



Dalian Maple Leaf International School
2018-2019 Academic Year
(Chemistry 12)



Course Overview:

Chemistry is the science that deals with the properties and reactions of materials. It is concerned with the identification, characterization, and transformations of matter, and with the energy changes accompanying these transformations. As such, it makes an important contribution to our ability to

- comprehend the natural environment
- understand various other pure and applied sciences, as well as the nature of scientific inquiry

Through participation in co-operative labs, independent research, and other classroom experiences, students acquire knowledge, skills, and attitudes that enable them to pursue further study and experience success in the workplace as informed decision makers and full participants

Units/Topics to be covered:

- Reaction Kinetics
- Dynamic Equilibrium
- Solubility Equilibria
- Nature of Acids and Bases
- Acids and Bases: Quantitative Problem Solving
- Applications of Acid-Base Reactions
- Oxidation-Reduction
- Applications of Redox Reactions

Types of Assessments:

1. Labs
2. Quizzes
3. Tests
4. Projects

Classroom Expectations

Bring 2 ring binder, scientific calculator, pencil, eraser, ruler
Be respectful of everyone in the classroom
Enjoy

Mark Break down

Tests 30% (6 per unit 5 units)

Quizzes 5% (2 per unit lowest mark is dropped)

Unit 3 Lab 5%

Other Labs 20%

Science Fair Project 10%

Final Exam 30%

Policies

1. **Zero-Policy:** NO permanent zeros; students have an opportunity to make up work during the week before the exam (Midterm and Final)
2. **Reassessment Policy:** retest can be done for each unit but must be earned (attending tutorial doing practice questions)
3. **Other:** ALL tests are common for both campuses

Why we should study Chemistry?

- 1 Chemistry helps you to understand the world around you.
- 2 A basic understanding of chemistry helps you to read and understand product labels.
- 3 Chemistry can help you make informed decisions. If you understand how chemistry works you'll be able to separate reasonable expectations from pure fiction.
- 4 Chemistry is at the heart of cooking. If you understand the chemical reactions involved in making baked goods rise or neutralizing acidity or thickening sauces, chances are you'll be a better cook.
- 5 A command of chemistry can help keep you safe! You'll know which household chemicals are dangerous to keep together or mix and which can be used safely.
- 6 Chemistry teaches useful skills. Because it is a science, learning chemistry means learning how to be objective and how to reason and solve problems.
- 7 Helps you to understand current events, including news about petroleum, product recalls, pollution, the environment and technological advances.
- 8 Makes life's little mysteries a little less... mysterious. Chemistry explains how things work.
- 9 Chemistry opens up career options. There are many careers in chemistry, but even if you're looking for a job in another field, the analytical skills you gained in chemistry are helpful. Chemistry applies to the food industry, retail sales, transportation, art, homemaking... really any type of work you can name.
- 10 Chemistry is fun! There are lots of interesting chemistry projects you can do using common everyday materials. Chemistry projects don't just go boom.

Do you want to challenge and expand your knowledge of science? Chemistry 12 is for you.

We have fun and interesting experiments.

Textbooks: HEBDEN CHEMISTRY 12

Unit 1 Reaction Kinetics

Unit 2 Equilibrium

Unit 3 Solubility Equilibrium

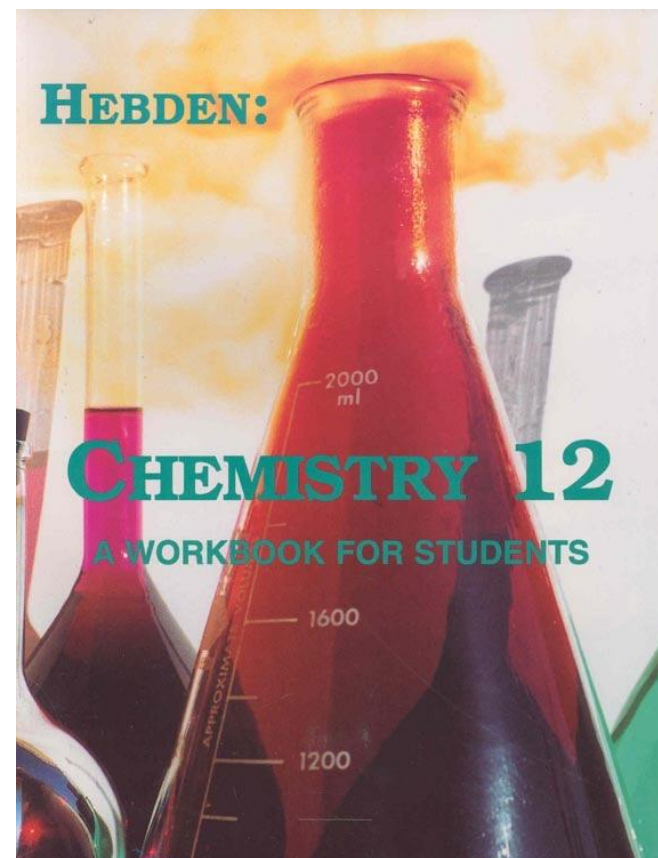
Unit 4 Acids, Bases and Salts

Unit 5 Electrochemistry.



Chemistry 12

The most **fantastic class in Maple Leaf**
The most **useful class in Maple Leaf**
The most **interesting class in Maple leaf**



Graduation Requirement?:

No Yes

不属于必修课

Careers Pathway

- Agricultural Chemistry
- Analytical Chemistry
- Biochemistry
- Biotechnology
- Catalysis
- Chemical Education
- Chemical Engineering
- Chemical Information Specialists
- Chemical Sales
- Chemical Technology
- Colloid and Surface Chemistry
- Consulting
- Consumer Product Chemistry
- Environmental Chemistry
- Food and Flavor Chemistry
- Forensic Chemistry
- Geochemistry
- Hazardous Waste Management
- Inorganic Chemistry
- Materials Science
- Medicinal Chemistry
- Organic Chemistry
- Oil and Petroleum
- Physical Chemistry
- Polymer Chemistry
- Pulp and Paper Chemistry
- R&D Management
- Science Writing
- Textile Chemistry
- Water Chemistry

Required

Prerequisites:
Chemistry 11 70%

选课要求:

完成高二化学

Suggested

Prerequisites:
To have successfully completed Physics 11 and Pre-Calculus 11

选课建议:

顺利完成高二物理和高二数学

Chemistry 12

Areas of study include: reaction kinetics, dynamic equilibrium, solubility equilibrium, acid and base chemistry and electrochemistry. Chemistry 12 involves a combination of modern chemistry theories and concepts with the use of mathematical calculations throughout.

化学 12

研究领域: 反应动力学、动态平衡、溶解平衡、酸和基础化学以及电化学。化学 12 包括了现代化学理论和概念与贯穿始终的数学计算应用的结合。

