

General Information.

Discipline: Mathematics *Course code:* 201-015-50

Ponderation: 4-2-4 *Number of class hours:* 90

Prerequisite:

Sec. IV Math (Technical & Scientific *or* Science Option)
or 201-016-05 (in college)

Objective:

Analyze problems by using concepts in algebra and geometry.

Your teacher will provide you with contact information, a listing of office hours, and the breakdown of the class mark in your section (see the written supplement to this course outline).

Introduction. This course is designed for students who need to review or relearn the basic skills in algebra and trigonometry. Successful completion of this course will allow you to take Calculus I and other college level mathematics courses.

Objectives. The successful student should be able to acquire a basic vocabulary in mathematics, develop basic skills in manipulating and simplifying algebraic expressions, acquire expertise in solving polynomial equations, linear inequalities, equations involving rational expressions, equations with one radical, and exponential and log equations, and also graph basic linear, quadratic, absolute value, exponential, logarithmic and trig functions, use Pythagoras's Theorem, the trig ratios, Law of Sines and Law of Cosines, prove simple trig identities, and prepare for other math courses at the college level.

Required Text. *Introduction to Elementary Functions*, by Sergio Fratarcangeli. Available at the college bookstore for about \$19.

Course Costs. In addition to the cost of the text, a scientific calculator (about \$22) is necessary. Only calculators which have previously been inspected and approved via sticker by the instructor will be permitted for use on quizzes, tests or the final examination. The only calculator model which will be approved is

SHARP EL-531XG

This model is available for purchase at the bookstore, both independently and packaged with the course text.

Bibliography. *Algebra and Trigonometry*, by Carosiello, Gideon and Gaten, is a good source of additional exercises. *Precalculus*, by Faires and DeFranza, is also a useful reference.

Teaching Methods. Classes are primarily lectures with some discussion and problem-solving. Homework normally amounts to about four hours a week. Many of the failures in this course are due to missing classes. You are expected to attend all lectures, to read the textbook, and to do the homework. Work is required! If something is unclear, ask your teacher before class, or after class, by e-mail or whatever.

Departmental Attendance Policy. Regular attendance is expected. Missing six classes is grounds for automatic failure in this course. The enforcement of this regulation is up to each individual instructor.

Evaluation Plan. The Final Grade is a combination of the Class Mark and the mark on the Final Exam. The method of determining the Class Mark will be given by your teacher on the first day of classes (see the supplement to this course outline). The Final Exam is set by the course committee, which consists of all instructors currently teaching this course, and is marked by each individual instructor.

The Final Grade will be the better of:

50% Class Mark and 50% Final Exam Mark

or

25% Class Mark and 75% Final Exam Mark

A student *choosing not to write* the Final Exam will receive a failing grade of 50% or their Class Mark, whichever is less.

There will be no formula sheet(s) in the final exam.

Students must be available until the end of the final examination period to write exams.

Other Resources.

Math Website.

<http://departments.johnabbott.qc.ca/departments/mathematics>

Math Study Area. Located in H-200A and H-200B; the common area is usually open from 8:30 to 17:30 on weekdays as a quiet study space. Computers and printers are available for math-related assignments. It is also possible to borrow course materials when the attendant is present.

Math Help Centre. Located near H-211; teachers are on duty from 9:00 until 16:00 to give math help on a drop-in basis.

Peer Tutoring. Starting on the fifth week of each semester, first year students can be paired with a fellow finishing student for a weekly appointment of tutoring. Ask your teacher for details.

Academic Success Centre. The Academic Success Centre, located in H-117, offers study skills workshops and individual tutoring.

Course Content. List of Suggested Exercises from *Introduction to Elementary Functions*.

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|-------------------------|-----------------------|
| Functions | Algebraic Functions |
| 1.3 #1-2 | 5.1 #1 |
| 1.4 #1-2 | 5.3 #1-3 |
| 1.5 #1-5 | 5.4 #1-2 |
| 1.6 #1-3, 5 | 5.5 #1-2 |
| | 5.6 #1-2 |
| Linear Functions | 5.7 #1 |
| 2.1 #1-4 | 5.9 #1(a)-(l) |
| 2.2 #1-2 | |
| 2.3 #1-3 | Exp and Log Functions |
| 2.4 #1-3 | 6.1 #1 |
| 2.5 #1-4, 6 | 6.2 #1-4 |
| | 6.4 #1-4 |
| Polynomial Functions | 6.5 #3, 4 |
| 3.1 #1 | 6.6 #1-3 |
| 3.2 #2, 3, 5 | 6.7 #1-3 |
| 3.3 #1-2 | 6.8 #1 |
| 3.4 #1-2 | 6.9 #1-3 |
| 3.5 #1 | |
| 3.6 #1(a)-(f), 2(a)-(h) | Trig Functions |
| 3.7 #1 | 7.1 #1-3 |
| 3.8 #1(a)-(g), 3, 4, 5 | 7.2 #1-11 |
| 3.9 #1-2 | 7.3 #1,3 |
| 3.10 #1 | 7.4 #1-3 |
| | 7.5 #1-2 |
| Rational Functions | 7.6 #1-5 |
| 4.2 #1-3 | 7.7 #1-2 |
| 4.3 #1-3 | 7.9 #1-3 |
| 4.4 #1-3 | 7.10 #1 |
| 4.5 #1-2 | |
| 4.7 #1, 2 | |
| 4.8 #1(a)-(g) | |

College Policies. Article numbers refer to the IPESA (Institutional Policy on the Evaluation of Student Achievement, available at <http://johnabbott.qc.ca/ipesa>). Students are encouraged to consult the IPESA to learn more about their rights and responsibilities.

Changes to Evaluation Plan in Course Outline (Article 4.3). Changes to the evaluation plan, during the semester, require unanimous consent.

Mid-Semester Assessment MSA (Article 3.3). Students will receive an MSA in accordance with College procedures.

Religious Holidays (Article 3.2). Students who wish to observe religious holidays must inform their teacher in writing within the first two weeks of the semester of their intent.

Grade Reviews (Article 3.2, item 19). It is the responsibility of students to keep all assessed material returned to them in the event of a grade review. (The deadline for a Grade Review is 4 weeks after the start of the next regular semester.)

Results of Evaluations (Article 3.3, item 7). Students have the right to receive the results of evaluation, for regular day division courses, within two weeks. For evaluations at the end of the semester/course, the results must be given to the student by the grade submission deadline.

Cheating and Plagiarism (Articles 8.1 & 8.2). Cheating and plagiarism are serious infractions against academic integrity, which is highly valued at the College; they are unacceptable at John Abbott College. Students are expected to conduct themselves accordingly and must be responsible for all of their actions.