonments and production operations for conventional operations in oil and gas 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
18	Petroleum	Within the discipline of petroleum engineering: coordinate and manage drilling, completions, workovers and abandonment programs for oil and gas wells, 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.
19	Petroleum	Within the discipline of electrical engineering: design and analysis of protection and control of low, medium and high voltage power systems for commercial, institutional, industrial and utility facilities and analysis of short circuit grounding arc flash and load flow studies
20	Petroleum	Within the discipline of petroleum engineering: design, analysis and specifications on the production of surface & downhole production equipment & systems for oil & gas wells 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.



21	Petroleum	Within the discipline of petroleum engineering: design, planning and implementation of drilling wellbores for oil and gas deposits 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.
22	Petroleum	Within the discipline of petroleum engineering: design, planning and implementation of well flow and buildup tests, water injection/disposal and falloff test, conduct pressure transient analysis on pressure data from drawdown, buildup and falloff tests, and optimize production of oil and gas wells that is the routine application of industry recognized codes, standards, procedure and practices using established engineering or applied science principles and methods of problem solving
23	Petroleum	Within the discipline of petroleum engineering: design of artificial lift systems for oil and gas wells, and field operations optimization in the oil & 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.
24	Petroleum	Within the discipline of petroleum engineering: design and implementation of drilling and completion operations of oil wells 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.
25	Petroleum	Within the discipline of petroleum engineering: design of artificial lift systems for oil and gas wells, and field operations optimization in the oil & 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.
26	Petroleum	Within the discipline of petroleum engineering: design and implementation of drilling and completion operations of oil wells 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.

27	Petroleum	Within the discipline of petroleum engineering: managing and coordinating the development and production of new and existing oil and gas reservoirs that is the routine application of industry recognized codes, standards, procedures and practices using established or applied science principles and methods of problem solving.
28	Petroleum	Within the discipline of petroleum engineering: implement and supervise oil and gas well drilling, completions and workover programs 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.
29	Petroleum	Within the discipline of petroleum engineering: the analysis and optimization of conventional and unconventional oil & gas production and the subsequent design and implementation of production and optimization systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles of problem solving.
30	Petroleum	Within the discipline of petroleum engineering: evaluate hydrocarbon reserves, manage and implement drilling, abandonment, workover and completion projects for gathering pipelines, oil & gas wells that is 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.
31	Petroleum	Within the discipline of petroleum engineering: design, manage and implement drilling, completion, optimization, workover, artificial lift systems and abandonment operation programs of oil and gas wells 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.
32	Petroleum	Within the discipline of petroleum engineering, planning and implementation of drilling and completing wellbores for oil and gas deposits 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.

33	Petroleum	Within the discipline of petroleum engineering: design, supervise, coordinate and implement well completion projects, abandonments and workover operations to optimize production of the oil and gas assets 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.
34	Petroleum	Within the discipline of petroleum engineering, design, implement, coordinate and supervise well completion, recompletion, workover, abandonment and downhole maintenance programs 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.
35	Petroleum	Within the discipline of petroleum engineering: evaluate, design and implementation of oil & gas well completions, workovers, production optimization, equipping, suspension and abandonment projects, and associated facilities and pipelines 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.
36	Petroleum	Within the discipline of petroleum engineering: evaluating and reporting on oil and gas reservoirs for hydrocarbon reserves, production rates and economic values 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.
37	Petroleum	Within the discipline of petroleum engineering: in the area of reservoir engineering related to the design and execution of petroleum reservoir and aquifer welltesting and the acquisition and analysis of subsurface pressure transient data, that is the routine application of industry recognized codes, procedures and practices using established engineering or applied science principles and methods of problem solving.

38	Petroleum	Within the discipline of petroleum engineering: manage, supervise, coordinate and implement oil and gas well production, drilling, completion, abandonments, well-optimization and workover 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.
39	Petroleum	Within the discipline of petroleum engineering: evaluation of new and existing hydrocarbon reserves and fluid composition, 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.
40	Petroleum	Within the discipline of petroleum engineering: design, planning and implementation of drilling wellbores for oil and gas, plus coordinate and manage drilling, completions, workovers and abandonment programs for oil and gas wells, that is routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
41	Petroleum	Within the discipline of petroleum engineering: design and implementation of drilling programs for oil & gas wells 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.
42	Petroleum	Within the discipline of petroleum engineering: design and implementation of drilling programs for oil & gas wells 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.
43	Petroleum	Within the discipline of petroleum engineering: the analysis and optimization of oil and gas production and the subsequent design and implementation of artificial lift systems that is the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles of problem solving.

44	Petroleum	Within the discipline of petroleum engineering: managing and coordinating the development and production of new and existing oil and gas reservoirs that is the routine application of industry recognized codes, standards, procedures and practices using established or applied science principles and methods of problem solving.
45	Petroleum	Within the discipline of petroleum engineering: design, planning, directing and management of well testing operations that is the routine application of industry recognized codes, standards, procedure and practices using established engineering or applied science principles and methods of problem solving.
46	Petroleum	Within the discipline of petroleum engineering: planning, development, evaluation and exploitation of hydrocarbon resources 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.
47	Petroleum	Within the discipline of petroleum engineering: coordinate the in-situ thermal recovery of bitumen 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.
48	Petroleum	Within the discipline of petroleum engineering: planning, development, evaluation and exploitation of hydrocarbon resources 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.
49	Petroleum	Within the discipline of petroleum engineering: coordinate down-hole subsurface completions and optimize oil & gas production equipment 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.
50	Petroleum	Within the discipline of petroleum engineering: the design, management, planning, coordination, and execution of pipeline and wellsite facility construction 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.
51	Petroleum	Within the discipline of petroleum engineering: design, manage and implement drilling, completion, optimization, workover, artificial lift systems and abandonment operation programs of oil and gas wells 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.
52	Petroleum	Within the discipline of petroleum engineering: coordinate and manage drilling, completions, workovers and abandonment programs for oil and gas wells, 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.
53	Petroleum	Within the discipline of petroleum engineering: evaluation of new and existing hydrocarbon reserves and fluid composition, 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.
54	Petroleum	Within the discipline of petroleum engineering: managing, designing, evaluating, preparing, and coordinating both the design and construction of piping systems, completions, workovers, and abandonments for oil and gas 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.
55	Petroleum	Within the discipline of the petroleum engineering; manage and design of oil and gas pipeline and facility construction projects that is the routine application of industry recognized codes, standards, procedures and practices using established or applied science principles and methods of problem solving.
56	Petroleum	Within the discipline of petroleum engineering: design, planning and implementation of drilling fluids used to drill wellbores for oil and gas reserves 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.

57	Petroleum	Within the discipline of petroleum engineering: the design, implementation, and supervision of oil and gas well completion, workover, and production enhancement 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.
58	Petroleum	Within the discipline of petroleum engineering: evaluating and report on oil and gas reservoirs for hydrocarbon reserves, production rates and economic values 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.
59	Petroleum	Within the discipline of petroleum engineering: manage, supervise, coordinate and implement oil and gas well production, drilling, completion, abandonments, well-optimization and workover 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.
60	Petroleum	Within the discipline of petroleum engineering: Coordinate the development and implementation of oil and gas well completion and workover programs and associated pipeline facility projects, to optimize production of oil and gas assets, and to economically evaluate these assets 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.
61	Petroleum	Within the discipline of petroleum engineering: Planning, design, management and economic analysis of primary, secondary and tertiary recovery schemes for new and existing oil and gas reservoirs by using conventional reservoir engineering techniques that is the routine application of industry recognized codes, standards, procedures and practices using established or applied science principles and methods of problem solving.

## SOFTWARE ENGINEERING

1	Software Eng.	Within the discipline of software engineering: design, program and manage 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.
2	Software Eng.	Within the discipline of software engineering: design, program, implementation and analysis of software applications for unmanned vehicle 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.
3	Software Eng.	Within the discipline of software engineering: project management, planning, analysis, implementation, testing and reporting of information assurance 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.



## PETROLEUM GEOLOGY

1	Petr. Geol.	Within the discipline of petroleum geology: wellsite supervision including collecting, processing, quality assessment and petrographic examination of drill bit cuttings and cores, completing geotechnical index tests as required, preparing geological strip logs including drilling data, hydrocarbon testing data, photomicrographs and geophysical logs, assessing interpreted data against geological prognoses and monitoring geohazards as drilling progresses using wellsite, petrophysical and petrogeological techniques that are the routine application of industry recognized codes, standards, procedures and practices using established engineering or applied science principles and methods of problem solving.
2	Petr. Geol.	Within the discipline of petroleum geology: prepare, manage, supervise, teach and coordinate the collection, implementation and evaluation of geological, geophysical and engineering data for the effective understanding of new and existing hydrocarbon reserves 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.