

# Coordinated Calculus Courses

The Coordinated Calculus Courses are

- Math 220-0 Differential Calculus of One Variable Functions
- Math 224-0 Integral Calculus of One Variable Functions
- Math 230-0 Differential Calculus of Multivariable Functions
- Math 234-0 Multiple Integration and Vector Calculus

Coordinated calculus courses are run “in lockstep,” with shared syllabi, exams, homework assignments, discussion worksheets, and a common Canvas course site. Coordinated calculus courses also run shared office hours.

Each course has a coordinator who conducts weekly meetings with all instructors and teaching assistants and distributes the workload for the course. The course coordinator is the primary contact person for all non-section specific concerns. Each course has two common evening midterm examinations and a common final examination.

## Office Hours

All calculus instructors and graduate TAs teaching a common calculus class are expected to hold three office hours. Undergraduate TAs should hold two office hours. Usually these office hours are open to all students in the course.

## Course Meetings

Each instructor and teaching assistant assigned to a coordinated calculus course must attend weekly course meetings led by the course coordinator (for the meeting with instructors) or a designated instructor (for the meeting with the TAs). These meetings address current course topics, pedagogical issues, homework assignments, exams, and various administrative issues.

## Syllabi

Coordinated calculus courses adhere to common day-by-day syllabi. The course coordinator will provide instructors with the syllabus.

## Examinations

Each coordinated calculus course offers two common midterm examinations administered in the evening, and one common final exam. These exams are scheduled with the registrar’s office before the beginning of the term. Final examinations can only be given at the time and date scheduled by the registrar and announced in the quarterly class schedule. The rooms for the midterm and final exams are not assigned until the middle of the quarter. The Midterm Examination schedule is available at <http://www.registrar.northwestern.edu/registration/midterms.html>. The Final Examination schedule is available at [http://www.registrar.northwestern.edu/registration/final\\_exam\\_schedules.html](http://www.registrar.northwestern.edu/registration/final_exam_schedules.html).

We do not offer make-up exams in these courses. The University requires students to check the final examination schedule and the common midterm examination schedule before registering for courses and to avoid conflicts. A student who has a conflict between a common midterm examination and another midterm examination (or other activity, such as a varsity athletic competition) must contact the course coordinator, who may be able to arrange for the student to take the exam remotely or at a slightly different (but overlapping) time. Individual instructors may not make this determination. A student who has a conflict between a common final examination and another final examination must petition the Assistant Dean for Academic Standing for an incomplete grade in the course. If approved, the student will take a make-up final examination during the following academic quarter.

All instructors and TAs share in grading the common midterms and final. The grading sessions are scheduled just following the exam or on the following day. Grading is done via Crowdmark, an internet based grading system. Details will be supplied by the course coordinator.

## Homework Assignments

Coordinated calculus courses have both online and written homework assignments. Students complete the online assignments through WebAssign, an online homework system provider. The WebAssign homework assignments are set up by the course coordinator before the start of the term. Each coordinated calculus course instructor must have a WebAssign account. Contact the Director of Calculus or your course coordinator to have an account created on your behalf.

The written homework assignments will be collected during lecture and graded by the teaching assistants. This process is slightly complicated by our use of undergraduate TAs, and the course coordinator will provide details about how assignments are graded and returned to students.

## Discussion Sections

For each of the four coordinated calculus courses, discussion sections are pooled across all MWF lecture sections and all instructors for the course. Students register separately for a MWF lecture section and for a discussion section. This system differs from the way discussion sections are scheduled for all other math courses, where a specific MWF lecture section is always linked to a specific discussion section.

Students are not allowed to freely switch between discussion sections. For example, a student who takes Math 230 and has registered for Section 921 must attend Section 921 throughout the quarter.

Students in coordinated calculus courses receive their written homework assignment for the week at the beginning of discussion. Their goal in discussion is to generate ideas for how to attack the problems on the assignment, not necessarily to solve all of the problems on the assignment completely. Students work in small groups of 1-4 students, and are encouraged to interact with their peers. As part of this process the teaching assistant circulates around the room, facilitating the discussion within each group and answering questions (but not providing solutions!) as needed.

The TAs communicate any feedback about students to the instructors via e-mail or during the weekly meeting.

## Grading

The instructors for each Coordinated Calculus Course determine course grades as a group, usually the day after scoring final examinations. Plan your travel accordingly. The final score in the course for each student will be the maximum of the following three computations (the exact weights of the homework assignments may vary from course to course as needed; this is only an example):

### Method 1 (Normal Weighting)

Final Exam	$1 \times 200 =$	200
Midterm Exams	$2 \times 100 =$	200
WebAssign	Total Scaled to 50 Points	50
Written Homework	Total Scaled to 100 Points	100
Total Points		500

### Method 2 (First Midterm Dropped)

Final Exam	$1 \times 267 =$	267
Midterm Exams	$1 \times 0 + 1 \times 133 =$	133
WebAssign	Total Scaled to 50 Points	50
Written Homework	Total Scaled to 100 Points	100
Total Points		500

### Method 3 (Second Midterm Dropped)

Final Exam	$1 \times 267 =$	267
Midterm Exams	$1 \times 133 + 1 \times 0 =$	133
WebAssign	Total Scaled to 50 Points	50
Written Homework	Total Scaled to 100 Points	100
Total Points		500

## Grading Statement

You may provide your sections with the following grading statement.

*Letter grades for this course will be assigned in coordination with the instructors of other sections of Math 2xx, based on a shared policy. We guarantee at least an A- to students with a combined final course percentage of 90% or higher, at least a B- to students with a percentage of 80% or higher, at least a C- to students with a percentage of 70% or higher, and at least a D to students with a percentage of 60% or higher. However, the grading scale may be more generous than this.*

Course grades often end up being more generous than those based on the above scale, but there is no guarantee of that. We hope for a class average near 75% on examinations. Although the distribution of final grades can vary slightly from quarter to quarter, the historical departmental distributions are roughly as follows:

Letter Grades	Percentage of Students Earning the Letter Grades
A's and A-'s	32%
B+'s, B's and B-'s	35%
C+'s, C's, and C-'s	28%
D and F	5%

First-time course coordinators must submit their proposed grade distribution to the Calculus Director (or, if s/he is unavailable, the Director of Undergraduate Studies) for approval before the instructors submit final grades to the registrar.

## Peer-Guided Study Groups

Parallel to these basic courses, the Searle Center runs a Peer-Guided Study Group program. Students who participate will meet weekly in small groups with a trained peer facilitator in a formal study-group. One of the course instructors should be assigned as the Peer-Guided study group liaison, and will be responsible for meeting weekly with the lead peer facilitators to ensure that the facilitators understand the course material and conventions.

Last updated on September 11, 2018.