

## MATHEMATICS 2300: Analytic Geometry and Calculus 2

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Office: 310 Mathematics

Office hours: MTW 3:30–4:15; other times by appointment.

Text: *Calculus* (John Wiley & Sons), Hughes-Hallett, Gleason, McCallum, et al.

Homework: 30%. WeBWorK: 10%. Recitation: 10%. Two midterm exams: 30%. Final exam: 20%.

Homework once a week to be turned in at the beginning of the recitation class.

Attendance (and nonattendance) will be noticed.

Links: (to be clicked on, or entered into browser if clicking doesn't work)

- ⊗ <http://math.colorado.edu/~sbc21/courses/12spring/2300/2300syllabus.html>
- ⊗ <http://math.colorado.edu/~sbc21/courses/12spring/2300/2300hw.html>
- ⊗ <http://euclid.colorado.edu/~wayned/webworks.html>

===== Understanding this will clarify your thinking immeasurably. =====

Most students cannot say explicitly what “ $x = y$ ” means. Here is the only correct definition:

“ $x = y$ ” means “ $x$  is a name for the same thing that  $y$  is a name for”.

From this definition the following three propositions follow easily (think about it):

- If  $x$  is a name for a thing, then  $x = x$ .
- If  $x = y$ , then  $y = x$ .
- If  $x = y$  and  $y = z$ , then  $x = z$ .

Note that  $x = y$  can be false, and that when  $x = y$  is true, there is only **one named thing** involved. When you read something like “The numbers  $x$  and  $y$  are equal”, understand that what is meant is that the **names**  $x$  and  $y$  refer to the same **one** number.