Syllabus*

Calculus with Analytic Geometry III

MATH 223 (sec. 001); MW 10:00 – 10:50, TR 9:30 – 10:45; BH 442

Instructor: Dr. Rick Mabry

Office:

BH 416; 797-5352;
MW 3:15–4:00pm; TR 9:00–9:30 and 10:45am-12:30pm.

Other hours can occasionally be arranged by appointment. Note my class hours below, all in BH 442.

MW: 10:00–10:50 (MATH 223), 12:00-12:50 (MATH 150), 4:00–5:15 (PHYS 335)

TR: 9:30–10:45 (MATH 223), 12:30–1:45 (MATH 150)

F: 2:00–whenever (MATH 398/498)

Email, Web page: rmabry AT lsus DOT edu, `www.lsus.edu/rick-mabry`

Text: *Calculus* by Sisson and Szarvas

Outline: The main topics in the course will come from chapters 11—15 of the text. Below is a list of the main topics (less than 100% of which will be covered).

Chapter 11: three-dimensional Cartesian space, vectors, dot products, cross products, lines and planes, cylinders and quadric surfaces.

Chapter 12: vector-valued functions, space curves, arc length, tangent vectors, projectile motion, curvature, normal and binormal vectors, torsion, planetary motion and Keplers laws.

Chapter 13: functions of several variables, limits and continuity, partial derivatives, tangent planes, linear approximations, the chain rule, directional derivatives, gradient vectors, extreme values, Lagrange multipliers

Chapter 14: double integrals and their applications, double integrals in polar coordinates, triple integrals and applications, triple integrals in cylindrical and spherical coordinates, change of variables in multiple integrals

Chapter 15: vector fields, line integrals, the fundamental theorem for line integrals, Greens theorem, surface integrals, parametrized surfaces, Stokes theorem, the divergence theorem

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:

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

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

	Mon.	Jan. 14		First class. Howdy.
	Mon.	Jan. 21		Martin Luther King Holiday
	Fri.	Feb. 1	Last day to drop without W	
	Thu.	Feb. 7	*Test #1*	
	Mon.–	Feb. 11–		Mardi – (no
	–Tue.	–Feb. 12		–Gras classes)
	Thu.	Feb. 28		Last day to change to Audit
Calendar:	Tue.	Mar. 12	*Test #2*	
	Thu.	Mar. 28		Last day to withdraw with W
	Fri.	Mar. 29		Good Friday Holiday
	Mon.–	Apr. 1–		SPRING– (no
	–Fri.	–Apr. 5		–BREAK classes)
	Thu.	Apr. 11	*Test #3*	
	Thu.	May 2		Our last class. It's been volumes of fun.
	Mon.	May 6	*FINAL EXAM*	@ 10:30 am

Final exam schedule:
`www.lsus.edu/offices-and-services/records-and-registration/final-exam-schedule`

Homework: Homework will be assigned but only rarely (if ever) collected. (Ignore it your own peril! If you don't treat your homework like daily bread, 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. `www.lsus.edu/student-email`

A link to Moodle is here: `moodle.lsus.edu/`

I often post items of interest on our unofficial Calc III *home page*, here:
`lsusmath.rickmabry.org/rmabry/math223/`

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

Disability Services: LSUS will make reasonable accommodations for persons with documented disabilities. Students must notify the Coordinator of Services for Students with Disabilities located in the Student Development & Counseling Center (Administration Building, Room 227, 797-5365) and the instructor of any special needs.

Code of Student Conduct: Academic dishonesty will not be tolerated. Students should familiarize themselves with the code of student conduct found in the Student Handbook. Some possible sanctions for violating the code may include:

- loss of credit for the work involved
- grade of F in the course
- separation from the university for one or more semesters
- expulsion from the university

The Student Handbook is online here:

`www.lsus.edu/offices-and-services/policies-and-manuals/student-handbook/student-rights-and-responsibilities/student-conduct-code`

Math Lab: Take advantage of the computing power in the Math Lab, BH 404.