



GEOPHYSICS COURSE EQUIVALENTS 2005 Edition

APEGGA Exam	Equivalent courses at the University of Alberta	Equivalent courses at the University of Calgary
05-GP-F1 Introductory Calculus	<p>ONE OF: MATH 100 Calculus I MATH 113 Elem Calculus I MATH 114 Elem Calculus I MATH 117 Honours Calculus I</p> <p>PLUS ONE OF: MATH 101 Elem Calculus II MATH 115 Elem Calculus II MATH 118 Honours Calculus II</p>	<p>ONE OF: MATH 251 Calculus I MATH 249 Introductory Calculus AMAT 217 Calc for Eng & Sci</p>
05-GP-F2 Linear Algebra	<p>ONE OF: MATH 102 Applied Lin. Algebra MATH 120 Basic Linear Algebra I MATH 125 Linear Algebra I MATH 127 Linear Algebra</p>	<p>MATH 221 Linear Alg for Sci & Eng</p> <p>OR</p> <p>MATH 211 Linear Methods I and MATH 013 Eigenvalues & Eigenvectors</p>
05-GP-F3 Introductory Physics I	<p>ONE OF: PHYS 102 Mechanics PHYS 124 Particles and Waves PHYS 144 Newt Mech & Relativity ENPH 130 Wave Motion, Optics</p>	<p>PHYS 211 Mechanics OR PHYS 221 Mechanics</p>
05-GP-F4 Introductory Physics II	<p>ONE OF: PHYS 100 Wave Motion & Elec PHYS 126 Fluids, Fields & Radtn PHYS 146 Fluids and Waves ENPH 131 Mechanics</p>	<p>PHYS 223 Intro Electromag & Therm</p>
05-GP-F5 General Chemistry I	<p>CHEM 101 Intro Univ Chemistry OR CHEM 103 Intro Univ Chemistry I</p>	<p>CHEM 201 General Chemistry I</p>
05-GP-F6 General Chemistry II	<p>CHEM 102 Intro University Chem II OR CHEM 105 Intro University Chem II</p>	<p>CHEM 203 General Chemistry II</p>
05-GP-F7 Computing Science	<p>ONE OF: COMPUT 114 Intro to Programming COMPUT 101 Intro to Computing ENGCOMP 100 Prog for Engineers PHYS 234 Intro Comp Physics</p>	<p>ONE OF: CPSC 215 Intro to Programming CPSC 231 Intro to Comp Science I CPSC 235 Inquiry-based intro to Computer Science</p>

05-GP-C1 Differential Equations	MATH 201 Differential Equations OR MATH 215 Intermediate Calculus II	ONE OF: MATH 253 Calculus II AMAT 311 Differential Equations I AMAT 307 Differential Eqns for Eng
05-GP-C2 Intermediate Calculus	ONE OF: MATH 209 Calculus III MATH 215 Intermediate Calculus II MATH 217 Honors Adv. Calculus I	MATH 331 Multivariate Calculus OR MATH 353 Calculus IV
00-GP-C3 Electricity and Magnetism	PHYS 281 Electromag & Optics	PHYS 323 Optics & Electromag
05-GP-C4 Vibrations, Waves and Optics	PHYS 244 Mechanics	PHYS 321 Harmonic Motion, Waves & Rotation OR PHYS 225 Classical Physics
05-GP-C5 Physical Geology	EAS 101 Physical Geology OR EAS 210 Engineering Earth Science	GLGY 201 Prin of Geol & Geoph
05-GP-C6 Physics of the Earth	GEOPH 110 Intro to Geophysics OR GEOPH 210 Physics of the Earth	GOPH 359 Global Geophysics
05-GP-C7 Probability and Statistics	STAT 141 Intro to Stats OR STAT 151 Intro to Applied Stats	ONE OF: STAT 357 Stats for Physical Sciences STAT 211 Statistics STAT 327 Environmental Stats
05-GP-C8 Integral Transform Methods	MATH 334 Advanced Calculus I OR MATH 201 Differential Equations	AMAT 415 Mathematical Methods
05-GP-C9 Complex Variable Calculus	MATH 311 Func of Complex Var	PMAT 421 Intro to Complex Analysis OR AMAT 415 Mathematical Methods
05-GP-C10 Database Management or Computer Graphics or Computational Physics	CMPUT 291 Intro to File & Database OR PHYS 420 Computational Physics	ONE OF: CPSC 471 Database Mgmt Systems CPSC 453 Intro Computer Graphics PHYS 535 Comp Methods in Physics
05-GP-C11 Thermodynamics	ONE OF: PHYS 211 Heat, Therm & Kinetic PHYS 224 Thermal Physics PHYS 311 Statistical Physics	PHYS 347 Thermodynamics
05-GP-C12 Continuum Mechanics	PHYS 467 Fund. Of Continuum Mech	ENGG 317 Mechanics of Solids
05-GP-C13 Optics & Lasers	PHYS 362 Optics and Lasers	PHYS 471 Optics

05-GP-C14 Electromagnetic Theory	PHYS 381 Electromagnetic Theory I	PHYS 455 Electromagnetic Theory II
05-GP-C15 Historical Geology	EAS 103 Earth & Life	GLGY 203 Princ of Geol & Geophys II
05-GP-C16 Crystallography and Mineralogy	EAS 224 Mineralogy I	GLGY 311 Minerals and Rocks OR GLGY 313 Crystal & Opt Mineralogy
05-GP-C17 Sedimentation and Stratigraphy	EAS 222 Pr of Sediment & Strat OR EAS 231 Principles of Sedimentatrn	GLGY 381 Strat & Sedimentation
05-GP-C18 Structural Geology	EAS 321 Structural Geology I	GLGY 341 Structural Geology
05-GP-C19 Introduction to Applied Geophysics	GEOPH 223 Envir Monitoring OR GEOPH 224 Geoph Exploration	GOPH 355 Exploration Geophysics
05-GP-M1 Quantitative Seismology	GEOPH 421 Seism & Phys Structure	GOPH 551 Seismic Theory OR GOPH 645 Seismic Wave Propagation
05-GP-M2 Digital Signal Processing	GEOPH 426 Signal Analysis	GOPH 557 Geoph Data Processing
05-GP-M3 Principles of Applied Seismic Methods	GEOPH 326 Ray Seismology	GOPH 355 Exploration Geophysics
05-GP-M4 Principles of Applied Electrical & Electromagnetic Methods	GEOPH 424 Elec & Potential Methods of Exploration	GOPH 453 Mining Geophysics
05-GP-M5 Principles of Applied Gravity and Magnetic Methods	GEOPH 325 Gravity, Magnetic and Electrical Prospecting Techniques	GOPH 547 Gravity and Magnetics
05-GP-M6 Advanced Global Geophysics, or Global Geology	GEOPH 524 Plate Tect & Glob Dyn OR GEOPH 440 Global Geodynamics	GOPH 681 Adv Global Geop & Geod OR GLGY 555 Global Geology
05-GP-M7 Petroleum Geology	EAS 430 Petroleum Geology OR EAS 431 Reg & Petr Hydrogeology	GLGY 577 Petroleum Geology
05-GP-M8 Metallic Mineral Deposits	EAS 433 Metalliferous Mineral Dep	GLGY 527 Ore Deposits

05-GP-M9 Hydrogeology	EAS 223 Intro to Hydrogeology	GLGY 401 Physical Hydrogeology
05-GP-M10 Physical Properties of Rocks/Engineering Geology	ONE OF: GEOPH 332 Prop of Geomaterials MIN E 323 Rock Mechanics GEOPH 620 Rock Physics	GOPH 457 Phys Properties of Rocks OR GLGY 571 Engineering Geology
05-GP-M11 Well Log Analysis	PET E 465 Well Log & Form Eval OR EAS 424 Subsurf Geol Methods	GOPH 449 (GLGY 449) Petrophysical Techniques OR ENPE 577 Petroleum Geology
05-GP-M12 Partial Differential Equations	MATH 337 Intro to Partial Diff Eqns OR MATH 300 Adv Bound Value Prob	AMAT 413 Intro to Partial Diff Eqns
05-GP-M13 Solid State Physics	PHYS 308 Stat. Mole., & Solid State Physics OR PHYS 415 Intro to Condensed Matter	PHYS 507 Solid State Physics
05-GP-M14 Geostatistics	MIN E 310 Ore Reserve Estimation OR MIN E 612 Geostatistical Methods for Modelling Earth Sciences Data	GLGY 597 Numerical Models & Geostatistics
05-GP-M15 Advanced Signal Processing	GEOPH 431 Geophysical Inverse Theory OR GEOPH 623 Inverse Problems in Geophysics	GOPH 657 Seismic Signal Analysis OR GOPH 667 Digital Signal Theory and Applications
05-GP-M16 Advanced Seismic Methods	GEOPH 624 Theor Seismology I	ONE OF: GOPH 647 Adv Applied Geophysics GOPH 659 Practical Seismic Modeling GOPH 665 Theoretical Seismology GOPH 687 Theory of Seismic Imaging
05-GP-M17 Advanced Seismic Interpretation	GEOPH 438 Aspects of Seismic Data Processing	GOPH 559 Geophysical Interpretation
05-GP-M18 Adv Electrical & Electromag. Methods and Interpretation	GEOPH 424 Electromagnetic and Potential Methods of Exploration	GOPH 653 Electromagnetic & Induced Polarization Topics
05-GP-M19 Advanced Gravity and Magnetic Methods	GEOPH 424 Electromagnetic and Potential Methods of Exploration OR GEOPH 437 Environmental and Exploration Geophysics	GOPH 547 Gravity & Magnetics
05-GP-M20 Reservoir Engineering	PET E 473 Fund Reservoir Eng OR PET E 295 Intro to Fund Pet Engg	ENPE 523 Reservoir Engineering

05-GP-M21 Geophysical Field Methods	Attendance at Field School is mandatory for students taking GEOPH 437 (Methods of Exploration Geophysics) and GEOPH 438 (Aspects of Seismic Data Processing)	GOPH 549 Field School
05-GP-M22 Isotope Geophysics	EAS 420 Geochemistry II	PHYS 561 Stable and Radioactive Isotope Studies, Fundamentals
05-GP-M23 Fluid Dynamics	PHYS 467 Continuum Mechanics	ENME 341 Fund of Fluid Mechanics
05-GP-M24 Computer Controlled Instrumentation	CH E 540 Process Dynamics & Control	CPSC 325 Hardware/Software Interface
05-GP-M25 Igneous Petrology	EAS 331 Igneous Petrology	GLGY 531 Advanced Igneous Petrology
05-GP-M26 Metamorphic Petrology	EAS 332 Metamorphic Petrology	GLGY 533 Metamorphism and Lithosphere Evolution
05-GP-M27 Advanced Sedimentology	EAS 422 Sedimentary Facies	GLGY 461 Sedimentary Petrology
05-GP-M28 Advanced Structural Geology	EAS 421 Structural Geology II	GLGY 541 Adv Structural Geology
05-GP-M29 Fluid Flow In Porous Media	PET E 473 Fund Reservoir Engg OR EAS 223 Intro to Hydrogeology	ENPE 513 Flow in Porous Media OR GLGY 677 Adv Topics in Oil and Gas Production
05-GP-M30 Geochemistry	EAS 320 Geochemistry I	GLGY 429 Geochemical Thermodyn.
05-GP-M31 Numerical Modelling Methods	CH E 474 Comp Methods In Engg	GOPH 645 Seismic Wave Propagation OR GOPH 665 Theoretical Seismology
05-GP-M32 Remote Sensing	EAS 451 Remote Sensing	GEOG 333 Remote Sensing I OR GEOG 433 Remote Sensing II

Revised March 2006