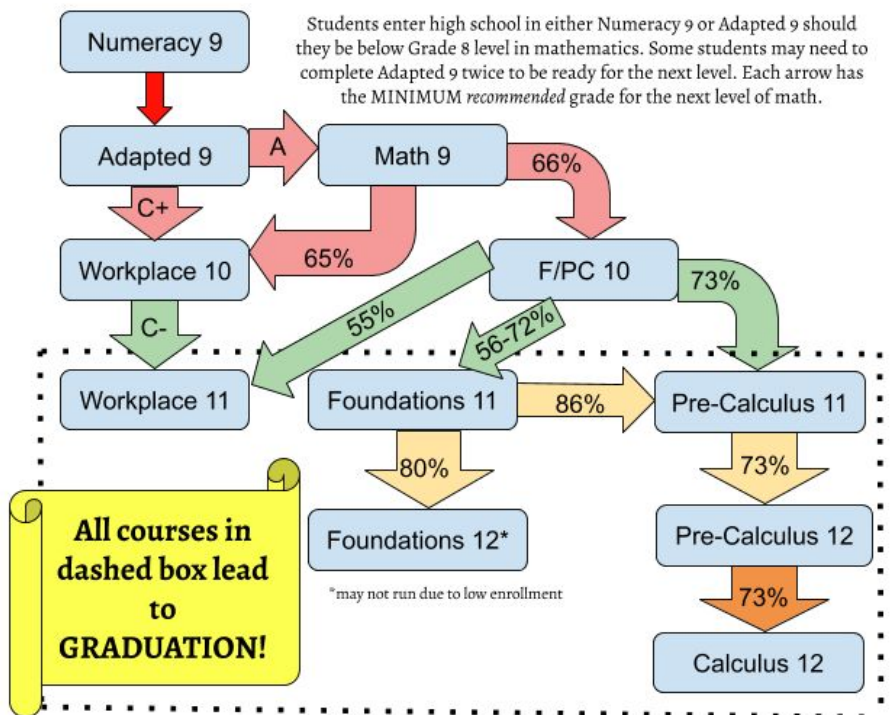


2020/2021 MATH PATHWAYS

What course should I take next???

If you ever took swim lessons, you likely remember having to take some levels more than once. It is not uncommon to be “stuck” in a swim level for 3 sessions, in fact! Swimming is a skill-dependent endeavor that has the potential to be very damaging to one’s well-being if those skills are not acquired in the proper order!

Mathematical skill acquisition is no different. As students’ knowledge gaps continue to pile up, their ability to be successful in the next course is greatly impacted. The end result can be their well-being being significantly affected--feelings of “drowning in math” may even come into play.



There are multiple ways to address knowledge gaps in mathematics. Here are some of the options:

1. **Upgrade the mark in the class** via a complete, 5 month re-do (ideal) or summer school (not ideal but better than not). Employ a tutor or use peer tutoring, for the second time through.
2. **Switch math pathways.** Not everyone needs to be in the academic math streams. The Workplace Math stream allows students who struggle in math to graduate and continue with their true passions. If university is a definite must to work towards, but mathematics is a struggle, staying with the Foundations Math stream is the optimal pathway. Students can apply to UVIC programs, for example, that do not require first year calculus, using Foundations Math.

Unfortunately, “trying harder” in the next course is simply not enough. Having better work habits does not erase knowledge gaps in mathematics.

Generally, we *recommend* the following courses for students for students upon exiting:

Exiting Course	take Workplace	take Foundations	take Pre-Calculus
Adapted Math 9	C+ to B (retake if below C+)	Consider Math 9 if you earned an A in Adapted 9	
Linear Math 9	C- to B	Linear FPC: A	
Mathematics 9	low C or C-	Linear FPC: high C or C+	Regular FPC: B or A
Linear FPC Math 10	60%	61% - 85%	86%
FPC Math 10	55%	56%-72%	73%
Foundations 11	n/a	80%	86%

Why take Linear Math 9 or Linear FPC Math 10?

- Students take TWO semesters to learn one math course. This is currently working well for students that need a slower pace for a variety of reasons, including but not limited to: health issues, slower processing speeds, low confidence, high amounts of extra-curricular activities/absences...
- **The curriculum is the same as 1-semester math. Students with many knowledge gaps need to know that although the math is being taught more slowly, it doesn't mean that the math is easier. Please refer to the table on the front page for what % we recommend for each course.**

Why take Workplace?

- Trades programs actually prefer students to have these courses, although students may enter with higher level courses.
- It is the easiest mathematics pathway out of high school. Workplace 10 is considered to be easier than Mathematics 9 since the units that are geared for Pre-Calculus courses are removed.
- Although other college and university programs tend to not accept this as a prerequisite, the math door is never locked. Students may upgrade their mathematics in college, should life necessitate it.

Why take Foundations of Mathematics (FOM)?

- Most* university programs will accept FOM 11 as a prerequisite as long as the desired program does not require Math 100 (Calculus). (*All UBC applicants must have PC 11)
- It is easier than PC 11. In fact, most students report that FOM 11 is easier than FPC 10. **If your FPC Math 10 is below 72%, FOM 11 is highly recommended prior to attempting PC Math 11.**
- It leads to FOM 12 which counts as an academic 12 in one's GPA. FOM 12 would be considered an easier academic 12, than say English 12, PC Math 12, Physics 12, etc.
- FOM 12 is an equivalent prerequisite to PC Math 11. Students can not only add an Academic 12 to their transcript, but also keep more postsecondary programs open than had they stopped at FOM 11. Esquimalt will offer FOM 12 each year but it is subject to enrollment, hence, it has not run as of yet.

Why take Pre-Calculus Mathematics (PC)?

- Any postsecondary program that has Math 100 as a required course, will demand that you have this level of math. Careers in medicine, science and engineering (amongst others) will require these courses.
- The highest ranked universities will require PC Math 11, even if the individual wants a degree in Music or Art.
- It leads to Calculus 12.

Why take Calculus 12?

- Careers in medicine, science and engineering (amongst others) require at least a first-year calculus course (Math 100). Calculus 12 is a recommended prerequisite for Math 100.
- Historically, 50-60% of students fail Math 100 on their first attempt. Successful completion of Calculus 12 in high school greatly increases the probability of success in Math 100.
- Students MUST take PC Math 12 **BEFORE** Calculus 12. Concurrent scheduling of these classes will not allow students to be successful in Calculus.

Why take Adaptive Pre-Calculus Math 11?

...this course is running for the first time in Feb 2020. Depending on its success, it may or may not be offered again. Students wishing to take PC 11 in this format should simply sign up for regular PC 11 during course selection season.

The adaptive version of Pre-Calculus 11 is designed to suit students who wish to have the flexibility of a self-paced learning model, and the structure and support of a classroom model. This course is best suited for independent, mathematically capable, hard-working students who learn optimally at their own pace. This course may also be ideal for students who tend to fall behind in their mathematics, and then find it difficult to catch up with the rest of the class. The [ALEKS software](#) will wait exactly where the student has left off! Although the course will end at the regular semester's end point, it is possible for the student to have additional time to work on the course after the course has ended.

This course will cover the same topics as the regular version of Pre-Calculus 11, however it will be delivered using a combination of the ALEKS Adaptive Learning software and a flipped learning model. Each student will write an assessment test (no multiple choice) that will determine exactly what they know. ALEKS will then create a learning pathway for that student to reach the learning outcomes of the course. This pathway adapts continually as answers are entered into the program. [Click here](#) to learn more.

Each day, students will scribe notes from a flipped lesson that will be found on their Google Classroom. As students are working on the unit that they are personally ready for, the teacher will teach lessons to small groups of students and individuals. Students will be assessed on their practice work, their notes, unit tests and a final exam. Upon completion of this course, students may opt to continue to Pre-Calculus Math 12.

Should a student wish to take the *Adaptive* PC 11 course, they will sign up for *Regular* PC 11 on their course selection form. There will be a **Google Form sent out to all students, so that they can indicate that they would like this delivery model. Students will be selected using a priority registration system that may involve securing a teacher recommendation. Only one class of Adaptive PC Math 11 will be offered and it will be subject to enrollment.**