



Mr. Molina's Multivariable Calculus Honors guidelines

Teacher: Mr. José Molina

Office	Days of the week	Time	Location
hours:	Monday - Thursday	Lunch	L217

If you cannot make the above office hours, please make an appointment. You can reach me at 408-537-9434 or e-mail, jmolina@bcp.org. Email is my preferred method of contact. Web page address is <http://webs.bcp.org/sites/jmolina/default.htm>.

Text: Calculus (Multivariable Version, 9th edition) by Howard Anton.

Materials: Pencil (0.5 mm mechanical recommended), straight edge, multiple blue books and a graphic calculator (see next item).

Technology: We will be using a computer algebra system (CAS), Mathematica 6.1. Students are not expected to purchase a copy of Mathematica 6.1. Students will be able to use Mathematica 6.1 at Bellarmine. The required calculator is a Texas instrument 83 or 84.

Course Description: We will study three dimensional space, vector valued functions, partial derivatives, multiple integrals, and topics in vector calculus.

Philosophy: Multivariable Calculus is a second year college course. This course at Bellarmine **does not** give the student college credit. The intention of the course is, minimally, to prepare the student for a rigorous multivariable college course. At the end of this course if a student is confident in his abilities of multivariable calculus, next fall (at his college) he should challenge multivariable calculus. This will be a demanding course. A student in this course is expected to have an average of 45 - 60 minutes of homework per night. A student is also expected to seek extra help, provided he is struggling.

Behavior: You are expected to show compassion, consideration, respect for others, and enthusiasms while you are at Bellarmine, particularly in this classroom. Bellarmine cherishes its diversity as it strives to educate each student to accept that all persons are created in God's image and are unique expressions of the divine. In any circumstances we must tolerate one another. Specifically, Bellarmine (and classroom L217) will not allow any expression that mocks, diminishes or imputes the dignity of integrity of any person or group: **no racist, sexist, homophobic, abusive, or foul language, expression, or behavior will be tolerated at Bellarmine.**

Jugs: Mr. Molina gives his own jug unless he believes it is in the best

interest of the student to see the Dean. Jugs are as follow: You will be given a topic to research and write a two page single-spaced essay. You will only have two school days to complete the jug paper. **Failure to complete the jug paper on time will cost the student one homework grade. Each day the jug paper is late a homework grade will be deducted until it is turned in.**

Grades: Your grade will be composed of the following categories:

1. Tests are worth 45% of the grade.
2. Quizzes are worth 20% of the grade.
3. Homeworks are worth 15% of the grade. See homework policies and suggestions at the end of this document.
4. The final exam will be worth 15% of your grade. [◇]
5. Participation will be approximately 5% of your grade. Participation grade is determined on two items: 1. How well your group functions according to the roles of cooperative behavior. 2. How well you benefit to the class and classmates overall. This category may be used (by the teacher) to influence any borderline grades.

[◇] **REMARK:** *Your son's grade can change significantly at the end of the semester due to the weight of the final exam being 15%. The final exams for the mathematics department are Monday December 19 (Fall Semester) and Wednesday May 23rd (Spring Semester).*

The grading scale is as follows:

$A^+ \geq 97.5$	$97.5 < A \leq 92.5$	$92.5 < A^- \leq 89.5$
$87.5 \leq B^+ < 89.5$	$82.5 \leq B < 87.5$	$79.5 \leq B^- < 82.5$
$77.5 \leq C^+ < 79.5$	$72.5 \leq C < 77.5$	$69.5 \leq C^- < 72.5$
$67.5 \leq D^+ < 69.5$	$62.5 \leq D < 67.5$	$59.5 \leq D^- < 62.5$
$0 < F < 59.5$		

NOTE: Grades will be rounded up to the tenth place. Grades are frequently updated on the parentconnect.bcp.org website. You are encouraged to keep track of your grade by keeping all of your corrected tasks and visiting the previously mentioned website.

EXAMS: Almost all exams are without the use of a calculator.

Final remark: This syllabus should be and it is regarded as a contract. Discuss this entire document with one of your parents or guardian. Then email Mr. Molina at jmolina@bcp.org notifying him that

you and one of your parents/guardian have read and agree to the terms indicated by this course guideline. Feel free to copy and paste the below:

I (state your complete legal name) have reviewed the entire course guideline with one of my parent/guardian. We agree to the terms outlined by the entire document.

Finish the email by Sincerely and typing your legal name.

Homework Policies and suggestions

Policies	Suggestions
<ul style="list-style-type: none">• For each homework unit, please use a Bellarmine Blue Book. Do not do your homework on any other pages except for the Blue book you are using for the according unit.• For each homework, <u>if a student fails to use the Blue book</u>, he will earn a zero credit for that particular homework. NO EXEPTIONS. The objective of the Blue Book is to keep all of the student's unit homework collated in one source.• No late homework will be accepted unless the student has an excused absence.• A student will receive 3 points if at least 90% of the homework is completed. It is up to the student to check for accuracy of his homework. No partial credit is awarded.• Visit the Homework web page to see the daily homework assigned.	<ul style="list-style-type: none">• Purchase at least 8 Blue books at a time so that you do not run short of a supply.• Try and use one Blue book per unit. Most students are able to use one Blue book per unit. If you write big and use lots of space, you are likely to need multiple Blue Books per unit.• Keep the Blue Books after it has been graded. Your Blue books will be a good resource for reviewing.• When doing homework do not be shy about taking risks. It is more than ok to make errors on your homework. You will learn from your mistakes.• Come prepared to class to discuss the homework questions that you either struggled or need more clarification.• Print the Homework syllabus from the Homework web page.

Multivariable Calculus Honors Syllabus

Academic year: 2012 – 2013

Period: 5

email: jmolina@bcp.org

Web page: <http://webs.bcp.org/sites/jmolina/default.htm>

Instructor: José Molina

phone: 294 – 9224, xt 434

Goals

To learn the topics of Multivariable Calculus described earlier in a loving and cooperative manner.

Course outcomes

- ❖ **Open to growth.** Students will apply course content to problem solving exercises. They will actively contribute to cooperative learning in their small groups and with the class at large. Students will grow in their ability to move beyond computational math to analysis and application of geometric principles to real-life situations.
- ❖ **Intellectually Competent.** Students will explore various problem solving strategies that can be used to solve mathematical problems. They will demonstrate their mastery of concepts through daily class work, homework, group work, quizzes, and tests. Students will write detailed explanations of mathematical thinking and problem solving strategies as related to units of study.
- ❖ **Pursuing Leadership Growth.** Students will help each other discuss their ideas as they work through presented challenges by the teacher. They will take a lead in facilitating group work and in teaching classmates how to solve more difficult problems. In doing so, students will demonstrate the ability to work cooperatively toward our common goals as a class.

Teaching and Learning Methods

- ☺ Cooperative learning
- ☺ Lecture
- ☺ Use of Technology: We will be using the TI 83 calculator and looking at math animations from the web. Mathematica 6.1
- ☺ Class discussion
- ☺ Tests

General Expectations

- ☹ Be on time to class
- ☹ Bring learning materials (text, notebook, calculator, and pencil) to class every day.
- ☹ Return assignments completely and on time; homework will be given daily. (see chapter syllabus for details.)
- ☹ Be respectful of yourself, classmates, and teacher.
- ☹ At any time you are working in a small group work cooperatively and supportively.