



Freedom To Create. Spirit To Achieve.

The Revised Mathematics Program of Studies Grades 10–12

Information to Parents and Students
2012/2013

**R.F. STAPLES MATHEMATICS
DEPARTMENT**

Government of Alberta ■
Education

A New Choice: Mathematics 10C

The revised Grades 10-12 Mathematics Program includes a new option for students entering Grade 10. Mathematics 10C – the 'C' stands for 'combined' – is the starting point for both the Mathematics-1 and Mathematics-2 course sequences. Students who aren't sure which course sequence they want to follow right out of junior high can take Mathematics 10C and then choose which path they want to take, either Mathematics 20-1 or Mathematics 20-2, in Grade 11.

It allows students more time, and more resources, before they have to make a decision about which course sequence to pursue.

And it is designed to provide the student opportunities to switch sequences based on changes in his or her education and career goals.

Other Grade 10 mathematics courses available are the new Mathematics 10-3 for students planning to enter the majority of trades or the workforce immediately after high school and the current Mathematics 10-4 (Knowledge and Employability).

A Smoother Transition

The new program was designed to make it easier for students to move from Grade 9 to Grade 10 in mathematics. Mathematics 10C helps students who passed Mathematics 9 build on their achievements to succeed at new challenges in Grade 10. Students will spend a year learning in the high school format before choosing which sequence to follow in Grades 11 and 12.



Mathematics 10C gives students a smooth transition from junior high mathematics courses.



Informed Decisions

The courses students take in high school affect the programs they can enter in post-secondary education. By waiting until Grade 11 to choose which mathematics course sequence to follow, students will have a better idea of their future career goals, their skill at high school-level mathematics, and the requirements for the post-secondary programs that interest them. Students can now get input from high school teachers and counselors on which course suits their specific skills and career needs. And a wider range of programs at universities, colleges, and technical institutes accept the new Mathematics-2 course sequence than the former Applied Mathematics route, giving students more options at the post-secondary level as well.

Greater Flexibility

Students' goals and needs may change during high school, and with Mathematics 10C they can change their mathematics course to suit those new directions. Mathematics 10C includes topics needed for both Mathematics 20-1 and Mathematics 20-2. This means students will have the background knowledge to switch course sequences in either Grade 11 or Grade 12. Students will have more options in high school, which means more choices for their future education and career paths.

(Refer to fact sheet, "A Number of Options" for information on course progression)



A Number of Options

How do the courses work?

Below is a chart showing how the courses relate to one another and what options students will have as they progress through their high school career.

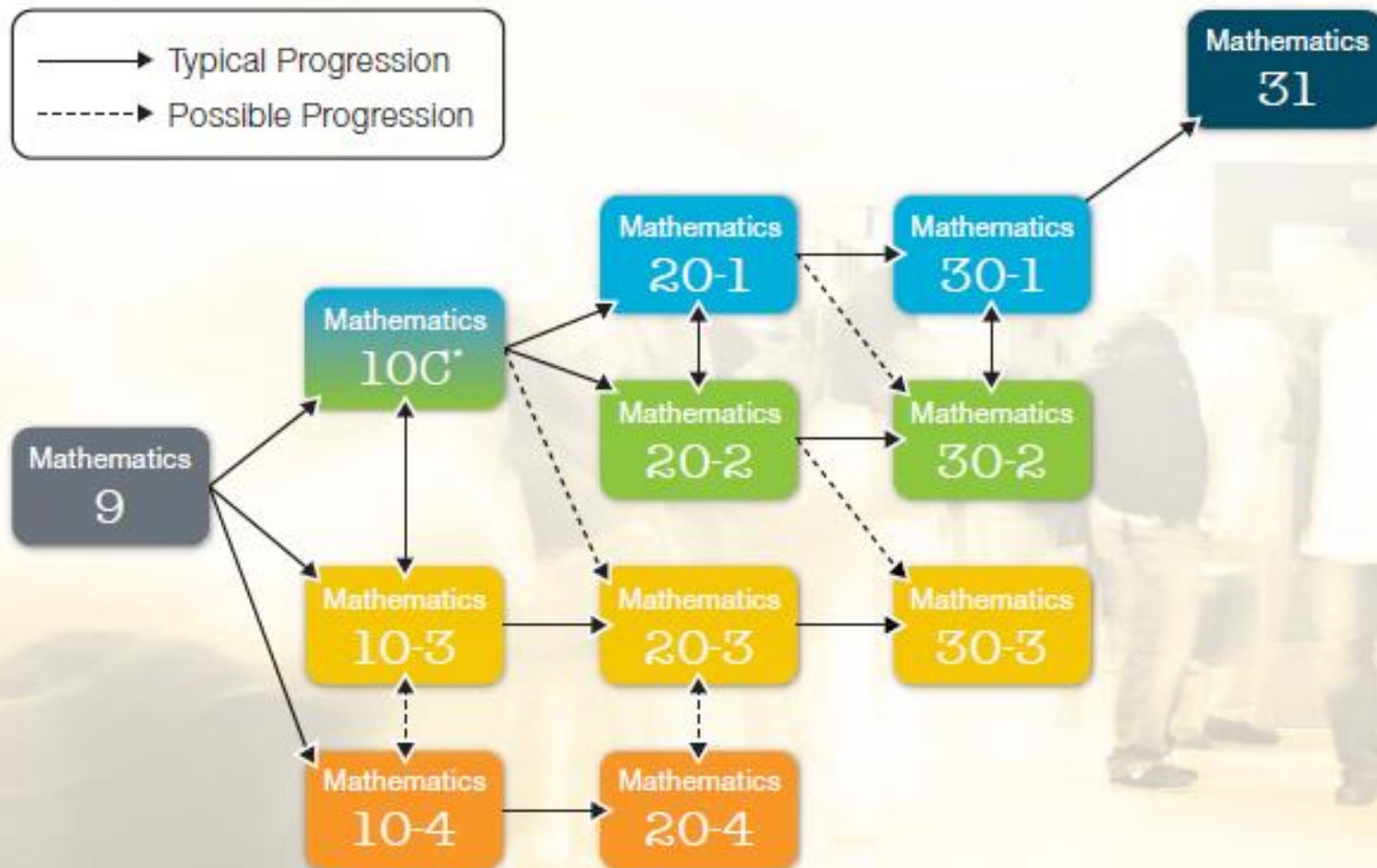
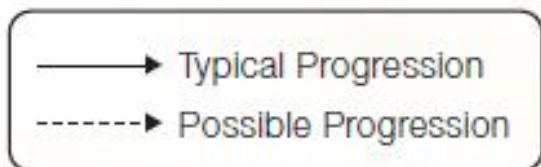
Please note:

Mathematics 10C is for students who want to take Mathematics-1, Mathematics-2, or just aren't sure yet.

Mathematics 10-4 and 20-4, the Knowledge and Employability courses, have not changed.

Mathematics 31 has not changed. Mathematics 30-1 is a co-requisite for Mathematics 31.

Progression Through Course Sequences



* Students must pass Grade 9 Mathematics to enrol in Mathematics 10C.

For more information, visit www.education.alberta.ca/math



Choosing the Right Sequence

It all adds up

Not all students have the same needs or goals. Now, in high school, students will be able to choose the mathematics courses that will help them on the path to their future.

The new mathematics courses were developed together with the teachers who will be in the classrooms with you. They've been approved by instructors from colleges, technical institutions, and universities who'll be building on what you learn in high school. And the material is based on input from business and industry leaders who use mathematics every day.

With their help, Alberta Education has created courses that will not only meet your needs in high school, but will support your further education and career choices.

You can find out more about post-secondary acceptance of these new course sequences by visiting our website at www.education.alberta.ca/math.

So when you're choosing a course sequence, don't just think about what you want now. Think about what you want to do in the future, and how to get there.



No matter what you're planning to do after high school, Alberta Education has made sure that you'll have the mathematical skills and knowledge that suit you.

$$u = x - 4$$



Course Sequences

All three course sequences will give students the mathematical reasoning and critical-thinking skills they'll need in life. (Refer to fact sheet, "A Number of Options" for information on course progression)

I should take...



Mathematics-1 if I want to study mathematics or sciences at a university, college, or technical institute and go on to a related career.

Mathematics-1 is for students who plan to enter post-secondary programs such as engineering, mathematics, sciences, some business studies, or other programs that require advanced math skills. The sequence is a co-requisite for Mathematics 31 and may be required for post-secondary calculus courses.

Mathematics-1 includes topics such as permutations and combinations, relations and functions, sequences and series, and trigonometry.



Mathematics-2 if I want to attend a university, college, or technical institute after high school, but do *not* need calculus skills.

Mathematics-2 is for students wishing to study at the post-secondary level in diverse fields, including arts programs, some engineering technologies, medical technologies, and some apprenticeship programs. This path will fulfill most students' needs. Mathematics-2 is designed with a great deal of flexibility, so that the student can switch sequences in Grade 11 or Grade 12 if his or her interests change.

Mathematics-2 includes topics such as relations, functions and equations, probability, statistics, and trigonometry.



Mathematics-3 if I am interested in learning the mathematics needed to enter most trades or if I want to enter the workforce after high school.

Mathematics-3 is for students who want to apprentice to a trade or enter the workforce directly after high school. It is designed to meet the entrance requirements for apprentices in most trades programs.

Mathematics-3 includes topics such as finance, geometry, measurement, and trigonometry.

Mathematics-1

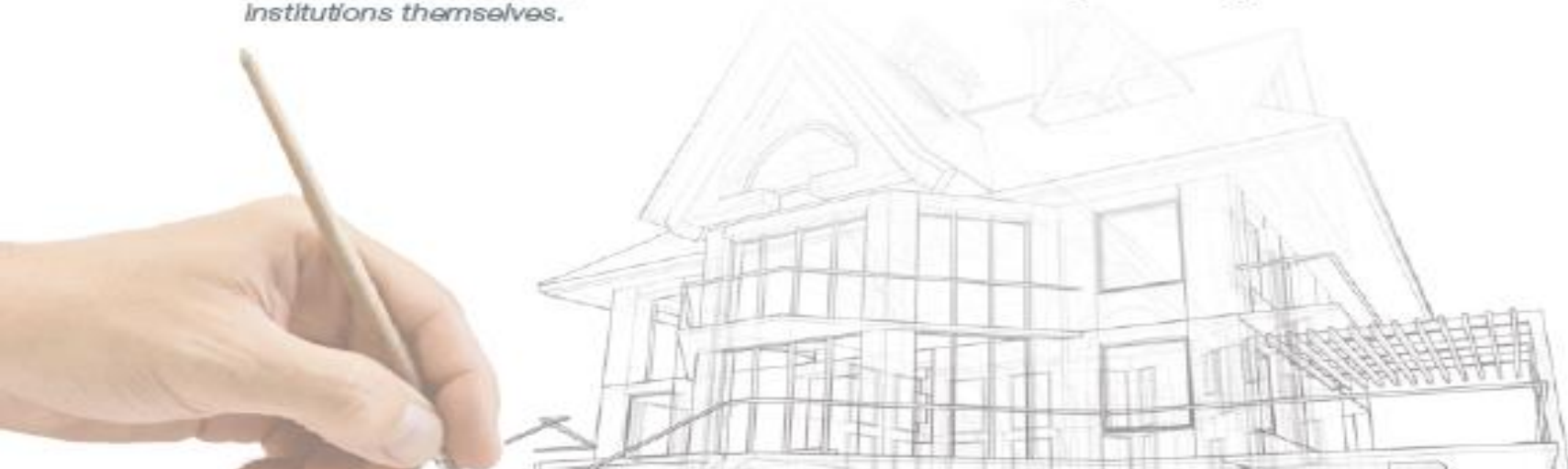
Once you successfully complete Mathematics 10C, you will need to decide which course sequence will meet your needs during the rest of your high school career and beyond. Whether you plan on pursuing further studies or entering the workforce directly, the revised Mathematics Program is designed to help you develop the appropriate skills.

There is a mathematics course that will meet your needs, no matter how your plans change.



Who should take the Mathematics-1 course sequence?

- *Mathematics-1 is designed for students who plan to apply for post-secondary programs that may require **calculus** skills.*
- *If you want to enter a post-secondary program such as **engineering, mathematics, sciences, some business studies**, or other programs that require advanced math skills, you should take **Mathematics-1**.*
- *Mathematics 30-1 is a co-requisite for **Mathematics 31** and may be required for post-secondary calculus courses. You should **always check the most up-to-date information** on post-secondary mathematics entrance requirements, which is available on the Alberta Learning Information Service (ALIS) website (see www.education.alberta.ca/math) and directly from the institutions themselves.*



Mathematics-3

Once you successfully complete Mathematics 10-3 or Mathematics 10C, you will need to decide which course sequence will meet your needs during the rest of your high school career and beyond. Whether you plan on pursuing further studies or entering the workforce directly, the revised Mathematics Program is designed to help you develop the appropriate skills.



There is a mathematics course that will meet your needs, no matter how your plans change.

Who should take the Mathematics-3 course sequence?

- *Mathematics-3 is designed for students who want to learn the mathematics needed to enter most trades or want to enter the workforce after high school.*
- *Most apprenticeship training programs in Alberta will recommend students successfully complete Mathematics 30-3. However, a small number of apprenticeship training programs may require students to complete the -2 course sequence in order to meet the mathematics entrance level competencies for those trades. Further information regarding apprenticeships can be found at: <http://www.advancededandtech.gov.ab.ca/planning.aspx>.*
- *You should always check the most up-to-date information on post-secondary mathematics entrance requirements, which is available on the Alberta Learning Information Service (ALIS) website and directly from the institutions themselves.*

Mathematics-2

Once you successfully complete Mathematics 10C, you will need to decide which course sequence will meet your needs during the rest of your high school career and beyond. Whether you plan on pursuing further studies or entering the workforce directly, the revised Mathematics Program is designed to help you develop the appropriate skills.

There is a mathematics course that will meet your needs, no matter how your plans change.



Who should take the Mathematics-2 course sequence?

- *Mathematics-2 is designed for students who want to attend a university, college, or technical institute after high school, but do not need calculus skills.*
- *If you want to study at the post-secondary level in fields such as arts programs, civil engineering technology, medical technologies, or some apprenticeship programs, you should take Mathematics-2. This sequence will fulfill most high-school students' needs.*
- *You should always check the most up-to-date information on post-secondary mathematics entrance requirements, which is available on the Alberta Learning Information Service (ALIS) website and directly from the institutions themselves.*



Transitioning from Grade 9 to Grade 10

- Successfully complete Grade 9 Mathematics
 - Mathematics 10C
 - Mathematics 10-3
- Unsuccessful in Grade 9 Mathematics
 - Mathematics 10-3 and continue in -3 course sequence
 - Mathematics 10-3 then Mathematics 10C
 - Mathematics 10-4, if appropriate

Courses Eligible for Retroactive Credits

Registered Course Reported Failed Semester/School Year: A	Alternative Course Passed Semester/School Year: B	Alternative Retroactive Credits Semester/School Year: B
Mathematics 10C	Mathematics 20-3	Mathematics 10-3
Mathematics 10-3	Mathematics 20-4	Mathematics 10-4
Mathematics 20-1	Mathematics 30-2	Mathematics 20-2
Mathematics 20-2	Mathematics 30-3	Mathematics 20-3

Various Programs Requiring 30-1

- Bachelor of Science at the University of Alberta
- Bachelor of Engineering at the University of Alberta
- Bachelor of Commerce at the University of Alberta
- Any post-secondary program that is calculus-based.

Various Programs Accepting 30-2

- Law (requires an initial degree, for example a Bachelor of Arts)
- Nursing at the University of Alberta
- Bachelor of Education (elementary and secondary, unless you want to teach math)
- Bachelor of Commerce at Grant MacEwan
- Bachelor of child & youth care at Grant MacEwan
- Dental Assisting/Technology at NAIT
- Engineering Technology at NAIT
- Respiratory Therapy at NAIT
- Industrial Heavy Equipment Technology at NAIT

Please note that this is not a comprehensive list. The most up-to-date information on post-secondary mathematics entrance requirements can be found at:

- Alberta Learning Information Service website:
<http://alis.alberta.ca/ec/ep/aas/ta/mathreq.html>
- individual post-secondary institution websites



R.F. STAPLES Student Services can also answer any questions you might have about post-

Questions????

Email me at:

- pkulmatyski@phrd.ab.ca
- kszautner@phrd.ab.ca
- pouimet@phrd.ab.ca
- Maurice.St.Denis@phrd.ab.ca