

EASTERN SCHOOL DISTRICTCourse Description

(June 2, 2006)

Course: Chemistry 2202**Subject Area:** Science**Text:** McGraw-Hill Chemistry**Description:**

This course is an introductory chemistry course unique to Newfoundland and Labrador based on the Pan-Canadian Common Framework of Science Learning Outcomes K-12 and the Atlantic Canada Foundation Science Curriculum Document. It contains specific outcomes covering 3 major introductory chemistry topics; Stoichiometry, Chemical Bonding, and Organic Chemistry.

Prerequisite:

A student will require thorough knowledge of the chemistry concepts taught in the "Chemical Reactions" unit of Science 1206 before beginning Chemistry 2202.

Sequencing:

The course is to be taught in the following sequence:

- Unit 1: Stoichiometry**
- Unit 2: Chemical Bonding in Matter**
- Unit 3: Organic Chemistry**

Each unit includes one compulsory STSE component. These are included as appendices at the back of the Chemistry 2202 Curriculum Guide. The information included is to be taught and evaluated as per the outcomes described in the curriculum guide.

Evaluation Guidelines:

Summative evaluation of students in Chemistry 2202 shall utilize a variety of evaluation instruments. Primarily, these are designed to test students' basic knowledge of content, their understanding and ability to apply content, and ability to synthesize and problem solve (higher thinking skills) with respect to the content.

Summative evaluation of students in science courses must involve a variety of evaluation instruments. **Midyear examinations, final examinations, and unit tests/quizzes**, completed by students are traditional instruments which must be a part of any summative student evaluation scheme. As well, **Performance Assessment** instruments shall be used for a portion of the summative evaluation.

Unit Tests/Quizzes:

All unit tests are based on the learning outcomes of the course and the objectives. The tests include a variety of testing techniques such as multiple choice and essay items. There is at least one test after each unit and sometimes the unit can be broken into several sections for the purpose of testing if the teacher deems it necessary. Each test is designed for completion in a single class period.

Performance Assessment:

Performance assessment instruments shall be used for a portion of the summative evaluation. *Examples of performance assessment instruments are assignments, written homework, science fair, class observations, science projects, laboratory reports, in-class presentation, in-class cooperative education, practical laboratory tests, observation checklist, computer assisted evaluation and teacher-student interviews, research reports, field trip reports, portfolios, etc.*

Teachers can determine the performance assessment instruments used in Chemistry 2202. However, a variety of instruments shall be used to accurately assess students' understanding of learning outcomes, with a focus on core labs and STSE topics.

Cumulative Midyear Examination:

The mid-year examination tests all course objectives to that point. It will include multiple choice, essay items and short answer questions on elective units. The test is designed to be completed in a 2 hour time period.

Final Examination:

The final examination is based on the course objectives for the entire year. It uses the same testing techniques used in the mid-year examination. The test is designed to be completed in a 2 hour time period.

Weighting of Evaluation Component:

Tests/Quizzes	25%
Performance Assessment	20%
Comprehensive Midyear Exam	20%
Final Examination	35%

Notes:

- 1) To parallel the evaluation for Chemistry 3202, performance assessments in Chemistry 2202 should primarily focus on STSE and core lab outcomes.
- 2) Student grades for the November reporting period comprised of results obtained from tests/quizzes (80%) and Performance Assessment (20%).

Table of Specifications:

A Table of Specifications is used for two main reasons. First, it guides the construction of examinations by outlining a percent value for each cognitive level and unit of study. Secondly, the total percentage for each unit directly corresponds to the suggested time for teaching that unit.

Unit	Cognitive Level %			
	Level 1	Level 2	Level 3	Total %
Stoichiometry	9	27	9	45
Structures to Properties	6	18	6	30
Organic Chemistry	5	15	5	25
Total %	20	60	20	100

The evaluation instrument will contain 15-20% of core lab and STSE (Science, Technology, Society, and the environment) content.

Final Examination Blue Print: *(Follows format of public exam)*

A) Selected Response:

Unit	Number of Selected Response Questions			
	Level 1	Level 2	Level 3	Total #
Stoichiometry	9	10	4	23
Structures to Properties	6	7	2	15
Organic Chemistry	5	5	2	12
Total %	20	22	8	50

B) Constructed Response Blue Print:

Unit	Number of Marks			
	Level 1	Level 2	Level 3	Total #
Stoichiometry	0	17	5	22
Structures to Properties	0	11	4	15
Organic Chemistry	0	10	3	13

Total %	0	38	12	50
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