


# Grade 12 Chemistry

## 1. Course Details

<p><b>Lawrence Park C.I.</b></p>  <p><b>TDSB</b></p>	<p><b>Teacher(s):</b> C. Papaiconomou, S. Harris</p> <p><b>Faculty:</b> Science</p> <p><b>Faculty Office Phone:</b> 416-393-9500 ext. 20060</p> <p><b>Name of ACL:</b> Ms. Christina Papaiconomou</p> <p><b>ACL Contact:</b> 416-393-9500 ext. 20060</p> <p><b>Textbooks:</b> Chemistry 12 (Nelson) (replacement cost \$120)</p>	<p><b>Date revised:</b> September 2015</p> <p><b>Course Name:</b> Grade 12 Chemistry University</p> <p><b>Course Code:</b> SCH4U1</p> <p><b>Prerequisite Course Code:</b> SCH3U1</p> <p><b>Credit Value:</b> 1</p> <p><b>Essential Resource Materials:</b> textbook</p>
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## 2. Overall Expectations

- This course enables students to deepen their understanding of chemistry through the study of organic chemistry, the structure and properties of matter, energy changes and rates of reaction, equilibrium in chemical systems, and electrochemistry.
- Students will further develop their problem-solving and investigation skills as they investigate chemical processes, and will refine their ability to communicate scientific information.
- Emphasis will be placed on the importance of chemistry in everyday life and on evaluating the impact of chemical technology on the environment.

### 3. Learning Skills and Work Habits

Evaluated on Report Card as:  
E (excellent); G (good); S (satisfactory); N (needs improvement)

The Learning Skills demonstrated by a student in every course are evaluated in the following six categories: Responsibility, Organization, Independent Work, Collaboration, Initiative, and Self-Regulation. The Learning Skills are evaluated using a four-point scale. The goal for each student is to improve Learning Skills which will translate into improved student's overall success.

In addition, completion of the assigned homework/assignments on time will contribute to student's success. We also know that regular attendance in all classes is essential for success; please avoid scheduling appointments during school time.

Students are expected to demonstrate academic honesty on all assignments, presentations, tests, and examinations. Students who cheat or plagiarize will receive a mark of zero for the assignment, presentation, test, or examination.

<b>Responsibility</b>	<p>The Student:</p> <ul style="list-style-type: none"> <li>- fulfils responsibilities and commitments within the learning environment;</li> <li>- completes and submits class work, homework, and assignments according to agreed-upon timelines;</li> <li>- takes responsibility for and manages own behaviour.</li> </ul>
<b>Organization</b>	<p>The Student:</p> <ul style="list-style-type: none"> <li>- devises and follows a plan and process for completing work and tasks;</li> <li>- establishes priorities and manages time to complete tasks and achieve goals;</li> <li>- identifies, gathers, evaluates, and uses information, technology, and resources to complete tasks</li> </ul>
<b>Independent Work</b>	<p>The Student:</p> <ul style="list-style-type: none"> <li>- independently monitors, assesses, and revises plans to complete tasks and meet goals;</li> <li>- uses class time appropriately to complete tasks;</li> <li>- follows instructions with minimal supervision</li> </ul>
<b>Collaboration</b>	<p>The Student:</p> <ul style="list-style-type: none"> <li>- accepts various roles and an equitable share of work in a group;</li> <li>- responds positively to the ideas, opinions, values, and traditions of others;</li> <li>- builds healthy peer-to-peer relationships through personal and media-assisted interactions;</li> <li>- works with others to resolve conflicts and build consensus to achieve group goals;</li> <li>- shares information, resources, expertise and promotes critical thinking to solve problems and make decisions</li> </ul>
<b>Initiative</b>	<p>The student:</p> <ul style="list-style-type: none"> <li>- looks for and acts on new ideas and opportunities for learning;</li> <li>- demonstrates the capacity for innovation and a willingness to take risks;</li> <li>- demonstrates curiosity and interest in learning;</li> <li>- approaches new tasks with a positive attitude;</li> <li>- recognizes and advocates appropriately for the rights of self and others</li> </ul>
<b>Self-Regulation</b>	<p>The student:</p> <ul style="list-style-type: none"> <li>- sets own individual goals and monitors progress towards achieving them;</li> <li>- seeks clarification or assistance when needed;</li> <li>- assesses and reflects critically on own strengths, needs, and interests;</li> <li>- identifies learning opportunities, choices, and strategies to meet personal goals.</li> </ul>

#### 4. Teaching/Assessment and Evaluation Strategies – Course Work (70%)

Students will demonstrate achievement of all the overall expectations of the course. Missed and/or incomplete assignments will have an impact on the final grade where there are a significant number of curriculum expectations that have not been evaluated because of missed assignments. Timelines and units may be adjusted to accommodate student needs. Teachers may deduct marks for late assignments, to a total of 10% of the value of the assignment. Late assignments will not be accepted after the assignment has been taken up in class or the marked assignment has been returned to the class, at which point a mark of zero may be applied.

Unit #	Major Culminating Tasks	Achievement Chart Focus	Tentative Timelines
1	<p><b><u>Unit 1: Electrochemistry</u></b></p> <ul style="list-style-type: none"> <li>▪ Formal Lab Report</li> <li>▪ Major Test</li> </ul>	<ul style="list-style-type: none"> <li>▪ K/U; T/I; C; A</li> <li>▪ K/U; T/I; C; A</li> </ul>	<ul style="list-style-type: none"> <li>▪ Sept. 2015</li> <li>▪ Oct. 2015</li> </ul>
2	<p><b><u>Unit 2: Structure and Properties of Matter</u></b></p> <ul style="list-style-type: none"> <li>▪ 2 Dry Labs</li> <li>▪ Major Tests</li> </ul>	<ul style="list-style-type: none"> <li>▪ K/U; T/I; C; A</li> <li>▪ K/U; T/I; C</li> </ul>	<ul style="list-style-type: none"> <li>▪ Oct, Nov 2015</li> <li>▪ Nov.&amp; Dec. 2015</li> </ul>
3	<p><b><u>Unit 3: Energy Changes and Rates of Reactions</u></b></p> <ul style="list-style-type: none"> <li>▪ Dry Lab</li> <li>▪ Formal Lab Report</li> <li>▪ Lab Test</li> <li>▪ Major Tests</li> </ul>	<ul style="list-style-type: none"> <li>▪ T/I</li> <li>▪ T/I; C</li> <li>▪ T/I; C</li> <li>▪ K/U; T/I; C; A</li> </ul>	<ul style="list-style-type: none"> <li>▪ Jan. 2016</li> <li>▪ Feb. 2016</li> <li>▪ Mar. 2016</li> <li>▪ Feb. &amp; Mar. 2016</li> </ul>
4	<p><b><u>Unit 4: Chemical Systems and Equilibrium</u></b></p> <ul style="list-style-type: none"> <li>▪ Lab</li> <li>▪ Research Report</li> <li>▪ Major Tests</li> </ul>	<ul style="list-style-type: none"> <li>▪ T/I; C</li> <li>▪ C; A</li> <li>▪ K/U;T/I;C;A</li> </ul>	<ul style="list-style-type: none"> <li>▪ Apr. 2016</li> <li>▪ Apr. 2016</li> <li>▪ Apr. &amp; May 2016</li> </ul>
5	<p><b><u>Unit 5: Organic Chemistry</u></b></p> <ul style="list-style-type: none"> <li>▪ Dry Lab</li> <li>▪ Major Test</li> <li>▪ Major Assignment</li> <li>▪</li> </ul>	<ul style="list-style-type: none"> <li>▪ K/U;T/I;C;A</li> </ul>	<ul style="list-style-type: none"> <li>▪ June 2016</li> </ul>

#### Teaching/Assessment and Evaluation Strategies – Final Evaluation (30%)

All students must take part in the culminating activities for each course at every grade level of study

Summative Tasks	Achievement Chart Focus	Weighting
<ul style="list-style-type: none"> <li>▪ <b>Final Evaluation</b> <ul style="list-style-type: none"> <li>○ A comprehensive final exam written during the June exam period.</li> <li>○ This is based on all course material from September to June, including lab work.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ K/U; T/I; C; A</li> </ul>	30 %

## Teaching/Assessment and Evaluation Strategies – Types of Assessment

Assessment <i>for</i> Learning	Assessment <i>as</i> Learning	Assessment <i>of</i> Learning
(Seeking and interpreting evidence for use by learners and teachers to decide where the learners are in their learning, where they need to go, and how best to get there)	(Fostering of students' capacity to be their own best assessors, supported by structured opportunities by teachers for students to assess themselves)	(Assessment that is quantified, illustrating how well the students are learning)
Assessment strategies <b><i>MAY</i></b> include some of the following:		
<p><b><u>Student Product</u></b></p> <ul style="list-style-type: none"> <li>• Non-graded quizzes</li> <li>• Pre-tests</li> <li>• Concept maps, diagrams, cartoons</li> <li>• Exemplars</li> </ul>	<p><b><u>Student Product</u></b></p> <ul style="list-style-type: none"> <li>• K.W.L. charts</li> <li>• Exit tickets</li> <li>• P.O.E. charts</li> </ul>	<p><b><u>Student Product</u></b></p> <ul style="list-style-type: none"> <li>• Tests</li> <li>• Lab report writing</li> <li>• Lab tests</li> <li>• Presentations</li> <li>• Research projects</li> </ul>
<p><b><u>Observation</u></b></p> <ul style="list-style-type: none"> <li>• Student warm-up</li> <li>• Class questioning</li> <li>• Assessment of collaborative work</li> <li>• Traffic lighting</li> </ul>	<p><b><u>Observation</u></b></p> <ul style="list-style-type: none"> <li>• Peer/self-assessment of presentations, student work, graphs, problem-solving, quizzes etc.</li> <li>• Teacher observation of lab skills</li> <li>• Teacher observation of student collaboration</li> </ul>	<p><b><u>Observation</u></b></p> <ul style="list-style-type: none"> <li>• Tests</li> <li>• Lab report writing</li> <li>• Lab tests</li> <li>• Presentations</li> <li>• Research projects</li> </ul>
<p><b><u>Conversation</u></b></p> <ul style="list-style-type: none"> <li>• Open-ended questioning</li> <li>• Whole class discussion</li> <li>• Interviews/ conferencing</li> <li>• Descriptive feedback</li> <li>• Goal setting</li> </ul>	<p><b><u>Conversation</u></b></p> <ul style="list-style-type: none"> <li>• Didactic questioning</li> <li>• Teacher and peer feedback</li> <li>• Teacher support of lab skills development</li> <li>• Student-teacher conferences</li> <li>• Co-construction of evaluation rubrics</li> </ul>	<p><b><u>Conversation</u></b></p> <ul style="list-style-type: none"> <li>• Oral evaluation (concepts and lab skills)</li> </ul>

## 5. Achievement Chart

Achievement Categories For Course Work	Description	Weighting (Total 70%)
<b>Knowledge/Understanding</b>	- knowledge of facts and terms - understanding concepts, principles, and theories - understanding of relationships between concepts	24.5 %
<b>Thinking/Inquiry</b>	- critical thinking skills(analyzing, detecting bias) - creative thinking (problem solving) - inquiry skills (formulating questions; conducting research; analyzing, interpreting, and evaluating information; drawing conclusions)	24.5 %
<b>Communication</b>	- communication of information and ideas - use of visuals and technology – multimedia - oral communication (debates, discussions, listening skills, role-playing) - written communication (short essays, writing in role)	10.5 %
<b>Application</b>	- application of concepts, skills, and procedures - transfer of concepts, skills, and procedures to new ideas - making logical conclusions or generalizations - making predictions and planning course of action	10.5 %

## 6. Term Grades for Provincial Reports

The grade for each term/reporting period is based on the evaluations that have been conducted to that point in the course and will be preliminary and tentative. They will be based on the most consistent level of achievement to that point in time, but some of the overall expectations, strands, and units will not have been addressed. The students' grades will most likely change when the students' entire work is evaluated by the end of the course.

### Reporting Cycle

Reporting Cycle 1:	September 8 <sup>th</sup> – October 30 <sup>th</sup> Report Card – November 12 <sup>th</sup>
Reporting Cycle 2:	November 2 <sup>nd</sup> – February 3 <sup>rd</sup> Report Card – February 11 <sup>th</sup>
Reporting Cycle 3:	February 4 <sup>th</sup> – April 1 <sup>st</sup> Report Card – April 14 <sup>th</sup>
Reporting Cycle 4:	April 4 <sup>th</sup> – June 30 <sup>th</sup> Final Report Card pick up from July 4 <sup>th</sup> – 10 <sup>th</sup>
Review Days:	June 27 <sup>th</sup> (9-11 am only)

## 7. Communication

In addition to class time, students can receive additional assistance from:

- - Subject teachers by appointment before/after school, during lunch hour;
- Homework Club - every Tuesday and Thursday from 11:35 – 12:30pm in room 115;
- FIFI - Find It Finish It from 8:35 – 9:35am on October 21<sup>st</sup>, January 20<sup>th</sup>, March 30<sup>th</sup>, and June 8<sup>th</sup>