

# Syllabus\*

## Calculus with Analytic Geometry II

MATH 222 sec. 1; MW 1:00 – 1:50, TR 12:30 – 1:45; BH 442

**Instructor:** Dr. Rick Mabry

**Office:** BH 416, 797-5352, MW 12:00–1:00pm; TR 11:00am–12:30pm; WR 4:00–5:00pm.

Other hours can occasionally be arranged by appointment. Note my class schedule, below.

Math 222	(Calc II)	MW 1:00–1:50pm, TR 12:30–1:45pm	BH 442
Math 413/613	(History of Math)	W 5:00–8:00pm	BH 442
Math 490/690	(Adv Eucl Geom)	R 5:00–8:00pm	BH 442

**Email, Web page:** rmabry AT lsus DOT edu, <http://www.lsus.edu/rick-mabry>

**Text:** *Calculus* by Sisson and Szaras

**Outline:** The main topics in the course will come from chapters 6, 7, 9, and 10 of the text. Here is a list of the maintopics:

- Chap. 6** Finding volumes with slices; finding volumes with shells; arc length and surface area; hyperbolic functions; moments and centers of mass; work, force, and fluid pressure.
- Chap. 7** Integration by parts; partial fractions techniques; trigonometric integrals; trigonometric substitution; integration using Computer Algebra; numerical integration; improper integrals.
- Chap. 9** Parametric equations; polar coordinates; conic sections in Cartesian coordinates and polar coordinates.
- Chap. 10** Sequences; infinite series; the integral test; comparison tests; ratio and root tests; absolute and conditional convergence; power series; Taylor and Maclaurin series; applications of series.

**Grades:** There will be a three tests and a comprehensive final exam (see **Calendar**, below, for dates). The lowest of the three test scores will be replaced with the grade on the final exam, if the grade on the final exam is higher, then the four scores will be averaged to compute the total exam score. For this reason (and others), the following will be strictly enforced: *any test missed without valid and verifiable excuse will be assigned a score of zero*, and the previous sentences apply.

The final grades will be assigned as follows:

$$F < 50 \leq D < 60 \leq C < 75 \leq B < 90 \leq A.$$

Calendar:	Tue. Aug. 22		First class. Howdy.
	Mon. Sep. 5		<i>Labor Day</i> (no classes).
	Fri. Sep. 9		Last day to drop without W.
	Thu. Sep. 15	TEST #1	
	Mon. Oct. 3		Last day to change to Audit.
	Thu. Oct. 6	TEST #2	
	Thu. Oct. 13—		<i>Fall-</i> (no classes)
	Fri. —Oct. 14		<i>-Break</i> (no classes).
	Fri. Oct. 28		Last day to withdraw with W.
	Tue. Nov. 8	TEST #3	
	Thu. Nov. 24—		<i>Thanks-</i> (no classes)
	Sat. —Nov. 26		<i>-giving</i> (no classes).
	Thu. Dec. 1		Our last class. It's been real (-valued).
	Thu. Dec. 8	<b>FINAL EXAM</b>	10:30am.

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\*The instructor reserves the right to make announced changes as the semester progresses.

The complete final exam schedule is here: <http://www.lsus.edu/news-and-events/final-exams>

**Homework:** Homework will be assigned but only rarely (if ever) collected. (Ignore it your own peril! If you don't do and check your homework nearly daily, you'll soon be toast.) Material stressed in class is usually a good indicator of its likelihood of appearing on a test. Be sure to consult the old exams, too, which are posted on our *home page* (see below).

**You should have:** The tools of the trade: a scientific calculator (any kind) is a must; graph paper and a ruler are recommended. Warning: you will have no access to calculators (or other electronic devices) during your exams.

**Student Email and Moodle:** You can use the online Moodle system to check your test grades, send and receive class messages, etc. I send announcements using the News Forum on our Moodle page.

*Check your official LSUS email daily* (or even dailier) to be sure you don't miss important messages from me and others at LSUS. I'm told you can have LSUS email forwarded to another account of your choosing. <http://www.lsus.edu/student-email>

A link to Moodle is here: <http://moodle.lsus.edu/>

I often post items of interest on our unofficial Calc II *home page*, here: <http://lsusmath.rickmabry.org/rmabry/math222/>

I answer my email daily. (Seems more like hourly.)

**Math Help Lab:** Take advantage of free tutoring, help and computing power in the Math Help Lab, BH 404 (hours TBA)