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LETHBRIDGE COLLEGIATE INSTITUTE

Chemistry 30 Course Outline

Chemistry 30 consists of four units of study:

A: Thermochemical Changes
B: Electrochemical Changes
C: Chemical Changes in Organic Compounds
D: Chemical Equilibrium Focussing on Acid-Base Systems

The Alberta high School Science Program deals with the following four foundations:

Attitudes:
Students will be encouraged to develop attitudes that support the responsible acquisition and application of scientific and technological knowledge to the mutual benefit of self, society, and the environment.

Knowledge:
Students will construct knowledge and understandings of concepts in life science, physical science, and Earth and space science, and apply these understandings to interpret, integrate, and extend their knowledge.

Science, Technology, and Society (STS):
Students will develop an understanding of the nature of science and technology, the relationships between science and technology, and the social and environmental contexts of science and technology.

Skills:
Students will develop the skills required for scientific and technological inquiry, for solving problems, for communicating scientific ideas and results, for working collaboratively and for making informed decisions.

These 4 foundations are developed throughout the course.

UNIT A: Thermochemical Changes

In this unit, students study energy as it relates to chemical changes and quantify the energy involved in thermochemical systems, and consider the various aspects of energy use in society.

UNIT B: Electrochemical Changes

In this unit, students study electrochemical change and analyze the matter and energy changes within a system.

UNIT C: Chemical Changes of Organic Compounds

In this introduction to organic chemistry, students learn about common organic compounds and describe their properties and reactions. The significance of organic chemistry, in the context of technological applications and quality of life, is explored.

UNIT D: Chemical Equilibrium Focussing on Acid-Base Systems

In this unit, the concept that chemical change eventually attains equilibrium is developed, followed by a focus on the quantitative treatment of reaction systems involving acid-base solutions.

Course Assessment and Evaluation

Evaluation will consist of a balance between **Formative** and **Summative** assessment.
Formative assessment is assessment "*for*" learning. Tools used for this type of assessment generally address one or two learning objectives and include various types of activities, including (but not limited to) assignments, worksheets, homework, group work, games, or other classroom activities. This allows teachers to track student progress as well as to see and address areas of strength and weakness of particular students and the class as a whole. It allows students to gain practice in a particular area in order to really learn the material before the summative assessment without fear or worry of the assignment affecting their overall course grade.
Summative assessment is considered assessment "*of*" learning. Tools used for this type of evaluation address several learning objectives simultaneously and will include the final exam, unit exams, labs and projects.

Students cannot be successful on summative evaluation if they have not completed the formative assessment!
To make an analogy: *You cannot swim across the English Channel without training and practice!*

Course Breakdown

Unit A: Thermochemistry	3 weeks	20%
Unit B: Electrochemistry	5 weeks	30%
Unit C: Organic Chemistry	3 weeks	20%
Unit D: Equilibrium, Acids & Bases	5 weeks	30%

Unit Breakdown

Individual Performance Tasks	40%
Unit Exams	60%

The final grade awarded to students taking Chemistry 30 will be based on:

50% school-based mark
50% Diploma Exam

Resource

Jenkins, van Kessel, Tompkins & Lantz, Nelson Chemistry, Thompson/Nelson Publishing