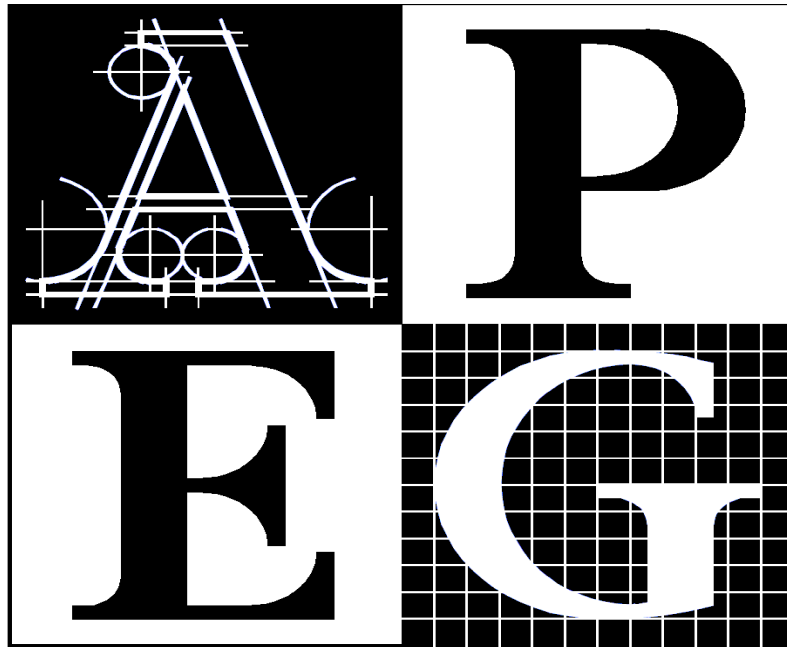

COMMON TO ALL UNIFORM SYLLABUS



**Professional Engineers
and Geoscientists of BC**

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**The Association of Professional Engineers and
Geoscientists of the Province of British Columbia**

- Note:**
- 1. This Syllabus May Be Subject To Change**
 - 2. These Courses Are Required In Addition To The Courses Required In The Common-To-All Uniform Syllabus**

The current geoscience syllabi will be replaced by new syllabi on January 1, 2007. Individuals applying for registration before this date will have their choice of the current or new syllabi. Individuals applying for registration after this date will have their applications evaluated with respect to the new syllabi.

COMMON TO ALL GEOSCIENTISTS NEW SYLLABUS – FUNDAMENTAL SCIENCE (3 of 4 Required)

06-FS -A1 Calculus. (Two Semesters).

Limits, continuity, differentiation and methods of definite and indefinite integration of elementary functions; applications of differentiation and integration to geometric and physical problems; numerical integration including Simpson's rule; infinite series including Taylor's series; partial differentiation of a function of two variables; multiple integrals and their application to simple problems; parametric equations with their application to arc length and curvature.

06-FS -A2 Physics. (Two Semesters)

Introductory university physics; Units; Accuracy. Classical kinematics, classical dynamics; Newton's Laws of Motion. Gravitation. Work and Energy. Relativistic kinematics and dynamics, rotational and oscillatory motion. Sound; elementary theory of heat and thermodynamics. Electrostatics; electric currents and magnetic force; magnetic fields; electromagnetic induction; electromagnetic radiation, wave propagation; interaction of radiation with matter; diffraction and interference. Optics. Elementary physics of the solid state. Nuclear physics.

06-FS -A3 Chemistry (Two Semesters)

Fundamental principles of chemistry with particular reference to the nature of solutions, the solid state and the molecular structure of both organic and inorganic substances.

06-FS-A4 Biology (Two Semesters)

COMPULSORY COURSES

06-COM –A1 Introduction to Mineralogy/Petrology

Introduction to Crystallography and crystal chemistry; the physical and chemical properties of minerals in hand specimens; identification of minerals. Field and laboratory classification of igneous and metamorphic rocks; the nature of magmas and processes of magmatic differentiation; metamorphic facies concepts; interpretation of textures and mineral assemblages of igneous and metamorphic rocks

06-COM –A2 Introduction to Sedimentation and Stratigraphy.

Classification of sedimentary rocks; processes of weathering, erosion, sedimentation and diagenesis; the formation of carbonate, clastic and chemical precipitate rocks; principles of stratigraphic and palaeontologic correlation; definition, geological and practical significance of sedimentary facies. Distribution of major Phanerozoic and Precambrian systems. Facies association; modern and ancient sedimentary environments.

06-COM –A3 Introduction to Structure and Tectonics.

Stress and Strain; Clastic, brittle and ductile properties of rock and deformation behaviour; fabric analysis of deformed rocks; structural features of stable and mobile elements of the crust, fold and fault development, mountain building and orogeny.

COMMON TO ALL GEOSCIENTISTS NEW SYLLABUS – Group B (3 of 8 Required)

ELECTIVE COURSES

06-COM-B1. Intermediate Mathematics.

Any 200 level or higher Math course acceptable for credit in the Faculty of Science or Applied Science.

06-COM-B2. Intermediate Chemistry.

Any 200 level or higher chemistry course acceptable for credit in the Faculty of Science or Applied Science.

06-COM-B3. Intermediate Physics.

Any 200 level or higher physics course acceptable for credit in the Faculty of Science or Applied Science.

06-COM-B4. Introductory Biology.

Any 100 level or higher biology course acceptable for credit in the Faculty of Science or Applied Science.

06-COM-B5. Introduction to Computing.

Any 100 level or higher computing course acceptable for credit in the Faculty of Science or Applied Science

06-COM-B6. Economics.

Any 100 level or higher economics course acceptable for credit in the Faculty of Science or Applied Science.

06-COM-B7. Probability and Statistics.

Concepts of probability, events and populations, probability theorems, concept of a random variable, continuous and discrete random variables, Probability distributions, moments and their estimation, joint distributions, probability plotting and testing of distributional assumptions, distributions of a function of a random variable; sampling and statistical estimation theory, hypothesis testing; simple regression analysis; introduction to the design of experiments

06-COM-B8. Technical Writing

Principles of effective written communication in technical, professional and business contexts; preparation of abstracts, technical proposals and reports, correspondence, minutes and other technical records with emphasis on clarity, precision and consistency.