

INDUSTRIES AND AREAS OF PRACTICE



Starting on June 30, 2021, individual registrants will be required to annually provide their self declared industry and area(s) of practice to Engineers and Geoscientists BC. Additionally, starting on July 2, 2021 registrant firms will also be required to self declare the firm's industry and area(s) of practice.

Historically, registrants were encouraged to self-declare their industry and area(s) of practice (formerly known as fields of practice). Under the *Professional Governance Act* and the Engineers and Geoscientists BC Bylaws this information is now mandatory. The information provided will be published on the online Register and will be

reviewed during a compliance audit or practice review of a registrant. A minimum of one industry and one area of practice must be declared, but there is no maximum limit.

Please note that the list of industries and areas of practice may not capture every industry and area of practice in which Engineers and Geoscientists BC registrants practice. In these cases, registrants can choose the "other" option and manually enter in this information.

Registrants' industry and area(s) of practice can be declared, reviewed, and updated through their online Account with Engineers and Geoscientists BC.

PROVIDING INFORMATION

When providing this information, first select your industry of practice, then select your area(s) of practice. The following examples have been provided below to

EXAMPLE 1

An engineer works for a consulting firm that focuses on structural engineering services and the engineer's work is focused on structural design of concrete, steel, and wood frame buildings. In this case the engineer may declare the following:

Industry of Practice: Consulting Engineering – Structural

Area(s) of Practice: Engineering – Structural – Building Design/Const – Concrete
Engineering – Structural – Building Design/Const – Steel
Engineering – Structural – Building Design/Const – Wood

EXAMPLE 2

A geoscientist works for a mining firm as a Mine Geoscientist, but also conducts mineral exploration related work for the firm. In this case the geoscientist may declare the following:

Industry of Practice: Resources – Mining

Area(s) of Practice: Geoscience – Geology – Mine Geology
Geoscience – Geology – Exploration Geology

help registrants understand how to declare these details.

EXAMPLE 3

An engineer works for a software development firm and their work is focused on aerospace. In this case the engineer may declare the following:

Industry of Practice: High Technology – Software Development

Area(s) of Practice: Engineering – Aeronautics/Aerospace – Avionics/Software/
Communications
Engineering – Aeronautics/Aerospace – Other

EXAMPLE 4

An engineer is working for a financial planning institution and is not practicing within the definition of professional engineering, but is focused on business development. In this case the engineer may declare the following:

Industry of Practice: Non-Regulated Practice – Financial Planning

Area(s) of Practice: Non-Regulated Practice – Business Services
Non-Regulated Practice – Sales & Marketing

INDUSTRIES OF PRACTICE

CONSTRUCTION AND MANUFACTURING

Concrete & Precast
Construction
Design/Build
Fabrication
Heavy Manufacturing
Light Manufacturing
Other

CONSULTING ENGINEERING

Aeronautics/Aerospace
Agriculture
Biomedical
Building Science
Chemical
Civil
Coastal and Ocean
Computer
Construction
Electrical/Electronic
Environmental
Fire Protection
Food/Beverage
Forest
Geological
Geotechnical
Groundwater
Industrial/Manufacturing
Land Development
Management

Marine/Naval
Materials Handling
Mechanical
Metallurgical/Materials
Mining
Petroleum
Power (Energy)
Project Management
Pulp & Paper
Safety
Structural
Surveying/Geomatics
Transportation
Water Resources
Other

CONSULTING GEOSCIENCE

Coastal and Ocean
Environment
Geochemistry
Geology
Geophysics
Geotechnics
Hydrogeology
Hydrology
Management
Mineral Exploration
Other

GOVERNMENT

Agencies
Crown Corporations
Federal
First Nations
Government Ministry not defined in the
PGA as a Government Registrant
Health Care
Military
PGA Defined Government Registrant
Provincial/Territorial
Regional, Municipal
Other

HIGH TECHNOLOGY

High Technology Manufacturing
Instrumentation/Controls
Product Development
Research and Development
Security
Software Development
Systems Integration
Other

NON-REGULATED PRACTICE

Education
Financial Planning
Law/Arbitration
Management Consulting
Non-Profit Associations
Service Industry
Other

RESOURCES

Agriculture
Aquaculture
Chemical
Fishing
Forestry
Mining
Oil and Gas
Pulp & Paper
Other

UTILITIES, COMMUNICATIONS, & TRANSPORTATION

Communication &
Telecommunication
Electric and Gas Utilities
Facility Management
Pipelines
Transportation
Water Supply
Other

AREAS OF PRACTICE – ENGINEERING

AERONAUTICS/AEROSPACE

Aerodynamics/Flight Test Engineer
Air/Spacecraft/Station Design
Avionics/Software/Communications
Environmental/Experiments
Operations
Propulsion
Space Systems/Subsystems
Structures
Other

AGRICULTURAL

Agrifood Processing
Construction
Hydraulics/Hydrology
Irrigation and Drainage
Machinery
Soils/Soil Mechanics
Other

BIOMEDICAL

Equipment
Prostheses
Other

BIORESOURCE

BIOSYSTEMS

BUILDING ENVELOPE

Advanced Materials & Polymers Building
Enclosure Assessment & Design
Energy Use Assessment
Other

CHEMICAL

Biochemical
Corrosion
Equipment
Foodstuffs
Heat Transfer/Energy Conservation
Petrochemical
Process Design and Control
Processes/Production
Other

CIVIL

Building Construction/Maintenance
Coastal and Ocean Engineering
Foundations/Soils/Geotechnology
Hydraulics and Hydrotechnical
Hydroelectricity/Dams
Hydrology
Marine Installations
Municipal/Urban/Town Planning
River Engineering
Roads, Rails, Airports
Traffic/Signage
Transportation
Water Resources
Water/Sanitary
Other

COMPUTER

Hardware
Information systems
Network
Software
Systems/System Integration
Other

ELECTRICAL/ELECTRONIC

Alternative Energy Systems
Controls/Robotics
Electronics/Microelectronics
Energy Management
Instrumentation & Controls
Microwave
Power Equipment/Electronics
Power Generation/Distribution
Radio Frequencies
SCADA Systems
Services: Lighting, Building, Roadway
Telecommunications
Underwater Systems
Other

ENGINEERING PHYSICS

Acoustics, Vibrations
Optics, Lasers
Systems, Apparatus
Other

ENVIRONMENTAL

Air Assessment/Monitoring/Management
Audits/Site Remediation
Climate Risk Management
Climate Science
Coastal/Ocean Assessments
and Management
Emergency Preparedness/Response
Environmental Training
Fisheries/Aquaculture
Greenhouse Gas Calculation
Hazard and Mitigation Assessments
Impact Assessment
Noise Management
Regulatory Process Management
Soils/Groundwater Management
Sustainability
Waste Management
Wastewater Treatment/Management
Water Supply/Treatment/Conservation
Other

FIRE PROTECTION

Code Consulting
Detection and Control
Investigation
Loss Prevention
Risk Assessment
Safety Analysis
Testing
Other

FOREST

Forest Operations
Forest Planning
Harvesting
Hydrology
Soil Structures
Transportation Systems
Wood Products
Other

GEOLOGICAL ENGINEERING

Economic
Geophysics
Geotech./Soil Mech./Rock Mech.
Hydrogeology
Prospecting
Resource Evaluation
Other

GEOTECHNICAL

Buildings
Hazards
Other Structures
Other

INDUSTRIAL/MANUFACTURING

Automatic Assembly
Cost/Inventory Control
Facilities, Maintenance, Operations
Instrumentation/Equipment
Materials Handling/Packaging
Production Systems
Quality Assurance
Safety/Ergonomics
Other

MARINE/NAVAL

Machinery, Equipment
Naval Architecture
Navigational Aids
Ports and Harbors
Shipbuilding
Underwater Equipment
Other

MECHANICAL

Automation, Robotics
Automotive
Building Systems
CAD/CAM/CAE
Cryogenics
Electromechanical Systems
Engines, Turbines, Compr. Pumps
Finite Element Analysis
HVAC
Hydraulics/Fluids
Instrumentation
Machine, Plant Design
Machinery
Materials Handling
Pipelines
Pressure Vessels
Transportation Equipment
Underwater Systems
Other

METALLURGICAL/MATERIALS

Ceramics
Composite Materials
Corrosion
Extractive
Failure Analysis

Materials Handling
Metal Shaping, Assembly
Metals and Alloys
Physical
Process Engineering
Semiconductors
Welding
Other

MINING

Design Installations
Drilling
Environmental Impacts
Exploration
Explosives
Extraction/Processing
Machinery/Equipment
Metal Fabrication
Mine Construction
Mine Evaluation
Mine Tailings
Mining Operation
Reclamation
Rock Mechanics
Other

PETROLEUM

Drilling and Rock Mechanics
Pipelines
Process & Design
Production Facilities
Recovery
Refinery
Reservoir Engineering
Subsea
Other

PULP & PAPER

Controls
Environment
Machinery/Equipment
Materials Handling
Plant Operations
Processes
Structural/Construction
Other

STRUCTURAL

Building Design/Construction – Concrete
Building Design/Construction – Steel
Building Design/Construction – Wood
Building Envelope
Bridges
Commercial
Industrial
Offshore facilities
Port, Harbour, Terminal Facilities
Residential
Seismic Retrofit
Towers
Other

OTHER ENGINEERING

Administration/Management
Education
Health & Safety
Military
Project Management
Quality Management
Surveying/Geomatics
Other

AREAS OF PRACTICE – GEOSCIENCE

GEOCHEMISTRY

Environmental Geochemistry
Exploration Geochemistry
Geochemistry
Marine Geochemistry
Other

GEOLOGY

Biostratigraphy
Coal Geology
Coastal Geology
Economic Geology
Engineering Geology
Environmental Geology
Exploration Geology
Geochronology

Geographic Information Systems
Geology
Geomathematics
Geomorphology
Marine Geology
Mine Geology
Mineralogy
Palaeontology
Petroleum Geology
Petrology
Sedimentology
Stratigraphy
Structural Geology
Surficial Geology
Volcanology
Other

GEOPHYSICS

Environmental Geophysics
Geophysics
Glaciology
Marine Geophysics
Seismology
Other

ENVIRONMENTAL GEOSCIENCE

Climate Risk Management
Climate Science
Coastal/Ocean Assessments
and Management
Engineering Geology
Forest Practices Geology
Hazard and Mitigation Assessments

Hydrogeology
Hydrology
Land Reclamation Geology
Terrain Analysis
Other

OTHER GEOSCIENCE

Administration/Management
Education
Health & Safety
Military
Project Management
Quality Management
Surveying/Geomatics
Other

AREAS OF PRACTICE – OTHER

Accounting
Architecture
Business Services
Charity
Commerce/Trade
Communications
Economics

Education (non-teaching)
Education (teaching)
Finance
Health Care
Humanities
Human Resources
Insurance

Journalism
Language Learning
Law
Mathematics
Medicine
Membership Organizations
Real Estate

Sales & Marketing
Tourism
Other