



# Course Outline: PERIOD 2 Foundations 20 Enriched Spring 2019 Semester

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## General Course Description

Foundations of Mathematics 20 is a continuation of Foundation and Pre-Calculus 10. This course is considered a Pre-Advanced (AP) course and will therefore have a focus on critical and creative thinking as it applies to Mathematics. Students will be challenged in this course to extend understandings of concepts beyond application and into analysis, synthesis and evaluation. The pace of this course will be rigorous and using class time provided imperative to success.

Students are encouraged to visit <http://carignanmath.weebly.com/> for extra help. Math videos and supplementary materials will be posted.

### Outcome for Chapter 6:

- **FP20.8:** Demonstrate understanding of systems of linear inequalities in two variables.

### Outcome for Chapter 7:

- **FP20.9:** Demonstrate an understanding of the characteristics of quadratic functions of the form  $y = a(x - p)^2 + q$ , including: vertex, intercepts, domain and range, axis of symmetry.

### Outcome for Chapter 1:

- **FP20.2:** Demonstrate understanding of inductive and deductive reasoning including: analyzing conjectures, analyzing spatial puzzles and games, providing conjectures, solving problems.

### Outcome for Chapter 2:

- **FP20.4:** Demonstrate understanding of properties of angles and triangles including: deriving proofs based on theorems and postulates about congruent triangles, solving problems.

### Outcome for Chapter 3 & 4:

- **FP20.5:** Demonstrate understanding of the cosine law and sine law (including the ambiguous case)

### Outcome for Chapter 5:

- **FP20.6:** Demonstrate an understanding of normal distribution, including standard deviation and z-scores.
- **FP20.7:** Demonstrate understanding of the interpretation of statistical data, including: confidence intervals, confidence levels, margin of error.

### Outcome for Chapter 8:

- **FP20.3:** Expand and demonstrate understanding of proportional reasoning related to: rates, scale diagrams, scale factor, area, surface area, volume.

### Project Outcome:

- **FP20.1:** Demonstrate understanding of the mathematics involved in an historical event or an area of interest

## EVALUATION:

Foundational Assignments (Formative)	0%
Extension Problems, Journals	10%
Project	5%
Concept Checklists	50%
Comprehensive Test #1 (Ch 6, 7 & 1)	10%
Comprehensive Test #2 (Ch 2, 3 & 4)	10%
Statistics Test (Ch 5)	5%
Final Exam	10%
TOTAL	100%

## CLASSROOM EXPECTATIONS:

- If you don't understand the way something has been taught I can usually teach it in a couple several different ways – just ask!
- My classroom is a place where people feel comfortable and accepted. Please behave in ways that help make that true.
- Phone use: During teaching time, phones must either be left in your locker or placed in your slot in the phone holder at the front of the classroom. On most days you will be allowed to retrieve your phone after I am done teaching. This privilege will be removed if you choose to use your phone inappropriately in class.
  - Phones will NEVER be allowed during tests so be sure to always have your graphing calculator with you! I do not usually have extra calculators so you must come prepared.
- Extra help: Please always ask if you have any questions. Campbell Collegiate Math Teachers also provide a scheduled math help session every day – please check the posted sign in my classroom for times and locations
- There is no such thing as a stupid question! Ask if you don't understand!!!!!!
- You must come prepared for class – bring all supplies and your textbook every day.

## SUPPLIES NEEDED:

- GRAPH PAPER (MUST HAVE!!)
- loose leaf
- Binder
- Textbook
- Ruler
- Pencils
- Eraser
- Coloured Pens (Erasable Coloured pens are a helpful tool)
- Highlighters
- Sticky Notes
- Scientific Calculator (APPROVED STYLES ONLY)

**CALCULATORS WITH THE FOLLOWING FEATURES WILL NOT BE ALLOWED: WriteView, Mathprint,**

**Multiview,**

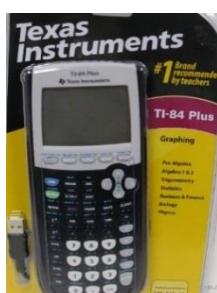
**Natural Display**

**Textbook Display**

- Graphing Calculator (See below)

You need to have a **Texas Instrument Graphing Calculator** in order to complete various Pre-AP portions of this course (and for each subsequent Pre-AP and AP Math course). The AP final exam in grade 12 is written using the graphing calculator for half the test and no access to any calculator for the other half.

- Below are photos of some of the types and varieties that will meet the needs of the students.



**TI-84 Plus**

Regular black or Silver Case  
This calculator has a black and white screen and uses replaceable batteries



**TI-84 Plus C**

The case comes in various colours  
This Calculator has a coloured screen and a rechargeable battery



**TI-84 Plus CE**

The case comes in various colours  
This Calculator has a coloured screen and a rechargeable battery  
It is thinner and lighter than the previous two models

## DAILY WORK: FOUNDATIONAL ASSIGNMENTS & UPPER LEVEL ASSIGNMENTS

One of the most important things you can do to be successful in this class is to do your daily work. Most days I will give you an assignment that is broken into three parts:

- The first part of each daily assignment is the **Foundational Assignment (FA)**. This assignment contains the fundamental questions that cover the basic foundation of the concept, and will cover the minimum of skills needed to pass the class. **This assignment counts for formative marks on a daily basis and counts towards the incentive.** Completing this assignment will help you to earn up to a 60% average in this class. These assignments will be due to be handed in for formative evaluation. These assignments must be labelled properly, be neatly completed and show all appropriate work in order to receive credit.
- The second part of the assignment is called the **MID LEVEL ASSIGNMENT (MLA)**. This assignment contains higher level questions which will provide you with practice questions that are necessary to understand if you wish to get a mark above a minimum of 60%, as well as extra practice at Foundational Level Questions. Homework checks on this homework will be conducted and recorded on a regular basis but will not be counted towards the incentive.
- The last level of the assignment is called the **UPPER LEVEL ASSIGNMENT (ULA)**. This assignment contains stretch and extension questions that will help students prepare for upper level math classes such as AP. Students who are motivated to do well in AP are encouraged to work on these questions throughout the semester. It is often advisable to work on these questions collaboratively with other students. Homework checks will not be done on these questions but they may be discussed in class.

I use the Remind APP to send out homework assignments, answer keys to assignments and reminders about upcoming Concept Checks or Comprehensive Tests. It is very important that all students sign up for REMIND. Please use the following code to sign up now (Please use your actual name to sign up for Remind so that I know who you are!)

**A** If you have a smartphone, get push notifications.

On your iPhone or Android phone, open your web browser and go to the following link:

[rmd.at/4e29h74](http://rmd.at/4e29h74)

Follow the instructions to sign up for Remind. You'll be prompted to download the mobile app.

**B** If you don't have a smartphone, get text notifications.

Text the message [@4e29h74](https://www.remind.com/text/4e29h74) to the number [\(780\) 666-7508](tel:7806667508).

\* Standard text message rates apply.

Don't have a mobile phone? Go to [rmd.at/4e29h74](http://rmd.at/4e29h74) on a desktop computer to sign up for email notifications