



# GEORGE HARVEY COLLEGIATE INSTITUTE

## Student Course Outline

### MCB 4UO Advanced Placement Calculus AB

April 26, 2007

**Developed by:** R. Ng

**Approved by:** John Yan

**Prerequisite:** MCR 3U or MCB 4U

**Credit Value:** One

### COURSE DESCRIPTION

### UNITS OF STUDY

UNIT	TOPIC	(110 HOURS + a minimum of 5 hours after school)
1	Functions, graphing end behaviour, limits and continuity	16 Hours
2	Derivatives and their applications in word problems (related rates, maximum / minimum )	24 Hours
3	Curve sketching of polynomial, exponential and logarithmic functions ( with respect to global and local max/min and concavity )	15 Hours
4	Exponential word problems and trigonometry	10 Hours
5	The definite integral, Riemann sums and the fundamental theorem of Calculus	25 Hours
6	Area under the curve, volumes of revolution, solving for antiderivatives and slope fields	25 hours

## ASSESSMENT/EVALUATION

The assessment/evaluation in this class will consist of the following:

- Paper and Pencil unit tests and quizzes
- Participation in after-class prep and extra teaching sessions
- Final Exam
- Optional participation in the College Board Exam in May

Students will be assessed and evaluated frequently throughout the course. All materials - review and theory questions, exercises and handouts distributed during the class - should be studied in preparation for written tests and evaluations. A student will receive a mark of zero for missed tests. Students returning from absences--with proper documentation-- will be allowed to write make-up tests. It is the student's responsibility to make arrangements with the subject teacher. All other aspects of assessment and evaluation in this course are subject to the School Assessment and Evaluation Policy. See student agenda for more information.

## ASSESSMENT/EVALUATION (cont'd)

<b>IN-CLASS ASSIGNMENTS &amp; TESTS</b> <ul style="list-style-type: none"> <li>• Knowledge/Understanding (30%)</li> <li>• Thinking/inquiry (10%)</li> <li>• Communication (10%)</li> <li>• Application (20%)</li> </ul>	70%
<b>SUMMATIVE EVALUATION</b> <ul style="list-style-type: none"> <li>• Knowledge/Understanding (10%)</li> <li>• Thinking/inquiry (5%)</li> <li>• Communication (5%)</li> <li>• Application (10%)</li> </ul>	30 %
<b>TOTAL</b>	<b>100%</b>

## RESOURCES

### Textbook:

Calculus : Graphical, numerical , algebraic : 3<sup>rd</sup> edition  
Finney, Demana, Waits and Kennedy  
Pearson  
ISBN- 0-13-201 408- 4

### Study guide:

**Barron's AP Calculus**

### Teacher Notes

posted on [www.myteacherpages.com/webpages/RNg1](http://www.myteacherpages.com/webpages/RNg1)

## STUDENT RESPONSIBILITIES

### Materials Required

- ✓ Textbook (The textbook will be provided to you by your teacher.)
- ✓ 3-Ring Binder (Remember to always have lots of lined paper and keep your binder neat and organized.)
- ✓ Pen, Pencil, Eraser, Ruler, Graph paper
- ✓ Graphing Calculator (Mandatory for daily use and at home).

### Attendance

It is expected that students will:

- Arrive for class promptly, with all necessary materials
- Make efficient use of class time
- Complete all assignments by due date
- Keep an up-to-date notebook
- Be responsible for all notes, assignments and tests given in their absence.

### Additional commitments:

- Keep in contact with Ms. Ng via email
- Check Ms. Ng's website regularly for posting of extra notes/ answers

