Choosing the Right Math Courses

The essence of mathematics is not to make simple things complicated,but to make complicated things simple. (S. Gudder)

ABERHART

MATH FACULTY:

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Mr. Lee Marshall
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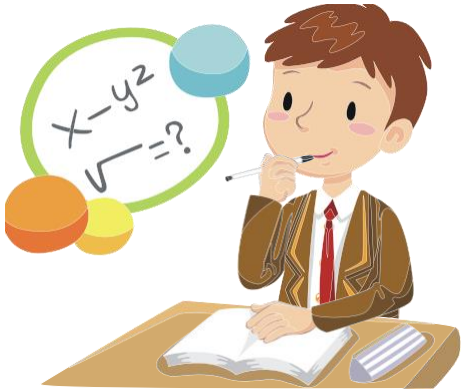
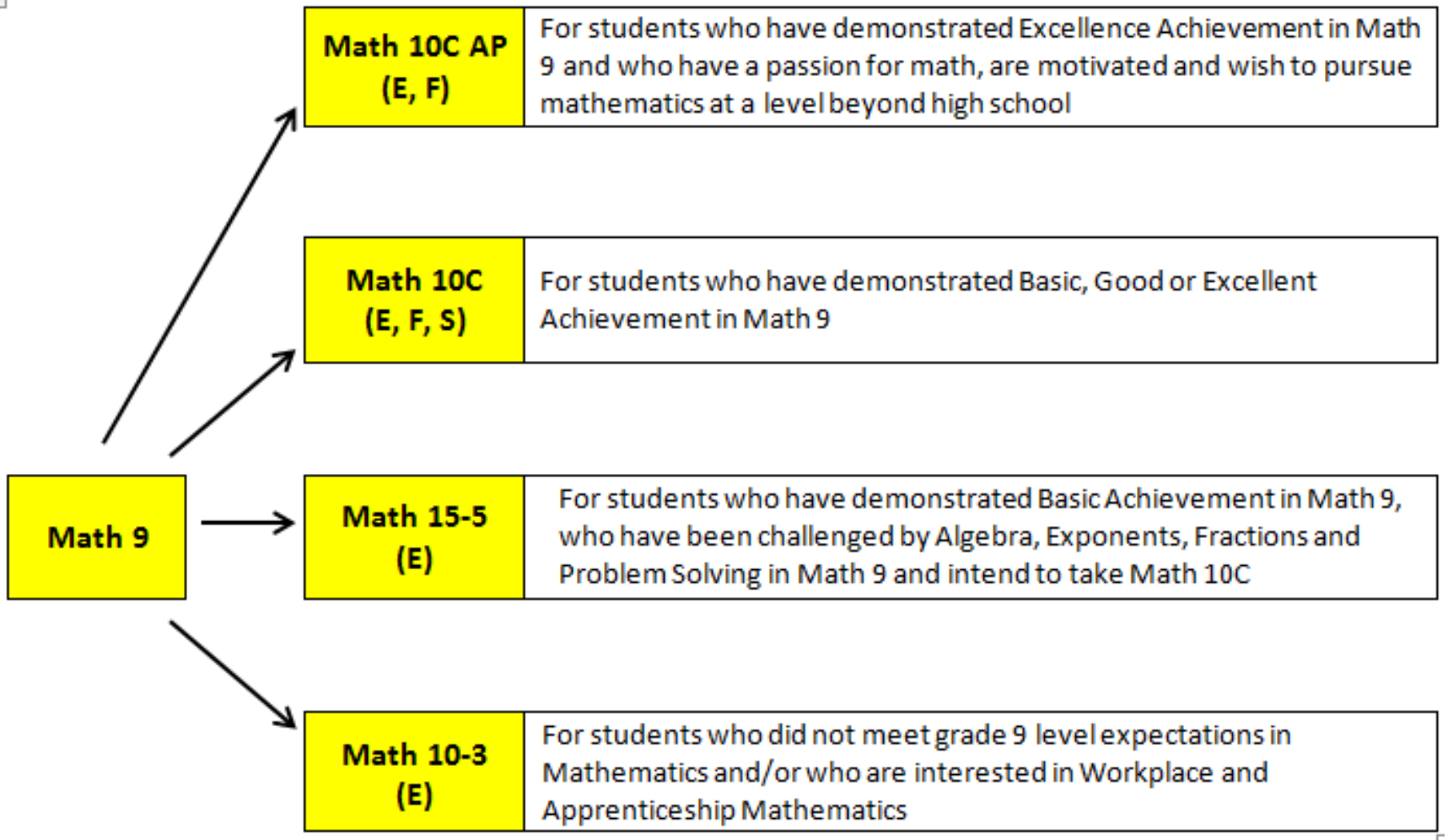


Transition from Grade 9 to 10



Mathematics 10C and 10CAP

Students who have demonstrated Basic Achievement (or higher) in Math 9 may enrol in Mathematics 10C (*Combined*) and then choose which path they want to take in grade 11, either Mathematics 20-1 or Mathematics 20-2.

Mathematics 10C helps students build on their achievements (especially algebra skills and number sense) to succeed at new challenges in Grade 10. To be successful in this course, students must have good work habits.

The Mathematics 10C course consists of three main topics:

1. **Measurement**: linear measurement, surface area and volume, proportional reasoning, primary trigonometric ratios
2. **Algebra and Number**: prime factors and applications, irrational numbers, real numbers, rational exponents, polynomials, factoring
3. **Relations and Functions**: relations and functions, linear relations, function notation, systems of linear equations, coordinate geometry, equation of a line, slope

Mathematics 10C Advanced Placement

What is Advanced Placement?

- Advanced Placement (AP) is a program run by the College Board (United States) which offers students enrichment of University-level courses in high school.
- The regular Math 10C, 20-1, 30-1 and 31 topics are covered on an accelerated basis and then enriched to increase the students' depth of understanding.

Who should take Math 10C AP?

- If you love math, are motivated, wish to pursue mathematics at a level that will take you beyond high school and have demonstrated Excellence Achievement in Math 9 then this course is for you!

Why take Advanced Placement Math?

- You will study mathematics at a greater depth and it will provide you with an additional challenge. It will prepare you for university-level work.
- Successful completion of the Calculus AP exam (at the end of Math 31AP) may lead to advanced credit at the university level.

NOTES:

*Math 10CAP, 20-1AP and 30-1AP are offered in both English and French.

*Math 31AP is offered in English (The AP exam is written in English).

*Spanish Bilingual Students must registered in Math 10C Spanish.

In grade 11, they may enrol in Math 20-1AP (with teacher recommendation).

Mathematics 15-5

(Preparation for Math 10C)

Students who have demonstrated Basic Achievement and who have been challenged by Algebra, Exponents, Fractions and Problem Solving in Math 9 and also intend to take Math 10C may register in this course.

- The course provides learning opportunities that will develop student competency in knowing how to learn, thinking critically, applying multiple literacies, identifying and solving complex problems, and demonstrating good communication skills.
- The course will enhance numeracy skills in students, develop their critical thinking and problem solving abilities, and set them up for success in future courses in mathematics.
- This course is offered first semester.
- Successful students earn credits in the Locally Developed Course, Math 15-5, and are expected to complete Math 10C second semester of grade 10.

Mathematics 10-3

Students who did not meet grade 9 level expectations in Mathematics must register in Math 10-3 and students interested in Workplace and Apprenticeship Mathematics should also register in Math 10-3.

This course consists of four main topics.

1. **Measurement**: linear measurement, area and volume, mass, capacity and temperature, 2-D shapes and 3-D objects (regular, composite and irregular shapes)
2. **Geometry**: spatial reasoning, Pythagorean theorem, similarity of polygons, primary trigonometric ratios, parallel lines and transversal, properties of angles
3. **Number**: unit pricing, currency exchange, proportional reasoning, earning an income
4. **Algebra**: manipulating and applying formulas

GRADE 11 AND 12 COURSES

Foundations of Mathematics
(Math 20-2 & 30-2)

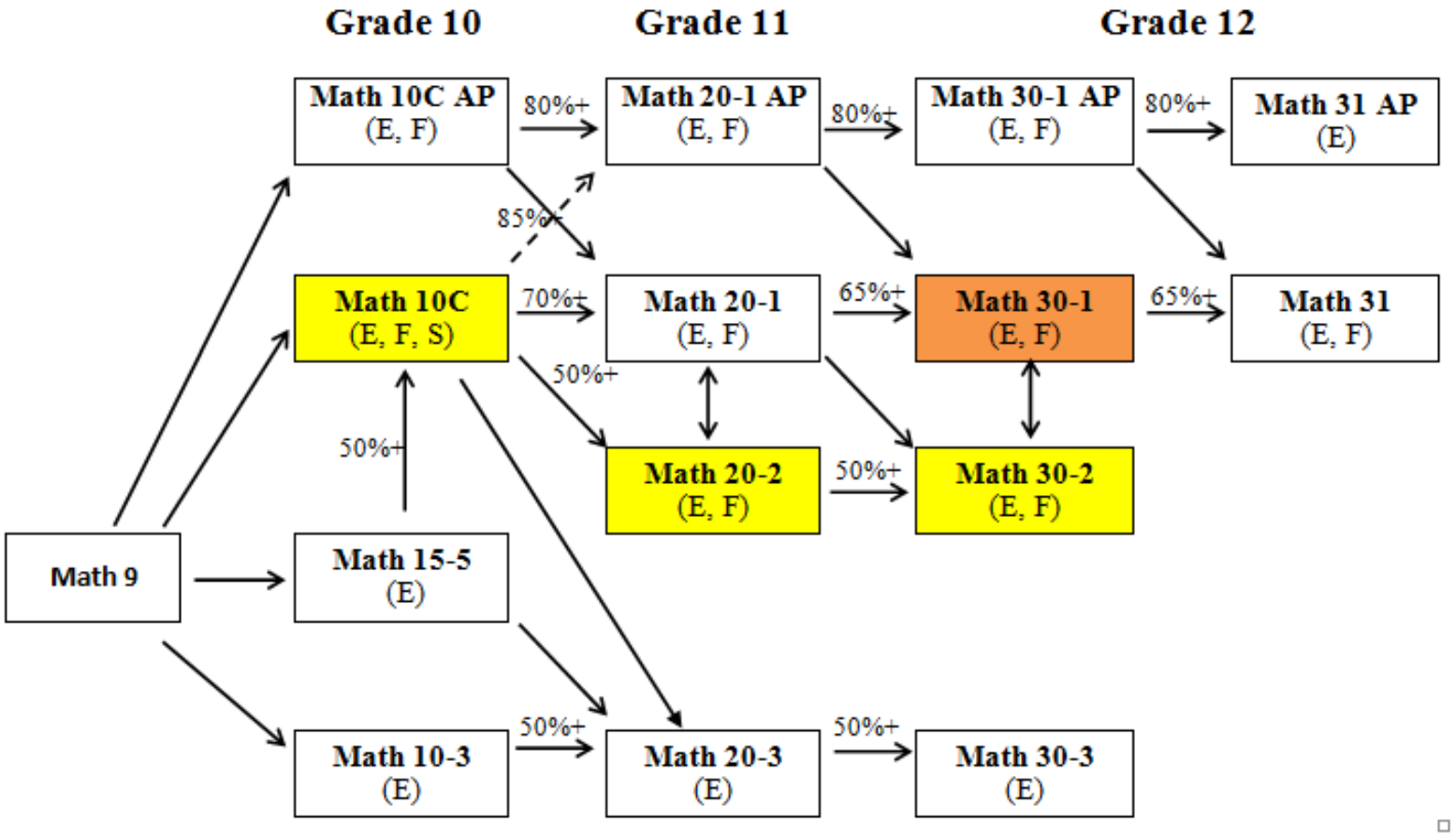
This sequence fulfills most high-school students' needs. It is designed to provide students with the mathematical understandings and critical-thinking skills identified for **post-secondary studies** in programs that **do not** require the study of **calculus.**

For example:

Arts programs
Nursing
Some engineering technology programs
Medical technologies
Some apprenticeship programs
Some business studies

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.

Foundations of Mathematics



*E = English, F = French, S = Spanish

Pre-Calculus Mathematics

(Math 20-1 & 30-1 or 20-1AP & 30-1AP)

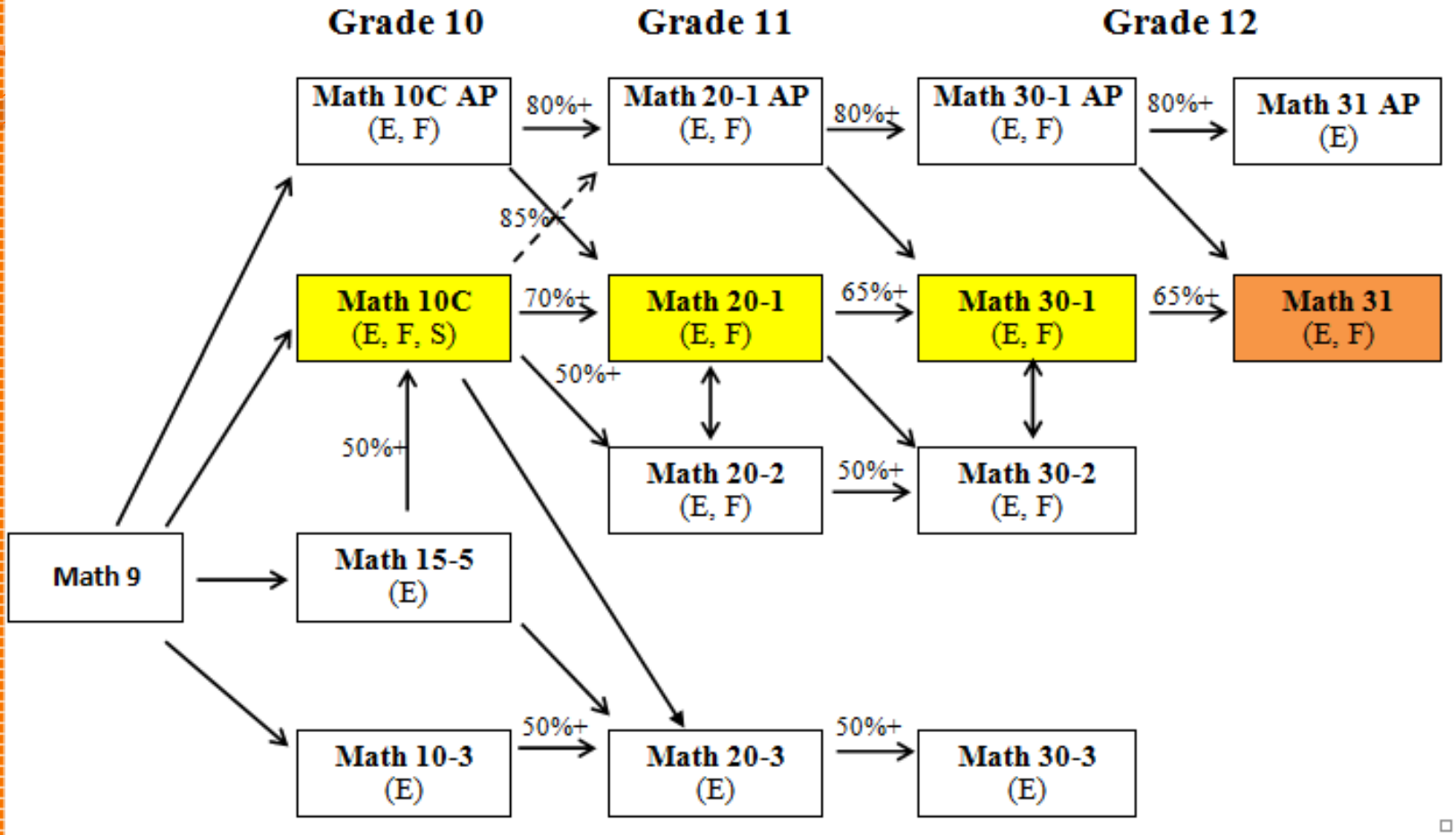
This sequence is designed to provide students with the mathematical understandings and critical-thinking skills identified for entry into **post-secondary programs** that **require** the study of **calculus**.

For example:

Engineering
Mathematics
Sciences
Some business studies
Other programs that require advanced math skills

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.

Pre-Calculus Mathematics



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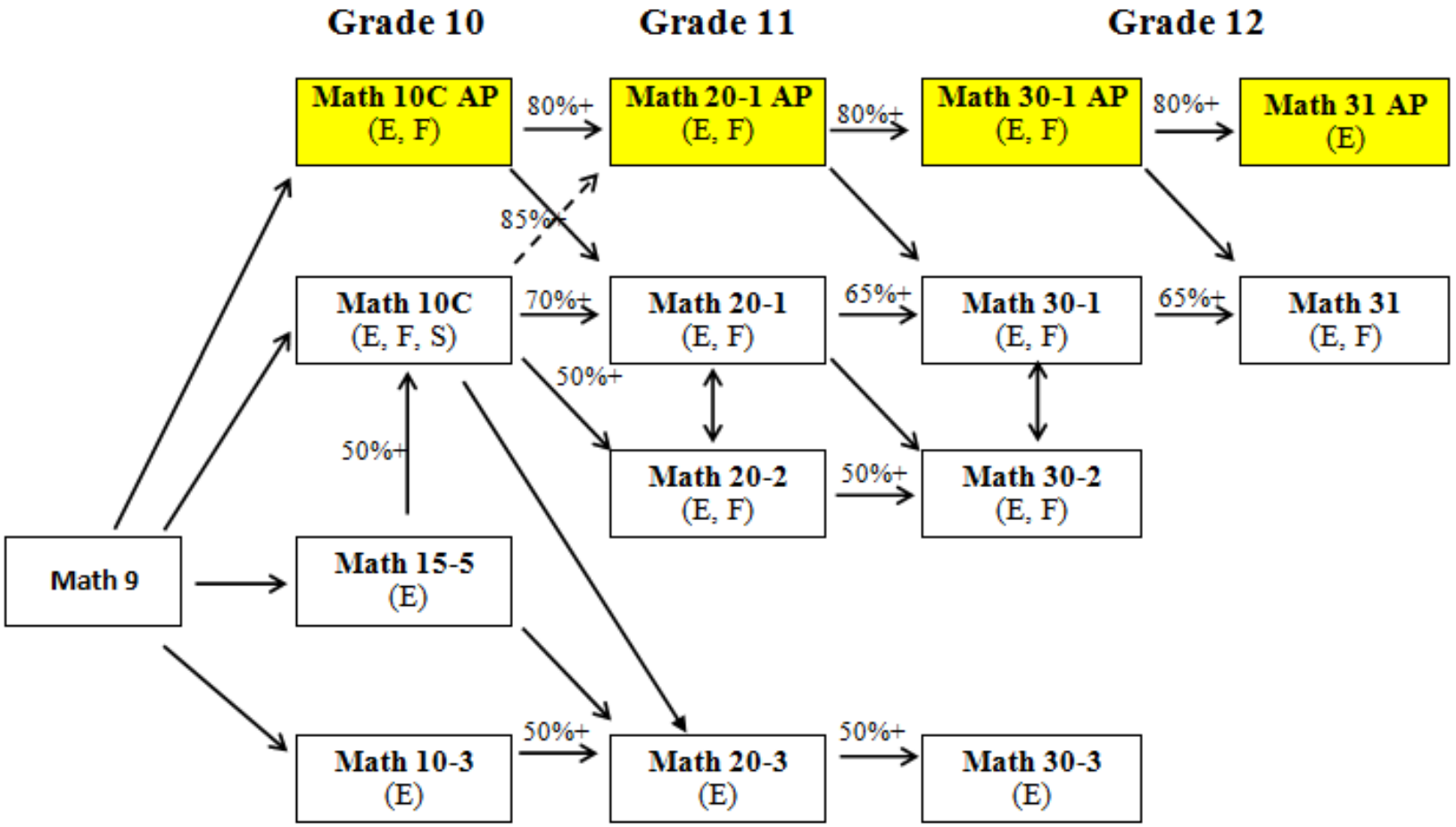
Pre-Calculus Advanced Placement



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Mathematics 31 (Calculus)

- The course is the introductory study of differential and integral calculus.
- It is intended for students who will pursue more education in mathematics, the natural sciences, or engineering at university, or who will enter highly mathematics-intensive programs at technical schools or colleges.
- To be successful in Math 31, you must be highly motivated, have excellent work habits and have a very strong math background.

Workplace and Apprenticeship Mathematics
(Math 20-3 & 30-3)

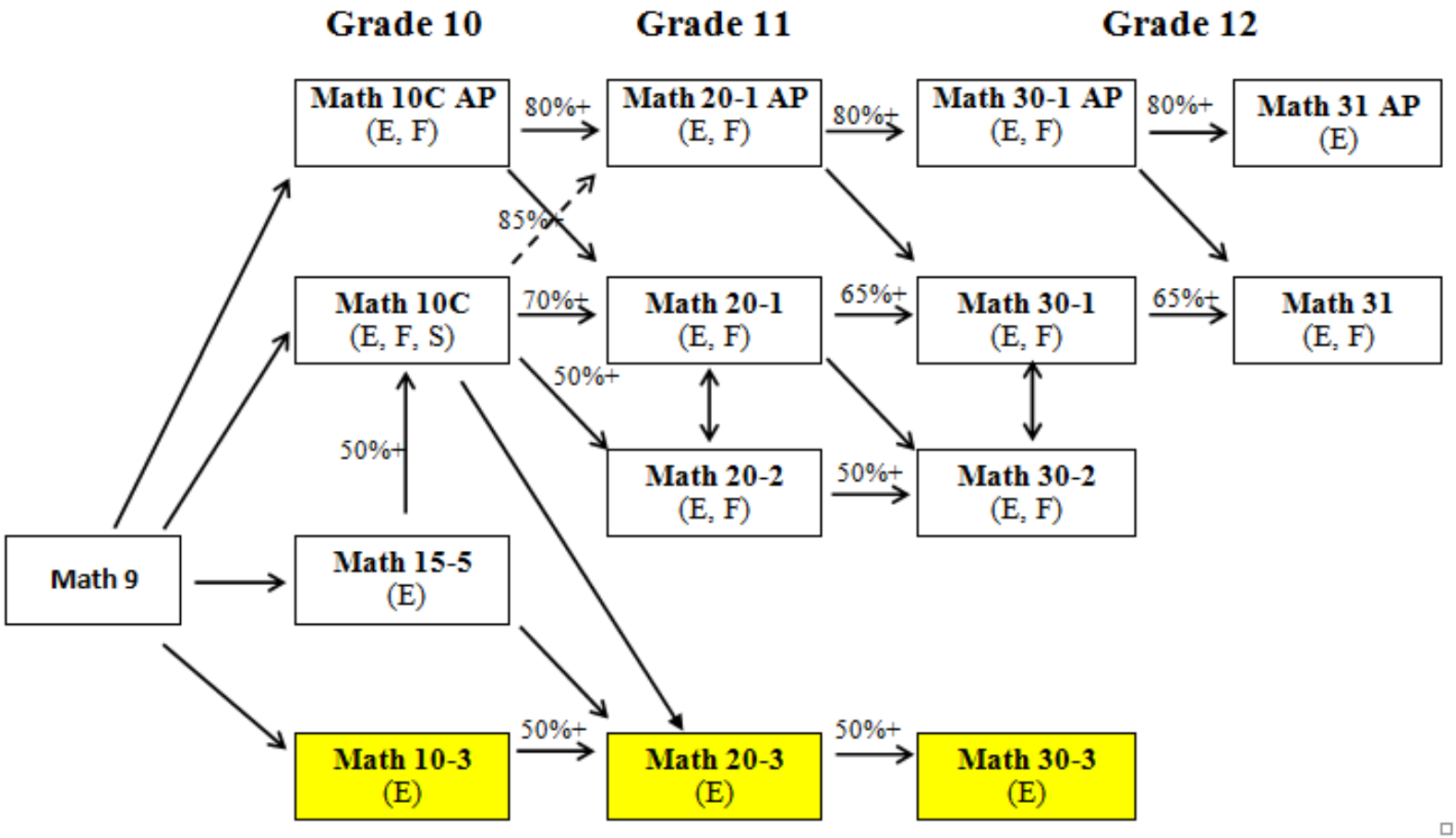
This course sequence is designed to provide students with the mathematical understandings and critical-thinking skills identified for **entry** into the **majority of trades** and for **direct entry** into the **work force**.

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.

Workplace and Apprenticeship Mathematics



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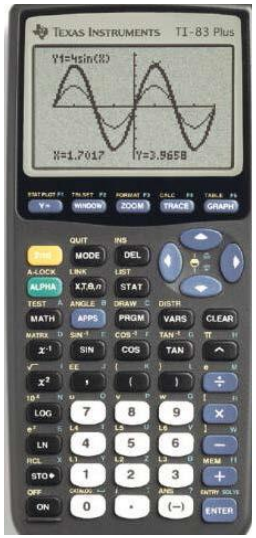
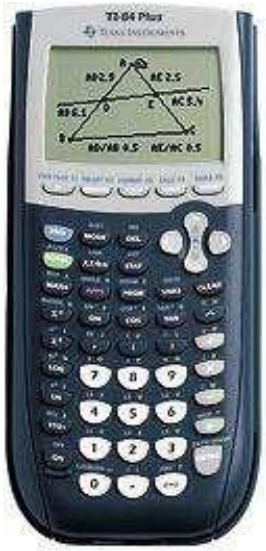
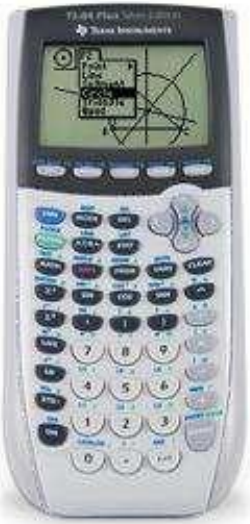
About the Graphing Calculator…

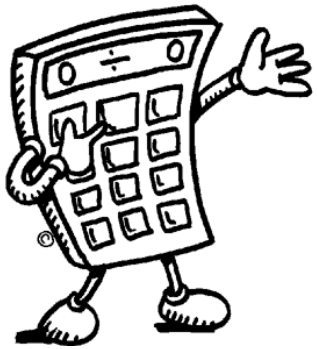
The **TI-83+ orTI-84+** are recommended

- A graphing calculator (approved byAlberta Education) is required for Math 10C, 20-1, 20-2, 30-1 and 30-2.









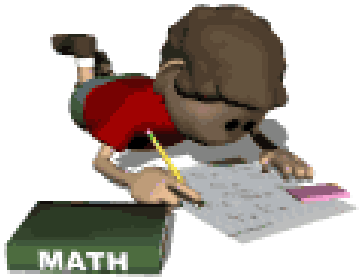
Math Tutorials

ABERHART

Monday-Thursday
8:30-8:55am

	Monday	Tuesday	Wednesday	Thursday
English **Español**	Rooms 301, 305 & 309	Rooms 302 & 305	Rooms 301, 305 & 309	Rooms 302, 305 & 309
Français	Salles 304 & 306	Salles 303 & 318	Salles 304 & 306	Salles 303, 309 & 318

Other Information



- **RESOURCES:** Resources such as 'The Keybook' and different Workbooks are sold through Math teachers.
- **PEERTUTORING:** Available through Guidance.
- **MATH CONTESTS:** Students will have an opportunity to write the following Math Contests: Canadian Math League Contests, the Alberta High School Math Competitions and the University of Waterloo Contests (Cayley, Fermat and Euclid). Stay tuned for more information over the semester.

Questions?

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ALBERTA EDUCATION WEBSITE: www.education.alberta.ca/math