

Course Description:

Grade 12 Applied Mathematics (40S) is intended for students considering post-secondary studies that do not require a study of theoretical calculus. It is context driven and promotes the learning of numerical and geometrical problem-solving techniques as they relate to the world around us. It builds upon the foundation knowledge and skills from Grade 10 Introduction to Applied and Pre-calculus Mathematics and Grade 11 Applied Mathematics. Primary goals of Applied Mathematics are to have students develop critical-thinking skills through problem solving and model real-world situations mathematically to make predictions.

These goals may be attained in a number of ways. Students may collect data in experiments and activities and then develop mathematical concepts by analyzing that data. They are encouraged to learn and demonstrate effective communication skills through a variety of media. Students are expected to become proficient in both oral and written communication skills.

Applied Mathematics is designed to promote student flexibility and responsibility. Flexibility is encouraged by having students work on non-routine problems and projects. Responsibility is encouraged as students work individually and in cooperative groups to explore connections with other mathematical areas, school subjects, and real-life applications.

Technology is an integral part of both learning and assessment in Applied Mathematics. Graphing calculators, spreadsheets, or other computer software will be used by students for mathematical explorations, modelling, and problem solving.

Mark Distribution:

Final exam (Provincial) June 13, 2017 – 30%
Course Work – 70%

Units of Study:

Possibility 1		
Unit	Outcomes	Suggested hours
Sinusoidal Functions	L1, R3	12
Compound Interest	L1, FM1, FM2	12
Probability	L1, L2, L3, P1, P2, P3	20
Polynomial Functions	L1, R1	12
Permutations and Combinations	L1, P4, P5, P6	12
Investments	L1, FM3	12
Design and Measurement	L1, D1	10
Research Project	L1, RP1	10
Exponential and Logarithmic Functions	L1, R2	10
	Total	110

Each class we have is around 70 minutes, so a 12 hour unit on sinusoidal functions will take around 10 classes. This includes tests, lessons and work classes. You have to do your work and keep ahead.

Please note that the order that the units are studied may not follow the above listing.

Course Work may include any/all of the following: (projects, quizzes, daily work, reviews, and unit assignments)

Projects will be given for certain units. They must be handed in as a whole assignment, and fully completed before marks will be given out. They may be used in place of a test.

Homework: Most daily assignments will be handed in when completed, and after corrected. The completion marks for assignments will be 5 marks, this may be done in the form of a homework check on occasion as well. Assignments I correct will be worth between 10 - 50 marks. All work must be shown on any assignment, even those that are not handed in. Math is a process, not just an answer. Assignments are due the next day that class occurs. Not done is a zero on homework check.

Quizzes will be given throughout each unit. Some units will have more than others. They are considered to be a part of the daily assignments/homework section.

Tests will be given at the end most units. Some units may have more than one test. You must have the review for the unit completed before you write the test. Every day you miss has the same consequence as handing in an assignment late (-10%) per day.

Final Exams will be written by all on June 13th at 9:00 am. Enough said.

Class Expectations:

1. Students are expected to attend class regularly, on time, and with all proper supplies on hand at the start of class. Always have a ruler (metric and imperial), graph paper, writing supplies (this means a pen/pencil and paper) and your binder. **Always bring your calculator.** Once you are in here, you may not be allowed to leave.
2. If you need extra help, or time to finish an assignment, talk to me and we'll work something out.
3. If you miss a day, **you** are responsible to make up anything that you have missed. I will not chase you down. This includes any missing tests or quizzes. You need to make arrangements with me to find a time to write it. You have only three school days to make up a missed test. You should go to other students for the notes you have missed, because if I print them out for you, you probably will not read them. You should not photocopy them either, as you will not likely read them either.
4. Students are expected to show respect to each other, others property, and me.
5. Incomplete assignments are a problem. If a student makes a habit of not doing their work, steps will be taken. This may include detention time, or phone calls to parents. Studies have shown that students who actually do the work do better in the courses they are taking. Scientists have proven that completing the coursework is essential to your success in this course.
6. If you are unexcused for a class, you will receive a zero will not be allowed to make up the work for that day. Skipping a test will result in an automatic 0. This includes the days that you are sick, and nobody phones into the school, or does so after the start of class.
7. All major incomplete assignments must be handed in to get course credit. This does not include all of your daily assignments, just tests, quizzes, projects and hand-in assignments.
8. Three lates will be equal to an absence in my room. You do not get a 1 minute grace period after the bell. Tough. If the bell rings, the door will close, and everyone on the other side is outta luck. I cannot remove you from class for non-attendance, but I can give you zeros on all assignments you miss those days.

DO NOT BE AFRAID TO ASK FOR ASSISTANCE, I AM MORE THAN HAPPY TO HELP YOU SUCCEED.

Math/Science Club and the Rewrite Policy:

Any failing test may be rewritten up to two additional times. The first rewrite will be the same test, and the marks will be averaged. To do this rewrite, you must come to Math/Science club at least three times. During this time, you may correct your test, finish missing work, and have any questions answered. You must also complete or redo the review given to you before the original test (if there was one). These sessions occur on various days based on need. If you miss one session, you lose all chances to rewrite that test. If you miss two sessions, you will lose all opportunities to rewrite any test. The second rewrite will be a new test, and the mark you receive on it will be your mark for the unit.

A passing test may be rewritten once, and you will only be allowed this opportunity once. You may do this at any time up until June 8, 2019. It will be the same test, and your marks will be averaged. Use this one wisely. You must attend Math Club for three classes before this rewrite, and perform the same duties as listed above.

Math club is compulsory for any student who has
Failed a test
Has a course average below 50%
5 or more missing assignments.

If these above conditions no longer apply to you, then you do not have to continue to come to Math club. I will sincerely miss your company, but I'll get over it.

I have read this outline over, and discussed it with my parent(s)/guardian(s) and understand what it contains. By getting the required signatures, I will receive 5% on my first test by handing this in and not mentioning it out loud to anyone. I will most importantly, not bother Mr. Murray by asking him if I have to hand this in to get the 5%.

Parent/Guardian Signature

Students Signature

Date

Course Description:

Grade 12 essential Mathematics (30S) is intended for students whose post-secondary planning does not include a focus on mathematics and science-related fields. Grade 12 essential Mathematics is a one-credit course consisting of two half-credits each emphasizing consumer applications, problem solving, decision making, and spatial sense.

Grade 12 essential Mathematics builds on the knowledge and skills of both Grade 10 and Grade 11 essentials of mathematics

Students are expected to work both individually and in small groups on mathematical concepts and skills encountered in everyday life in a technological society.

Grade 12 Essential Mathematics (45S) Half Course V		Grade 12 Essential Mathematics (45S) Half Course VI	
Unit	Suggested hours	Unit	Suggested hours
Analysis of Games and Numbers	7	Analysis of Games and Numbers	7
Vehicle Finance	17	Home Finance	12
Statistics	7	Geometry and Trigonometry	10
Precision Measurement	12	Business Finance	15
Career Life	12	Probability	11
Total	55	Total	55

Please note that the order that the units are studied may not follow the above listing.

Each class we have is around 70 minutes, so Vehicle Finance is slotted for 17 hours, which means it should take around 15 classes. This includes tests, lessons and work classes. You have to do your work and keep ahead.

Mark Distribution:

Final exam (Provincial)	– 20% (June 12, 2019)
Course Work	– 80%

There is a total of 98 hours (there is actually 110 hours, but you are doing 12 hours of the career life mostly on your own) of new material to be covered in this course, so you will be expected to do homework outside of class. I will be available for help during lunch, as well as before first period. You cannot expect to get help while I have other classes.

Course Work will include all of the following:

Homework: Most daily assignments will be handed in when completed, or after being corrected. The completion marks for assignments will be 5 marks, this may be done in the form of a homework check on occasion as well. Assignments I correct will be worth between 10-50 marks. All work must be shown on any assignment, even those that are not handed in. Physics is a process, not just an answer. Assignments are expected to be completed by the next day that class occurs. They are not due until the day the test takes place. Not done is a zero on homework check.

Projects: there will be one major project for the course (Career Life). Other units may have small projects as well. These projects will be marked on a rubric which you will be provided with.

Quizzes will be given throughout each unit. Some units will have more than others. They are considered to be a part of the daily assignments/homework section.

Tests will be given at the end most topics. Some topics will have more than one test.

Final Exams will be written by all on the day scheduled. Enough said.

Class Expectations:

1. Students are expected to attend class regularly, on time, and with all proper supplies on hand at the start of class. Always have a ruler (metric and imperial), graph paper, writing supplies (this means a pen/pencil and paper) and your binder. **Always bring your calculator.** Once you are in here, you may not be allowed to leave.
2. If you need extra help, or time to finish an assignment, talk to me and we'll work something out.
3. If you miss a day, **you** are responsible to make up anything that you have missed. I will not chase you down. This includes any missing tests or quizzes. You need to make arrangements with me to find a time to write it. You have only three school days to make up a missed test. You should go to other students for the notes you have missed, because if I print them out for you, you probably will not read them. You should not photocopy them either, due to the fact you won't read them.
4. Students are expected to show respect to each other, others property, and me.
5. Incomplete assignments are a problem. If a student makes a habit of not doing their work, steps will be taken. This may include detention time, or phone calls to parents. Studies have shown that students who actually do the work do better in the courses they are taking. Scientists have proven that completing the coursework is essential to your success in this course.
6. If you are unexcused for a class, you will receive a zero will not be allowed to make up the work for that day. Skipping a test will result in an automatic 0. This includes the days that you are sick, and nobody phones into the school, or does so after the start of class.
7. All major incomplete assignments must be handed in to get course credit. This does not include all of your daily assignments, just tests, quizzes, projects and hand-in assignments.
8. Three lates will be equal to an absence in my room. You do not get a 1 minute grace period after the bell. Tough. If the bell rings, the door will close, and everyone on the other side is outta luck. I cannot remove you from class for non-attendance, but I can give you zeros on all assignments you miss those days.

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A passing test may be rewritten once, and you will only be allowed this opportunity once. You may do this at any time up until June 8, 2019. It will be the same test, and your marks will be averaged. Use this one wisely. You must attend Math Club for three classes before this rewrite, and perform the same duties as listed above.

Math club is compulsory for any student who has

Failed a test

Has a course average below 50%

5 or more missing assignments.

If these above conditions no longer apply to you, then you do not have to continue to come to Math club. I will sincerely miss your company, but I'll get over it.

I have read this outline over, and discussed it with my parent(s)/guardian(s) and understand what it contains. By getting the required signatures, I will receive 5% on my first test by handing this in and not mentioning it out loud to anyone.

I will most importantly, not bother Mr. Murray by asking him if I have to hand this in to get the 5%.

Parent/Guardian Signature

Students Signature

Date

Course Description:

Grade 11 essential Mathematics (30S) is intended for students whose post-secondary planning does not include a focus on mathematics and science-related fields. Grade 11 essential Mathematics is a one-credit course consisting of two half-credits each emphasizing consumer applications, problem solving, decision making, and spatial sense.

Grade 11 essential Mathematics builds on the knowledge and skills gained from Grade 10 Essential Mathematics and provides a foundation for the topics studied in Grade 12 Essential Mathematics. Students are expected to work both individually and in small groups on mathematical concepts and skills encountered in everyday life in a technological society.

Grade 11 Essential Mathematics (35S) Half Course III

Unit	Suggested hours
Analysis of Games and Numbers	7
Interest and Credit	18
3-D Geometry	16
Statistics	14
Total	55

Grade 11 Essential Mathematics (35S) Half Course I

Unit	Suggested hours
Analysis of Games and Numbers	5
Managing Money	16
Relations and Patterns	16
Trigonometry	5
Design Modelling	13
Total	55

Please note that the order that the units are studied may not follow the above listing.

Each class we have is around 70 minutes, so a 16 hour unit on Managing Money will take around 14 classes. This includes tests, lessons and work classes. You have to do your work and keep ahead.

Mark Distribution:

Final exam – 30% (Week of June 17th)
Course Work – 70%

Course Work may include any/all of the following:

Projects may be given for certain units. They must be handed in as a whole assignment, and fully completed before marks will be given out. They may be used in place of a test. The problem analysis handouts are included in this section. You will need to hand these in (by the due date) to receive credit for that unit.

Homework: The course work for each unit will mainly be done in your course workbook. You are not expected to hand it in to me for marking until the day of the test. It must be handed in by the end of the test day to receive full marks. The chapter review must be completed to be allowed to write your test. There will also be several hand-in assignments that I will mark for each unit. These will be counted towards your course mark.

Quizzes will be given throughout each unit. Some units will have more than others. They will also be counted towards your overall course mark. I will try to make it so that half your grade will come from tests and the other half will come from assignments and quizzes.

Tests will be given at the end most units. Some units may have more than one test. You must have the review for the unit completed before you write the test. You will receive a 10% deduction on your test mark if your review is not completed **before** you write your test. No exceptions. All tests will be written with the aid of a one-sided student created study sheet.

Final Exams will be written by all on the day and time scheduled. Enough said.

Class Expectations:

1. Students are expected to attend class regularly, on time, and with all proper supplies on hand at the start of class. Always have a ruler (metric and imperial), graph paper, writing/colouring supplies and your book. Always bring your calculator. Once you are in here, you may not be allowed to leave. If you leave it will be considered a late. See expectation # 2.

Course Description:

Grade 11 Applied Mathematics (30S) is intended for students considering post-secondary studies that do not require a study of theoretical calculus. It is context driven and promotes the learning of numerical and geometrical problem-solving techniques as they relate to the world around us. It builds upon the foundation knowledge and skills from Grade 10 Introduction to Applied and Pre-calculus Mathematics and builds a foundation for Grade 12 Applied Mathematics.

Primary goals of Applied Mathematics are to have students develop critical-thinking skills through problem solving and model real-world situations mathematically to make predictions.

These goals may be attained in a number of ways. Students may collect data in experiments and activities and then develop mathematical concepts by analyzing that data. They are encouraged to learn and demonstrate effective communication skills through a variety of media. Students are expected to become proficient in both oral and written communication skills.

Applied Mathematics is designed to promote student flexibility and responsibility. Flexibility is encouraged by having students work on non-routine problems and projects. Responsibility is encouraged as students work individually and in cooperative groups to explore connections with other mathematical areas, school subjects, and real-life applications.

Technology is an integral part of both learning and assessment in Applied Mathematics. Graphing calculators, spreadsheets, or other computer software will be used by students for mathematical explorations, modelling, and problem solving.

Mark Distribution:

Final exam – 30% (week of June 17th)
Course Work – 70%

Each class we have is around 70 minutes, so a 15 hour unit on Scale will take around 13 classes.

This includes tests, lessons and work classes. You have to do your work and keep ahead.

Course Work may include any/all of the following:

Possibility 1			
Units of Study:	Outcomes	Suggested hours	
Quadratic Functions	R2, M1, L2	20	
Scale	M2, M3, M1, L2	15	
Proofs	G1, G2, L1, L2	10	
Statistics	S1, S2, L2	20	
Research Project	RP1, L2	10	
Systems of Inequalities	R1, M1, L2	20	
Trigonometry	G3, G2, L2	15	
	Total	110	

Please note that the order that the units are studied may not follow the above listing.

Projects may be given for certain units. They must be handed in as a whole assignment, and fully completed before marks will be given out. They may be used in place of a test. The problem analysis handouts are included in this section. You will need to hand these in (by the due date) to receive credit for that unit.

Homework: The course work for each unit will mainly be done in your course workbook. You are not expected to hand it in to me for marking until the day of the test. It must be handed in by the end of the test day to receive full marks. The chapter review must be completed to be allowed to write your test. There will also be several hand-in assignments that I will mark for each unit. These will be counted towards your course mark.

Quizzes will be given throughout each unit. Some units will have more than others. They will also be counted towards your overall course mark. I will try to make it so that half your grade will come from tests and the other half will come from assignments and quizzes.

Tests will be given at the end most units. Some units may have more than one test. You must have the review for the unit completed before you write the test. You will receive a 10% deduction on your test mark if your review is not completed **before** you write your test. No exceptions. All tests will be written with the aid of a one-sided student created study sheet.

Final Exams will be written by all on the day and time scheduled. Enough said.

Class Expectations:

1. Students are expected to attend class regularly, on time, and with all proper supplies on hand at the start of class. Always have a ruler (metric and imperial), graph paper, writing/colouring supplies and your book. Always bring your calculator. Once you are in here, you may not be allowed to leave. If you leave it will be considered a late. See expectation # 2.
2. If you are late three times for class, it will be considered an unexcused absence. Attendance cannot be a reason to remove a student from a class, but it can be a deciding factor if the student is at risk to not earn their credit. You are expected to be in class when the bell rings, not after the bell rings.
3. If you need extra help, or time to finish an assignment, talk to me and we'll work something out. If you don't ask for more time I can't give it to you then you run into expectation # 6. You have three classes to make arrangements to complete missing tests. If you do not do so, you will receive a zero. You will not, in most cases, be allowed to write missing tests in class, they must be done on your own time.
4. If you miss a day, you are responsible to make up anything that you have missed. You will need to get the notes from a class mate, I will not print them off and you should not photocopy them. This includes any missing tests or quizzes.
5. Students are expected to show respect to each other, others property, and me. Help each other, it is a small class and it works better if we all get along.
6. Late assignments-All assignments will be given a due date and will be expected to be handed in by that date. If you do not have them handed in, and the assignment is returned to the class you will get a zero.
7. Incomplete assignments are a problem. If a student makes a habit of not doing their work, steps will be taken. This may include detention time, phone calls to parents, or a loss of spares. Completing the coursework is essential to your success in this course.
8. If you are unexcused for a class, you will receive a zero will not be allowed to make up the work for that day. This includes being removed from class, even if the work is already completed. This policy does include tests as well. Skipping a test will result in an automatic 0.
9. All major incomplete assignments must be handed in to get course credit.
10. If you have been given a review for an upcoming test it must be completed before you write the test. If it is not completed you will lose 10% per day on both the test and the review. The three day test rule is included here as well.

DO NOT BE AFRAID TO ASK FOR ASSISTANCE, I AM MORE THAN HAPPY TO HELP YOU SUCCEED.

Math/Science Club and the Rewrite Policy:

Any failing test may be rewritten up to two additional times. The first rewrite will be the same test, without a cheat sheet, and the marks will be averaged. The second rewrite will be a new test, with a cheat sheet, and the mark you receive on it will be your mark for the unit. To do a rewrite, you must come to Math/Science club three times. During this time, you will correct your test, finish missing work, and have any questions answered. You must be working on relevant material from the unit. If you cannot find any, I will provide extra work for you. You must also complete/redo the review given to you before the original test (if there was one). These sessions occur twice a week and you will be informed on the days they will occur. If you miss one session, you lose all chances to rewrite that test. If you miss two sessions, you will lose all opportunities to rewrite any test.

A passing test may be rewritten once, and you will only be allowed this opportunity once. You may do this at any time up until June 8, 2019. It will be the same test, without a cheat sheet, and your marks will be averaged. Use this one wisely. You must attend Math Club for three classes before this rewrite, and perform the same duties as listed above.

Math/Science club is compulsory for any student who has

***Failed a test**

*** a course average below 50%**

***5 or more missing assignments.**

If these above conditions no longer apply to you, then you do not have to continue to come to Math club. I will sincerely miss your company, but I'll get over it.

I have read this outline over, and discussed it with my parent(s)/guardian(s) and understand what it contains. By getting these signatures, and appropriate contact information, I will receive 5% on my first test. I will hand this in attached to my first test, and will not ask annoying questions about what to do with it. If it is ever mentioned, I will not get this generous award that Mr. Murray has so kindly offered me.

Parent/Guardian Signature

Students Signature

Date

Parent email(s): _____

best phone number for contact: _____

Chemistry 40S – Course Outline

Tidbits of wisdom from the world of chemistry...

“Research is what I’m doing when I don’t know what I’m doing”

- *Werner Von Braun*

“A tidy laboratory means a lazy chemist.”

- *Jöns Jacob Berzelius*

“I bought some powdered water, but I don't know what to add to it.”

- *Stephen Wright*

Course Description

Chemistry itself is a discipline that investigates the composition of matter and the various changes it undergoes. Quite literally, chemistry is the study of everything we know about. It can explain why leaves change colour in the fall, why dish soap doesn't work on your hair, or why living organisms can survive in the ocean depths without light or oxygen.

The grade 12 course provides students with an in depth experience in many different branches of the chemistry field. The purpose of this course is to build upon the basic principles that we began developing in grade 10 and expanded on in grade 11 chemistry course. The aim is to provide a strong fundamental understanding of the theories and laws that shape the scientific study. This course relies heavily on the use of the scientific process, and will require students to think critically to solve problems.

Course Timeline

Unit 2: Aqueous Reactions	<i>February 4th – February 25th</i>
Unit 1: Atomic Structure	<i>February 26th – March 8th</i>
Unit 3: Kinetics	<i>March 11th – April 9th</i>
Unit 4: Chemical Equilibrium	<i>April 10th – April 22nd</i>
Unit 5: Acids and Bases	<i>April 24th – May 9th</i>
Unit 6: Electrochemistry	<i>May 10th – June 14th</i>

Assessment

Course work	70%
Final Exam	30 %

Assessment in this course will be balanced across a number of different activities. Each unit will have a final test, but will also include research and presentation projects. A heavy weighting will also be put on laboratory work and reports, and will include a mark based on safe lab practices. Due to the nature of some of the chemicals we will be working with in the lab, failure to strictly adhere to safety procedures will result in removal from future lab activities. These will be replaced by research reports to fulfill the marking requirement.

There is no midterm exam in this course. All students will be required to write the final exam, which will cover material from the entire semester.

Textbook

the same text as last time

Keys to Success...

- Be prepared for class
- Complete all assignments and readings by the due date
- Study for tests and exams at least 3 days in advance
- Ask questions of others in class
- Come in for extra help when needed
- **Make Mistakes.** It helps you recognize when you're doing things right.