# Math 117
## Course Information
## Fall, 2010

**Instructor:** Megan Heenehan
**email Address:** mheenehan@wesleyan.edu
**Office:** Exley 634
**Office Hours:** Tuesdays 3:00-5:00pm and by appointment

In this course we will study Chapters 1–4 of the textbook *Calculus: single variable* (5$^{\text{th}}$ ed.), by Hughes-Hallett, Gleason, McCallum, et al. We also will make use of a TI-83 (or similar) graphing calculator. Other graphing calculators may be acceptable; check with your instructor to be sure. You should bring both your textbook and your graphing calculator to every class.

For many years we have offered a "non-traditional" calculus sequence, Math 117–118, which incorporates innovations in the teaching of calculus. One of the major differences is the reduction of time spent in lecture mode, when the instructor presents material at the board. Often class will begin with a brief discussion about themes and examples from previously assigned readings. The class will then divide into groups to work together on examples or discussion questions. Much of the learning will take place within these groups. The brief discussion that begins each class will thus be supplementary to the group work (and not the other way around). In addition to working together in class, you will also work with others on regularly assigned team homework. There will not be many problems on each team assignment, but every problem will involve careful thought and will require complete, well-organized and neatly written solutions.

The textbook selected for this course was chosen because it has proved especially successful when used in the current format. The text uses practical examples from the physical and social sciences to anticipate and to illustrate the major concepts of calculus. Since you will be responsible for much of your own learning in this course, you must read the text. In fact, you will regularly be assigned reading and problems on material that has not yet been discussed in class. The assigned readings will be short, but you must spend time studying them, both in an initial reading before class and in rereading as you work the assigned problems.

Much of what you will be doing in this course will be learning how to solve problems. To this end, the text stresses conceptual understanding over memorization and creative approaches to the techniques of calculus over drill.

**Individual homework.** Homework assignments will typically be assigned at each class and due at the following class. You may seek help on the individual homework assignments from your instructor, from our TAs, from other students in the class, and from the Math Workshop (see below), but you must write your homework yourself. There will be regular TA sessions, which you are strongly encouraged to attend if you have difficulty working the week's assignments. Your homework will be graded by your TA. **Late homework will not be accepted**, but your lowest two homework grades will be dropped.

**Team homework.** Most of our noontime Monday meetings will be devoted to team problems. The class will be divided into teams which will work together on an assigned problem or two. Attendance at these sessions is mandatory; your absence would unfairly increase the work demanded of the other members of your team. The problems assigned will be chosen so that you will be able to make a substantial beginning on them during the noontime session. Your team may need to meet outside of class to complete the assignment and review the write-up. Your work on the team homework should be your own and that of your team-mates only. You may ask your instructor for assistance, but nobody else. More details will

be provided at the first team session on Monday, September 13<sup>th</sup>. **Late team homework will not be accepted, and if you miss a team homework session you will receive no credit for that assignment**. You may drop your lowest team homework grade. New teams will be formed occasionally during the semester so that you will have the chance to work with many different students.

**Exams.** Three midterm exams will be given during the semester. Tentative exam dates are October 4, November 8, and December 6 (Mondays at noon). Your lowest midterm exam grade will be dropped. In addition there will be a cumulative final exam scheduled by the Registrar.

**Skills Test.** After Chapter 3 has been studied, you will have two weeks to take the Skills Test. The test is intended to confirm that you are able to perform routine calculations of derivatives, and to pass a test you must answer at least 8 of 10 questions correctly. You may take the Skills Test as many times as you need, but you must have passed it by 5 p.m. on the last day of classes, December 10<sup>th</sup>. Practice tests will be available. Each time you take the test, you will be given a different (but comparable) version of the test.

**Grading.** Your grade for the course will be computed as follows.
   40% hour-exam grades (lowest grade dropped)
   20% final exam
   18% individual homework (lowest two grades dropped)
   18% team homework (lowest grade dropped)
   4% participation
   In addition, you must pass a Skills Test to pass this course. (Details later.)

**Attendance.** Since working with other students is a major aspect of this course, it is important that everyone participates, both in class and as members of homework teams. During the semester you are permitted three unexcused absences from ordinary class meetings; additional absences will reduce your course grade.

**TA Help Sessions.** Starting by the second week of classes there will be afternoon or evening help sessions for Math 117 staffed by undergraduate TAs, open to all sections. Their hours and locations will be given to you as soon as they are available.

**Math Workshop.** You are encouraged to make use of the Math Workshop, a free tutoring lab provided by the Math Department. Located in the Science Library, the Workshop will be open weekday afternoons and Sunday through Thursday nights. Its hours of operation will be given to you as soon as they are available.

**Students with Disabilities.** It is the policy of Wesleyan University to provide reasonable accommodations to students with documented disabilities. Students, however, are responsible for registering with Disabilities Services, in addition to making requests known to me in a timely manner. If you require accommodations in this class, please make an appointment with me as soon as possible, so that appropriate arrangements can be made. The procedures for registering with Disabilities Services can be found at http://www.wesleyan.edu/deans/ disability-students.html.