



APEGM SYLLABUS FOR GEOPHYSICS

(ADOPTED BY ACADEMIC REVIEW COMMITTEE MARCH 5, 2001)

The following outlines the minimum knowledge of Geophysics required for the practice of professional geoscience in Manitoba.

Definition: The fundamental unit of each outline is the educational unit (EU). One educational unit in a knowledge subject is defined as formal instruction equivalent to a one-term (one-semester) course in an honours B.Sc. degree program at a Canadian university. A minimum of a first-year university level course is required.

SECTION I: FUNDAMENTAL SCIENCE (9 EUs required)

A. Specified Science (6 EUs required):

Mathematics	Minimum 1 EU
Physics	Minimum 1 EU
Chemistry	Minimum 1 EU

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):

Mathematics
Chemistry
Physics
Biology
Statistics
Computer Science

C. Technical Communications

Submission of a substantive report or thesis that demonstrates technical communication involving data collection and description, interpretation and synthesis. A literature-based paper is not acceptable.

SECTION II: GEOPHYSICS (20 EUs required in addition to fundamental science in Section I):

A. Field practice or field techniques. 1 EU required

B. Fundamental Geology (4 EUs required)

- Mineralogy
- Stratigraphy or Sedimentology
- Structural geology
- Petrology
- Geochemistry
- Geophysics
- Hydrology or Hydrogeology

C. Geophysics Subjects (6 EUs required)

1 EU from Data Processing or Inversion and
5 EUs which demonstrate that the applicant understands the basic principles of the major geophysics subject areas of Gravity, Magnetics, Electrical, Electromagnetic, Radiometrics, and Seismology and their application in one or a combination of the petroleum, mineral, or environmental fields. These EUs can be either subject specific or in areas of application.

D. Additional Subjects (9 EUs required)

Nine additional EUs required, with at least seven EUs in Geoscience*, Physics, Mathematics, or Computer Science, and not more than two EUs in other science.

*Definition of Geoscience: APEGM has the responsibility to regulate the practice of professional geoscience in Manitoba. It does not regulate the “practice” of Earth science or Earth systems science, which may include activity in fields such as atmospheric science, meteorology, and oceanography that presently fall outside the scope of regulated professional geoscience in Manitoba. However, for the purpose of credit in section C, EUs in these or other sciences can be credited as science other than geoscience.