Algebra and Trigonometry
A first course

Meeting days and times:
Days of Class: Monday and Wednesday
Time: 5:15PM – 6:45 PM
Location: The Praxeum, Portsmouth NH
Start Date: Wednesday September 2nd, 2015
No Class Labor Day, September 7th, 2015

Professor Information

Darren Tapp
Email address: tappdarren@gmail.com
Web address: http://www.darrentapp.com
Office: The Praxeum
Office Hours: 4PM-5:15 Monday/Wednesday and by appointment
Phone: (603) 486-3029

NOTE: This course is developed two months at a time. This syllabus will only outline the months of September and October. These two months will focus on algebra while November and December will focus on trigonometry. A continuation of this syllabus will be available to students in October.

Course Description: This course is part of a fourteen month series providing an introduction to algebra and trigonometry. These two months we will begin with a review of arithmetic including multiplication, long division, and fractions, as well as the commutative, associative, and distributive properties. We will then cover algebraic concepts such as variables, properties of exponents, the binomial theorem, polynomials, long division of polynomials, and rational expressions.

Prerequisite: The student should be proficient in arithmetic.

Assessments: No grade will be given for this course. Students will be invited to take assessments at different times throughout the fourteen month period.

Texts: *Algebra* by I.M. Gelfand and A. Shen. **ISBN:** 978-0-8176-3677-7
Trigonometry by I.M. Gelfand and Mark Saul. **ISBN:** 978-0-8176-3914-3

Course Policies:

- **General**

  - Students are expected to contribute to class. This may include spoken or written engagement.
  - Questions are always welcome. If there is not time to address a question in class, then it's appropriate to address that question out of class.
  - Some time reviewing material independently out of class is expected.
  - A good faith effort is expected for completion of all assignments.

- **Assignments**

  - Every Monday students will be asked to think about the material in the next 48 hours.
  - Every Wednesday homework will be assigned. Students are expected to attempt all assigned problems.
  - The following Monday the assignment will be collected. Students are expected to alert the professor as to any questions that were unanswered. The professor will then go over those problems the same day if possible.

- **Attendance and Absences**

  - For best results attendance of most classes is needed.
  - Informing the professor of an absence by phone or email is helpful for planing the course.
  - An absent student should email any uncompleted problems to the professor and request to review those problems.
  - When there are extenuating circumstances, attendance may be possible remotely.

Academic Honesty Policy Summary: Students should accurately represent their work at all times. This will help the professor with instruction.

Tentative Course Outline:
The weekly coverage might change as it depends on the progress of the class.

Week	Content	Read Through
September 2nd	• Fractions • Long division	Section 5
September 9th	• The binary system • Commutative and associative properties	Section 9
Week 3	• Exponents • Order of operations • Variables • Distributive property • Fractions review	Section 16
Week 4	• Negative powers • Properties of exponents • Scientific notation	Section 21
Week 5	• Multiplying binomials	Section 24
Week 6	• Binomial theorem • Pascal's triangle/binomial coefficients	Section 27
Week 7	• Polynomials	Section 31
Week 8	• Rational Expressions	Section 35
Week 9	• Polynomial division/Euclidean algorithm	Section 37
November	• Review of algebra • New trigonometry syllabus distributed	