



ENGINEERS &  
GEOSCIENTISTS  
BRITISH COLUMBIA

**University of British  
Columbia  
Vancouver Campus**

**Geophysics  
Course Equivalency Listing**

(Updated February 2024)

Instructions:

Prior to beginning, please ensure that you have reviewed the [Guideline to Completing Geoscience Checklists & Course Descriptions](#).

- A course can only be listed one time on the entire checklist
- Courses you list need to correspond to the course codes that appear on your transcript
  - If you are claiming courses from more than one institution, please clearly indicate the institution name where the course was completed.
- Courses must be acceptable for credit in the Faculty of Science or Applied Science
- If you are unsure which subject a course may be claimed towards, please choose the most relevant subject and indicate your uncertainty. Reviewers will try to determine the suitable subject.
- Note that EGBC staff or volunteers may contact the applicant for additional information during the assessment if additional information or clarification is required.

This course listing is a reflection of Engineers & Geoscientists BC's adoption of the Geoscientists Canada Geoscience Knowledge Requirements. In consultation with the school, the courses in this document have been identified as equivalent to the subjects listed. Note that course codes can be subject to change at any time.

Name: \_\_\_\_\_

System ID#: \_\_\_\_\_

EGBC - GEOPHYSICS CHECKLIST – UBC (Van) COURSE EQUIVALENT LIST  
**This Geoscience Checklist Should be Used as a Guide and May Be Subject to Change**  
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	Number	Description	Course (Institution Name)	Additional notes/comments
<b>Group: 1A – Compulsory Foundation Science – 11-GEOCOM- Foundation Science (AI 3 Required)</b>				
	FS-A1	Calculus (1 semester)	MATH 100, 101, 102, 104,110, 120, 180, 184	
	FS-A2	Physics (1 semester)	PHYS 101, 106, 107, 117,131	
	FS-A3	Chemistry (1 semester)	CHEM 110, 111, 120, 121, 141	
<b>Group: 1B – Additional Foundation Science – 11-GEOCOM- Electives (6 Required – NO MORE THAN TWO COURSES IN ANY ONE SUBJECT)</b>				
	COM-B1	Mathematics	MATH 101, 103, 105, 121, and/or any 200 level or higher	
	COM-B2	Chemistry	CHEM 113, 130, 123 and/or any 200 level or higher	
	COM-B3	Physics	PHYS 102, 108, 118, 170 and/or any 200 level or higher	
	COM-B4	Biology	BIOL 112, 121 and/or any 200 level or higher	
	COM-B5	Computer Programming	EOSC 211, 213, CPSC 110, 189 and/or any 200 level CPSC or higher; CPSC 103 or APSC 160 (cannot complete both)	
	COM-B6	Statistics	STAT 200, 241, 251, BIOL 300, GEOG 374, DSCI 100	
<b>Group: 2A – Compulsory Geoscience – 11-GEOCOM- Compulsory (All 4 Subjects Required – NO MORE THAN ONE COURSE IN EACH SUBJECT)</b>				
	COM-A1	Mineralogy & Petrology	EOSC 220, 221, 321, 322	
	COM-A2	Sedimentation & Stratigraphy	EOSC 222, 320	
	COM-A3	Structural Geology	EOSC 323	
	COM-A4*	Field Techniques	EOSC 223, 428, GEOS 309	
	*Applicants can choose to report work experience in lieu of taking a field techniques course offered by a post-secondary institution. Instructions can be found here: <a href="https://geog.ubc.ca/news/geob-course-codes-changing-to-geos/">COM-A4-Field-Techniques-Instructions-for-Reporting-Experience-Updated-April-2023.pdf.aspx</a> (egbc.ca)			

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	Number	Description	Course (Institution Name)	Additional notes/comments
<b>Group: 2B – Foundation Geophysics – 11-GP – Compulsory (5 of 6 Required)</b>				
	FGP-A1	Digital Signal Processing	EOSC 354	
	FGP-A2	Global Geophysics	EOSC 453	
	FGP-A3	Seismology/Seismic Methods	EOSC 353	
	FGP-A4	Exploration Geophysics	EOSC 350, 454	
	FGP-A5	Radiometrics/Gravity & Magnetism	EOSC 450	
	FGP-A6	Electrical & Electromagnetic Methods	EOSC 350	

<b>Group: 2C – Other Geophysics – 11-GP – Electives (9 Required – must be chosen from at least <u>FOUR</u> separate groups)</b>				
Communication	GP-C1	Thesis	EOSC 449, ENVR 449	
	GP-C2	Technical Writing	ENGL 301, SCIE 300	
Earth & Planetary Geoscience	GP-C3	Geomagnetism/ Paleomagnetism	NO EQUIVALENT COURSE	
	GP-C4	Global Tectonics	EOSC 332	
	GP-C5	Global Geophysics	EOSC 453	
Fundamental Math/Physics	GP-C6	Complex Analysis	MATH 305, 440	
	GP-C7	Differential Equations	MATH 215, 255, 256, 316	
	GP-C8	Electricity & Magnetism	PHYS 301	

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	GP-C9	Mechanics	PHYS 170, 216, 306, 350	
	GP-C10	Thermodynamics	PHYS 203	
	GP-C11	Vibrations, Waves & Optics	PHYS 318, 408	
Field Techniques	GP-C12	Field Techniques	EOSC 223, 328, 428; GEOS 309, 409	
Regional Geology	GP-C13	Geology of Canada	NO EQUIVALENT COURSE	
	GP-C14	Geology of North America	EOSC 332	
Geology	GP-C15	Geochemistry	EOSC 333	
	GP-C16	Igneous Petrology	EOSC 321	
	GP-C17	Metamorphic Petrology	EOSC 322	
	GP-C18	Sedimentary Petrology	EOSC 320, 421	
	GP-C19	Structural Geology	EOSC 323, 422	
	GP-C20	Tectonics	EOSC 332	
Modern Physics	GP-C21	Modern Physics	PHYS 250, 330	
Geophysical Methods & Interpretation	GP-C22	Analytical Methods	EOSC 454, 521, ATSC 409	
	GP-C23	Marine Geophysics	NO EQUIVALENT COURSE	
	GP-C24	Electrical & Electromagnetic Methods	EOSC 350	
	GP-C25	Gravity & Magnetism	EOSC 450	
	GP-C26	Seismology	EOSC 353	
	GP-C27	Radiometrics	NO EQUIVALENT COURSE	
	GP-C28	Rock Properties/ Rock Physics	NO EQUIVALENT COURSE	
	GP-C29	Seismic Interpretation	EOSC 353	

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Near Surface Geoscience	GP-C30	Environmental Geophysics	EOSC 350	
	GP-C31	Geomorphology	EOSC 330, GEOS 206, 308, 405, 406	
	GP-C32	Geographic Information Systems	GEOB 270, 370	
	GP-C33	Glacial/Quaternary Geology	GEOB 308, 408	
	GP-C34	Remote Sensing	GEOS 373, ATSC 301	
Resource Geoscience	GP-C35	Fluid Flow in Porous Media	NO EQUIVALENT COURSE	
	GP-C36	Hydrogeology/ Hydrology	EOSC 325, 329, 428, GEOS 305, 403, FRST 385, CIVL 418, ENVR 420	
	GP-C37	Mineral Deposits Geology	EOSC 331, 424	
	GP-C38	Petroleum Geology	EOSC 432	
	GP-C39	Reservoir Engineering	NO EQUIVALENT COURSE	
	GP-C40	Well Log Analysis	EOSC 432	
Applied Math/Physics	GP-C41	Calculus	MATH 200, 217, 226, 227, 253, 254, 264, 317	
	GP-C42	Computer-Controlled Instrumentation		
	GP-C43	Condensed Matter Physics	PHYS 412	
	GP-C44	Continuum Mechanics	EOSC 352	
	GP-C45	Digital Signal Processing	EOSC 354	
	GP-C46	Electromagnetic Theory	PHYS 401, 454	
	GP-C47	Electronics for Scientists	ELEC 203, 204 & 205, 301, PHYS 309, 319	
	GP-C48	Fluid Dynamics	PHYS 314, MECH 280	
	GP-C49	Fluid Flow Porous Media	EOSC 429	
	GP-C50	Geostatistics	MINE 420	

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## Geophysics Self-Evaluation Checklist

	GP-C51	Integral Transforms	NO EQUIVALENT COURSE	
	GP-C52	Linear Algebra	MATH 221, 223, 307, 412	
	GP-C53	Mathematical Physics	PHYS 312	
	GP-C54	Numerical Methods/ Computing	ATSC 409, EOSC 410, MATH 210, 360, 405, 406; PHYS 210, 410	
	GP-C55	Optics	PHYS 408, 458	
	GP-C56	Partial Differential Equations	PHYS 312, MATH 257, 400	
	GP-C57	Signal Analysis	EOSC 354	
	GP-C58	Vector & Tensor Analysis	EOSC 250	

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