

**Instructor:** Yvette Butterworth

**Text:** *A Graphical Approach to Precalculus with Limits*, Ed. 5, Hornsby, Lial & Rockswold  
*Precalculus Supplement*, Custom Edition for Foothill College

**Hours:** T & Th 8:00-9:50 am & Friday 9:00-9:50 in 4221

**Office Hours:** Monday 1-1:30 TBA

T&Th after 11am by appointment

Friday 10-10:30 TBA

**E-mail Address:** [profbutterw@yahoo.com](mailto:profbutterw@yahoo.com) or [butterworthyvette@fhda.edu](mailto:butterworthyvette@fhda.edu)

**Web Site:** <http://www.profbutterworth.com>

**Skype:** profbutterworth

### Course Description:

Math 48c, Precalculus III, is a course that continues exploring families of functions, and in particular, periodic functions. We will look at transformations of periodic functions and applications of those functions in real-world phenomena, such as objects undergoing simple harmonic motion. We will end the course by doing a culmination of all the functions learned in Math 48a, 48b and 48c. Additionally, we will work on mathematical thinking, logic and reasoning skills by writing simple proofs using trigonometric identities. Lastly, time permitting, we will look at the topic of limits, which is the beginning of calculus.

### Student Learning Outcomes:

Upon successfully completing of Math 48C, the student will be able to:

1. Model real-life phenomenon using linear, polynomial, trigonometric, exponential, logarithmic and rational functions.
2. Use the models in 1) to make predictions and interpret solutions within context of real life circumstances.
3. Demonstrate the ability to apply trigonometric functions, identities and the Law of Sine and Cosine to solve application problems.
4. Demonstrate the ability to define, graph and apply vectors and parametric equations in appropriate applications.

### Required Materials:

*A Graphical Approach to Precalculus with Limits*, Ed. 5, Hornsby, Lial & Rockswold **and** *Precalculus Supplement*, Custom Edition for Foothill College; Access to Course Compass; TI-83 or TI-84 Series Calculator; Pencils, Paper (for notes, quizzes and homework); a 3-ring binder (1.5in. or larger) is also a good idea.

### Attendance:

Attendance is very important. You are expected to attend every class meeting. Class sessions will cover material from your book, but may also give a different perspective on the material in your book. A student who stops attending is not automatically dropped from class, although I reserve the right to drop a student who misses 3 class meetings. *Students on the final grade roster who have not dropped, and who do not show up for the final exam, automatically receive an F in the course – it is your responsibility to drop yourself from the class if you don't wish to continue.* Please contact the instructor or the Admissions and Records Office if you can't continue. The **add/refund deadline** is Sat., 1/18. The **NRS deadline** is Mon., 1/20. The **W deadline** is Fri., 2/28.

### Course Compass Homework:

You will use Course Compass to do additional homework on-line. The course id is: **butterworth71457**. Learning mathematics is similar to playing a sport well. One must put in the time to practice. **You should expect to spend 2 – 3 hours each night on homework**, including reading the textbook and doing the problems. The online homework problems are posted on MyMathLab. You have multiple chances to answer the question correctly and are given extra help and guidance if needed. This portion will comprise 10% of your grade.

### **Applied Homework/Class Work & Participation:**

Your first assignment will be a group assignment on the 1<sup>st</sup> day of class. You will be getting to know your fellow classmates and familiarizing yourself with the layout of my class. The assignment should be nearly complete by the time you leave class on the first day and then you will be required to take the handout to the PSME on your own time and have it signed by a faculty or staff member. This assignment is due, by Thursday, January 23 regardless of your date of enrollment. I will reduce the grade by 25% per class day for late work.

Your second & third assignment is to fill out a set of questions about yourself and your reasons for taking this class. On the back of this information sheet, which I call an **Informative Questionnaire** is a contract between you and I that indicates that you have read and understand my syllabus and agree to the requirements set forth in my class. Successful completion of both sides is required for credit. It is due by Thursday, January 23 as well. This is the ONLY assignment that I will accept late. I really want this information and I am willing to accept between Jan 23 and Feb 27 for 75% credit (if it is complete).

I will assign problems to be worked for the next class during each session. These problems will be from the book, from handouts and printouts of problems from Course Compass. You must be in class to get the exact homework (although you may find it posted on the Google Calendar for your class on your class webpage). These homework assignments will be collected by me, checked off for completeness and returned to you for self-check. Work is late after I have checked it off in class and can only receive up to 70% credit for completed work regardless of the reason for being late. I will discuss how to deal with emergencies in class – keep in mind that I will always require a paper copy upon return. An emergency situation will only be given attention 5 or fewer times.

A final component will be individual and group work. During these assignments, you will be given work that will use all your developing skills in a more real-world statistics scenario than problems you will be encountering in the book. You will need to be present in class to work on these assignments. A missed group work can be made up for 70% credit.

This portion of your grade will comprise 10% of your grade.

Some final pointers about all work in my class: All work will be labeled with section and assignment (if from our book) and will be stapled in the upper left corner in sequential order and your name and date in the upper right. All problems must show the original problem, work and final answer to be considered complete. An answer only is never considered complete. Remember, if you don't do your homework on your own and in a timely manner, you are hurting no one but yourself – homework is a very valuable learning tool, and tests will let me know how much work you are doing on your homework! Late assignments standards **will not** be reconsidered.

### **Quizzes:**

A quiz will be given nearly every week on each chapter that we cover. These quizzes will be mostly multiple-choice, though some work may still be required to support answers. You will not use a Scantron form. The tentative schedule for these quizzes is shown on the calendar at the end of the syllabus.

If you do not receive a 70% the first time, you will get a “penciled-in grade” in the grade-book and will have the opportunity to make corrections. Once corrections are done you will need to visit the learning center and have a tutor go over the corrections and sign-off the quiz. Once this process is complete, you may make an appointment to retake the quiz in the Learning Center. If you miss a quiz you will get a note to take the quiz. The max grade attainable for a missed quiz will be 75%. This entire process must be done by the 2<sup>nd</sup> Friday following the original quiz. The quizzes will account for 20% of your grade.

### **Midterm:**

The midterm will contain problems like those encountered in class, in homework, in practice exams, on Course Compass and other work done in class. The midterm will cover material up to one week prior to the exam. Problems will be graded based upon support for answers using formulas and pertinent statistical knowledge. All work will be required to be shown and a final answer given based upon work shown. Grading will be based upon correct use of statistical knowledge, work shown using correct formulas and knowledge and a correct of the final answer. The midterm will be given a percentage. It is possible that it will be curved. If you miss the midterm you will need to make it up during my office hours (no exceptions) by the 2<sup>nd</sup> Friday following the midterm. A make-up midterm will not receive a curve if one was given. The midterm will account for 30% of your grade.

You must bring a valid ID to the midterm. A valid form of ID may be a state driver's license, a CA ID, a VISA/Passport or foreign ID. An OWL card **is not** a valid form of ID.

You may bring an **8.5x11 note card** to the midterm. The card may contain formulas, steps for doing problems and using your calculator, and portions of a problem where you know you always have difficulty, but it **may never contain a complete problem/example**. You **must** staple the note card to the back of your test.

### Final Exam:

The final will 30% of your grade. The final is cumulative but will focus more attention on material covered following the midterm material. The final will be **Thursday, March 27 7:30-9:30am**.

You must bring a valid ID to the final. A valid form of ID may be a state driver's license, a CA ID, a VISA/Passport or foreign ID. An OWL card **is not** a valid form of ID.

You may bring an **8.5x11 note card** to the final exam. The card may contain formulas, steps for doing problems and using your calculator, and portions of a problem where you know you always have difficulty, but it **may never contain a complete problem/example**. You **must** staple the note card to the back of your test.

### Grades:

Quizzes	=	20%
Course Compass	=	10%
HW/CW/Participation	=	10%
Midterm	=	30%
Final Exam	=	30%
<b>Total</b>	=	<b>100%</b>

### Percent Totals for Letter Grades

**A:** 89.45%↑ **B:** 89.44% - 79.45% **C:** 79.44% - 69.45% **D:** 69.44% - 59.45% **F:** 59.44%↓

### Class Rules:

The rules of my classroom are pretty basic – Be respectful of others. This means that you should not interfere with anyone else's ability to learn. Ways in which you may interfere include talking during lecture, not participating in group activities, using electronic devices for music/texting/gaming during class, making any kind of disruptive noise during class, coming to class late and not making an effort to be as unobtrusive as possible, wearing a hat in class, etc. I will follow the policies outlined in the college catalogue in dealing with violations of the class rules. Note: If I see your cell phone out on a consistent basis and see you disrupting others through its use or if you are not focusing, you will be warned and following a warning asked to leave the classroom! Cell phones are not allowed out during quizzes and tests! Having a phone out for any reason, without expression consent will be considered cheating (see below)! I know there are unexpected emergencies as well as times when we are expecting an important phone call, so I if the need arises, please use your phone discreetly. Discreet phone use includes keeping it on silent mode and preferably in your pocket. Discreet use also means waiting to answer the phone until you've stepped outside, or if it can't be put off, answering with a quick whispered, "Hello, hold on for a second." Just so you know in advance, my cell phone is always on my desk because I use it as a time keeping device for breaks and end of class, and you can be assured that I will not be answering it unless it is an emergency – and I do have children that will from time to time be with a babysitter, so those can arise!

### Student Honesty:

When doing homework I encourage students to work together and help one another. Students are expected to do their own work on tests and quizzes. I allow students to bring a 8.5x11 note card to the midterm and final. Cheating will not be tolerated! Talking to anyone but me, helping another student during an tests/quizzes, bringing more notes than authorized, copying information from another person's test or quiz, using external sources of information for which you were not explicitly given permission to use (including any calculating device not explicitly stated as appropriate, phones and pda's included) is considered cheating. Students caught participating in such activities will receive a zero on a quiz, violations on a midterm or final can also result in a drop from the course or a grade of an F in the course (regardless of class standing)! Cheating incidents will also be reported to the Dean of Students and further action could be taken in accordance with school policy.

### Student Grievances:

Please refer to the grievance policy in the college catalog if you have any questions.

### **Student Special Services:**

Students requiring special services or arrangements because of hearing, visual, or other disabilities should contact their instructor, counselor, advisor, or Disabled Student Services Office in Room 5997 (in the portables near entrance to lot 5) as early as possible in the quarter. To obtain disability-related accommodations you may also contact DRC at [adaptivelearningdrc@foothill.edu](mailto:adaptivelearningdrc@foothill.edu) or by calling (650) 949-7102 asking to speak with Akosua Grant the Accommodations Coordinator. I encourage all students with special needs to contact me as early as possible to arrange for any classroom assistance and to discuss your needs. You must contact me at least 2 weeks prior to the first exam to make arrangements and 1 week prior to EVERY exam to secure accommodations for your needs.

### **Additional Information:**

I reserve the right to make changes or additions to my syllabus at any time during the quarter. I will notify you via class discussion of any changes or additions. The college catalogue overrides my syllabus at any time.

You may find that you need additional help outside of class. I strongly urge every student to begin getting extra support from the beginning. Some additional resources include, tutoring offered in the PSME (Math) Center in Rm 4213, Tutorial Center, private tutors and of course my help (during office hours; see above) and your class mates' help.

### **Welcome to 3<sup>rd</sup> Quarter Pre-Calculus:**

Welcome to Math 48C! I am excited about the coming quarter! I am here to help you prepare for Calculus and if there is anything that you think will make your learning experience more rewarding, please let me know (please do not make the mistake that this is an invitation for you to tell me how to run my class, this is merely on a one on one office hour basis). By now I expect that you realize that in order to be a successful mathematician it does take practice, but I will remind you! You should plan to spend **at least 2 hours** outside of class, for every hour in class, studying your notes, text and doing problems (this means **at least 10 hours per week**; it is not wise to assume it will all happen on the weekend). I would like to stress that any math class goes very quickly – please stay abreast of your work and don't neglect your study. Class participation and study/project groups are very important as well! We will have occasional class time for group study, but you should get the names and numbers of at least two fellow class members to call in case you miss a class or need to ask a quick question. Have a great winter quarter at Foothill!

### A Brief Look at The Quarter:

Monday	Tuesday	Wednesday	Thursday	Friday
6	7 Introduction Supplemental 1.5	8	9 Supplemental 2.1 & 2.2	10 In-Class Exercise
13	14 Text 8.4 & 8.5	15	16 In-Class Exercise	17 Quiz #1 Add Deadline Saturday
20 Campus Closed No Classes NRS deadline	21 Text 9.1 & 9.2	22	23 Text 9.1 & 9.2 <b>Due:</b> Questionnaire & 1st Day Handout	24 Quiz #2 Last Day for Quiz #1 Make-Up
27	28 Text 9.3 & 9.4	29	30 Text 9.3 & 9.4	31 Quiz #3 Last Day for Quiz #2 Make-Up
Feb 3	4 Text 9.5 & 9.6	5	6 Text 9.5 & 9.6	7 Quiz #4 Last Day for Quiz #3 Make-Up
10	11 Text 10.1	12	13 Quiz #5 Review	14 Campus Closed No Classes
17 Campus Closed No Classes	18 Text 10.2 Review Last Day for Quiz #4 Make-Up	19	20  Midterm	21 Quiz #6 Last Day for Quiz #5 Make-Up
24	25 Supplemental 5.4 & 5.5	26	27 Supplemental 5.4 & 5.5	28 Quiz #7 Last Day for Quiz #6 Make-Up Last Day For "W"
March 3	4 Text 6.4 & 10.7	5	6 Text 6.4 & 10.7	7 Quiz #8 Last Day for Quiz #7 Make-Up
10	11 Text 12.1	12	13 Review of Functions (SLO 1)	14 Quiz #9 Last Day for Quiz #8 Make-Up
17	18 Review of Functions (SLO 1)	19	20 Review of Functions (SLO 1)	21 Quiz #10 Last Day for Quiz #9 Make-Up
24	25	26	27 <b>Final 7:30-9:30am</b> Last Day for Quiz #10 Make-Up	28