

# Math 212: Multivariable Calculus

## Spring 2018

Jay Daigle

### Course Goals

In this course we will extend our theory of calculus to cover functions of multiple variables. We will understand these functions algebraically and geometrically, and learn how to use the tools of differential and integral calculus to further understand them.

Topics will include: 3D graphing, planes, partial derivatives, vectors, directional derivatives, gradients, the chain rule, optimization and Lagrange multipliers, integration, parametrization, vector fields, line and surface integrals, and Green's, Stokes's, and the Divergence theorem.

### Instructor Info

<b>Lectures:</b>	MWF 3:00–3:55 PM	Fowler 209
<b>Instructor:</b>	Jay Daigle	<b>Office Hours:</b> MWF, 12:15 - 1:45 PM
<b>Office:</b>	Fowler 305	<b>Often in Office:</b> MWF, 4:00 - 5:00 PM
<b>Email:</b>	<a href="mailto:gdaigle@oxy.edu">gdaigle@oxy.edu</a>	T, 1:30 - 3:00 PM, 4:30 - 5:00 PM
<b>Textbook:</b>	<i>Calculus: Multivariable</i> 6th edition	
	McCallum Hughes-Hallet Gleason et al.	ISBN: 978-0470888674
<b>Course Webpage:</b>	<a href="http://jaydaigle.net/multi">http://jaydaigle.net/multi</a>	

### Grading

- Homework: 30%
- Midterms: 15% each
- Final: 25%

### Policies

- **Disabilities:** It is the policy of Occidental College to make reasonable accommodations for qualified individuals with disabilities. If you are a person with a disability and wish to request accommodations to complete your course requirements, please make an appointment with the course instructor as soon as possible to discuss your request. For information on documentation requirements, contact the Center for Academic Excellence (x2545).

- **Exams:** There will be three midterms and a final. Tentative dates for the midterms are February 21, March 21, and April 11.

The final exam is at 1:00 PM on Friday, May 11, in the usual classroom.

Graphing calculators will **not** be allowed on tests. Scientific, non-programmable calculators will be allowed. I will have some to share, but not enough for everyone.

- **Homework:** Homework is in many ways the most important part of this class. Math is a skill, and, like all skills, requires practice to develop and learn. I encourage you to collaborate with classmates on your homework. However, you must turn in your own writeup in your own words.

I strongly encourage you to start the homework sets early. In addition to making them easier to finish on time, it's often easier to understand the material we cover if you go into the lectures with some specific questions; thus it's useful to at least read even the questions you're not prepared to start on yet.

Each homework assignment will have one or two "starred" problems. These are not necessarily the hardest problems, though they will rarely be the easiest. They are the problems which will benefit the most from starting early; some of them will require you to think deeply to come up with a new perspective, while some others may simply be quite long.

Homework is due in class on the due date, which will usually be Wednesday. Late homework will not be accepted except by prior arrangement or a note from Emmons or the deans. Please email me at least the night before the due date if you need to request an extension. (I often keep late hours; don't feel shy about emailing at two in the morning).

The homework assignment with the lowest score will not be counted. This includes homework which is not turned in, so missing one homework will not significantly affect your grade. However, it is still important to master that material on every homework assignment.