

CGSB/APEGS Knowledge Standard Course List in Geology
University of Saskatchewan

Effective July 1, 2005

(Jan. 4, 2005 list compilation date – approval pending)

Section I – Fundamental Science (9 EUs required)¹

Note: U. of Saskatchewan Geology program requires 2 EUs of each of Mathematics, Physics and Chemistry (total = 6 EUs). These requirements are included in Section IA, although any of the courses in IB are also appropriate. The additional 3 EUs can include courses in IA and the long list in IB.

A. Specified Science (6 EUs required)

Mathematics (minimum 1 EU) MATH 110.3, MATH 112.3 or 116.3 OR MATH 102.6
Physics (minimum 1 EU) PHYS 111.6 or 121.6
Chemistry (minimum 1 EU) CHEM 112.3, CHEM 115.3 OR CHEM 111.6

And

3 more EUs from mathematics, physics, chemistry, or biology, with a maximum credit of 2 EUs in biology.

B. Additional Science (3 EUs required from the list below)

Mathematics MATH 211.3, 213.3, 225.3, 226.3, 238.3, 266.3
Chemistry CHEM 221.3, 231.3, 242.3, 243.3, 250.3, BIOCH 200.3
Physics PHYS 128.3, 322.3
Biology BIOL 110.6, 203.6, 204.3, 205.3, 253.3
Statistics STATS 245.3
Computer Science CMPT 111.3, 112.3, 116.3

Section II – Geology (20 EUs required)

A. Field practice or field techniques (1 EU required)² Geological Mapping I GEOL 308.3

B. Fundamental Subjects (5 EUs from the list below, with maximum 1 EU in any subject)

Mineralogy GEOL 224.3
Stratigraphy or Sedimentology GEOL 243.3 or 245.3
Structural geology GEOL 258.3
Petrology GEOL 225.3 or 226.3
Geochemistry GEOL 229.3
Geophysics GEOL 282.3 or 384.3

C. Additional Subjects (14 EUs required)

1. Other geoscience – at least 12 EUs in geoscience (from the list below and the unused subject from Section IIB)

¹ An EU is the equivalent of one 3-credit hour course in a 120 credit-hour, 4-year degree program.

² Knowledge must be from field-based instruction, not lectures.

GEOL 246 or 247 Paleontology/Stratigraphy
GEOL 311 or GEOG 235 Geomorphology
GEOL 312 or GEOG 335 Glacial geology
GEOL 324 Igneous Petrology
GEOL 325 Metamorphic Geology
GEOL 329 Biogeochemistry
GEOL 330 Climate History
GEOL 332 Paleontology
GEOL 343 Facies Models/Sedimentary Environments
GEOL 358 Advanced Structural Geology
GEOL 405 International Field Studies
GEOL 406 Global considerations in Geology
GEOL 408 Geological Mapping II
GEOL 411 Well-logging
GEOL 413 Aqueous Geochemistry
GEOL 429 Isotope Geochemistry
GEOL 433 Vertebrate Paleontology
GEOL 435 Microfossils
GEOL 437 Paleoecology
GEOL 439 Paleobotany
GEOL 444 Tectonics
GEOL 445 Phanerozoic History
GEOL 446 Advanced Sedimentology
GEOL 463 Petroleum Geology
GEOL 465 Mineral Deposits
GEOL 490 or 492 Geological Sciences Research
GEOG 225 Hydrology
GEOG 222 Technical Geography
GEOG 320 Cartography
GEOG 321 Air Photo Analysis
GEOG 322 GIS
GEOG 323 Remote Sensing
GEOG 325 Fluvial Systems
GEOG 435 Problems in Geomorphology
EVSC 220 Environmental Soil Science
EVSC 420 Environmental Fate of Toxic Substances
SL SC/EVSC 313 Environmental Soil Chemistry
SL SC/EVSC 322 Environmental Soil Physics
SL SC/EVSC 332 Soil Genesis and Classification
SL SC/EVSC 403 Environmental Soil Analysis

2. Other science – no more than 2 EUs in other science subjects, which can include atmospheric and oceanographic science.

From the list of Additional Science courses in Section IB, and
GEOL 206 Earth Systems
TOX 301 Environmental Toxicology
TOX 310 Radionuclide Toxicology