



The Association of Professional
Engineers and Geoscientists of Alberta

GEOLOGY & ENVIRONMENTAL GEOSCIENCE

COURSE EQUIVALENTS

2020 Syllabus Edition (Updated July 2022)

University of Alberta

University of Calgary

20-GFUND-1a Elementary Calculus I

MATH 113 Elementary Calculus I

OR

MATH 114 Elementary Calculus I

OR

MATH 134 Calculus for the Life Sciences I

OR

MATH 144 Calculus for the Physical Sciences I

MATH 249 Introductory Calculus

OR

MATH 265 University Calculus I

OR

MATH 275 Calculus for Engineers and Scientists

20-GFUND-1b Elementary Calculus II

MATH 115 Elementary Calculus II

OR

MATH 136 Calculus for the Life Sciences II

OR

MATH 146 Calculus for the Physical Sciences II

MATH 267 University Calculus II

OR

MATH 277 Multivariate Calculus for Engs and Scientists

20-GFUND-2a General Physics I

PHYS 124 Particles and Waves

OR

PHYS 144 Newtonian Mechanics and Relativity

PHYS 211 Mechanics

OR

PHYS 221 Mechanics

OR

PHYS 227 Classical Physics

20-GFUND-2b General Physics II

PHYS 126 Fluids, Fields, Radiation

OR

PHYS 146 Fluids and Waves

PHYS 223 Intro to Electromagnetism & Thermal Physics

20-GFUND-3a General Chemistry I

CHEM 101 Intro University Chemistry I

CHEM 201 General Chemistry: Structure & Bonding

OR

CHEM 211 Foundations of Chem: Structure & Bonding

20-GFUND-3b General Chemistry II

CHEM 102 Intro University Chemistry I

CHEM 203 General Chemistry: Change & Equilibrium

OR

CHEM 213 Foundations of Chem: Change & Equilibrium

20-GFUND-4 Differential Equations & Transform Methods

MATH 201 Differential Equations

MATH 331 Advanced Calculus

OR

MATH 375 Differential Equations for Engineers & Scientists

20-GFUND-5 Linear Algebra and Vector Analysis

MATH 125 Linear Algebra I

OR

MATH 127 Honours Linear Algebra I

MATH 211 Linear Methods I

OR

MATH 213 Linear Algebra I

OR

MATH 377 Vector Calculus for Engineers & Scientists

20-GFUND-6 Computing Science

CMPUT 101 Introduction to Computing

OR

CMPUT 201 Practical Programming Methodology

CPSC 217 Introduction to Computing Science I

OR

CPSC 235 Advanced Introduction to Computing Science

OR

DATA 211 Programming with Data

20-GFUND-7 Thermodynamics

PHYS 261 Physics of Energy

OR

CHEM 371 Energetics of Chemical Reactions

ENGG 311 Engineering Thermodynamics

OR

CHEM 371 Physical Chemistry: Thermodynamics

20-GFUND-8 Biology

BIOL 107 Introduction to Cell Biology

OR

BIOL 108 Introduction to Biological Diversity

BIOL 205 Organization and Diversity of Life

OR

BIOL 241 Energy Flow in Biological Systems

OR

BIOL 243 DNA Inheritance & Evolution

20-GFUND-9 Physical Chemistry

CHEM 373 Systems

CHEM 373 Physical Chemistry: Quantum Chemistry

20-GFUND-10 Organic Chemistry

CHEM 164 Organic Chemistry I

OR

CHEM 261 Organic Chemistry I

CHEM 351 Organic Chemistry I

OR

CHEM 353 Organic Chemistry II

20-GFUND-11 Inorganic Chemistry

CHEM 241 Introduction to Inorganic Chemistry

OR

CHEM 333 Inorganic Materials Chemistry

CHEM 431 Inorganic: Group Elements

OR

CHEM 433 Inorganic: Transition Metals

20-GFUND-12 Statistics

STAT 151 Introduction to Applied Statistics I

OR

AUSTA 215 - Statistical Methods for the Natural Sciences

STAT 205 Introduction to Statistical Inquiry

OR

STAT 213 Introduction to Statistics I

OR

STAT 327 Statistics for Physical & Environmental Sciences

University of Alberta

University of Calgary

20-GLGY-1 EAS 224	Mineralogy & Crystallography Mineralogy I	GLGY 313	Mineralogy
20-GLGY-2 EAS 222	Principles of Stratigraphy and Sedimentation Stratigraphy and Sedimentation	GLGY 381	Sedimentary Rocks & Processes
20-GLGY-3 EAS 331	Igneous Petrology Igneous Petrology	GLGY 333 OR GLGY 431	Igneous & Metamorphic Rocks & Processes Igneous Petrology
20-GLGY-4 EAS 336	Sedimentary Petrology Sedimentary Systems	GLGY 579	Basin Analysis
20-GLGY-5 EAS 332	Metamorphic Petrology Metamorphic Petrology	GLGY 433	Metamorphic Petrology
20-GLGY-6 EAS 233	Structural Geology Geologic Structures	GLGY 343 OR GLGY 445	3D Geologic Structures & Methods Structural Geology
20-GLGY-7 EAS 320	General Geochemistry Geochemistry I	GLGY 323	Geochemical Processes
20-GLGY-8 GEOPH 210	Global Geophysics Physics of the Earth	GOPH 351	Introduction to Geophysics
20-GLGY-9 EAS 225	Geomorphology Earth Surface Processes and Landforms	GLGY 353	Surficial Systems
20-GLGY-10 EAS 458	Glacial and Quaternary Geology Cold Regions Geoscience	No Course Equivalent	
20-GLGY-11 EAS 323	Hydrogeology Introduction to Hydrogeology	GLGY 401	Physical Hydrogeology
20-GLGY-12 EAS 230 OR PALEO 414	Paleontology Introduction to Invertebrate Paleontology Paleontology	GLGY 493	Evolution of Earth through Life and Time
20-GLGY-13 EAS 364	Petroleum & Natural Gas Petroleum Geology and Subsurface Methods	GLGY 577 OR GLGY 581	Introduction to Petroleum Geology Advanced Petroleum Geology
20-GLGY-14 No Course Equivalent	Economic Geology No Course Equivalent	No Course Equivalent	
20-GLGY-15 EAS 368	Metallic Mineral Deposits Ore Deposits Geology	GLGY 527	Ore Deposits

20-GLGY-16 Stratigraphy of Western North America

No Course Equivalent

No Course Equivalent

20-GLGY-17 Geotectonics & Global Geology

No Course Equivalent

GLGY 555 Global Tectonics

20-GLGY-18 Exploration Geophysics

GEOPH 223 Environmental Geophysics

GOPH 355 Exploration Geophysics

OR

GEOPH 224 Geophysics Exploration Techniques

20-GLGY-19 Optical and Advanced Mineralogy

EAS 232 Mineralogy II

GLGY 523 Advanced Mineralogy

20-GLGY-20 Advanced Sedimentology

EAS 465 Sedimentology

GLGY 463 Siliciclastic Sedimentology

OR

GLGY 483 Carbonate Sedimentology

20-GLGY-21 Advanced Igneous and/or Metamorphic Petrology

EAS 466 Petrogenesis

No Course Equivalent

20-GLGY-22 Advanced Geochemistry

EAS 468 Geochemical Processes

GLGY 602 Advanced Aqueous Geochemistry

20-GLGY-23 Principles of Geotechnics

CIV E 381 Soil Mechanics

GLGY 571 Engineering Geology

OR

MIN E 323 Rock Mechanics

20-GLGY-24 Advanced Paleontology

PALEO 513 Advanced Paleontology

GLGY 587 Invertebrate Paleobiology

OR

PALEO 418 Paleobiology of the Lower Vertebrates

OR

PALEO 419 Paleobiology of the Higher Vertebrates

20-GLGY-25 Advanced Structural Geology

EAS 421 Structural Geology & Tectonics

GLGY 541 Advanced Structural Geology

OR

GLGY 641 Advanced Structural Methods

20-GLGY-26 Geostatistics

No Course Equivalent

GLGY 597 Geostatistics

20-GLGY-27 Advanced Hydrogeology

EAS 425 Contaminant Hydrology

GLGY 505 Contaminant Hydrogeology

OR

GLGY 601 Advanced Physical Hydrogeology

OR

GLGY 605 Groundwater Flow/Transport

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20-GLGY-28 Reservoir Geology

No Course Equivalent

GLGY 698

Reservoir Characterization

20-GLGY-29 Advanced Ore Deposits

No Course Equivalent

No Course Equivalent

20-GLGY-30 Photogeology and Remote Sensing

EAS 451

Digital Remote Sensing

GEOG 484

Remote Sensing Essentials

OR

GEOG 584

Advanced Remote Sensing

20-GLGY-31 Precambrian Geology

EAS 432

Precambrian Geology

GLGY 535

Early Earth Evolution

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