



Syllabus for Math 2414 – 41002, Fall 2009 CALCULUS II

Habib Y. Far, Instructor

Course Schedule: MWF, 8-9:30 am, Room F-234

Catalogue Description: Differentiation and integration of exponential and logarithmic functions, techniques of integration, applications of the definite integral, the calculus of transcendental functions, parametric equations, polar coordinates, indeterminate forms, improper integrals, L'Hopital's Rule, sequences and series.

Prerequisite: MATH 2413 or departmental approval

Credit: 4 Hours

Purpose: Math 2414 is a continuation of the study of calculus begun in Math 2413 (Calculus I). Calculus II emphasizes the calculus of transcendental functions, techniques of integration, applications of integration, parametric equations, polar coordinates, and infinite sequences and series.

Topics:

- Exponential, logarithmic, and inverse trigonometric functions
- Techniques of integration
- Applications of integration
- Parametric equations
- Polar coordinates
- Infinite sequences and series

Course Outcomes: In completing this course, through various means including but not limited to collaborative learning, technology, and required software assignments, you will

- differentiate and integrate logarithmic, exponential, hyperbolic, and inverse trigonometric functions
- use the basic techniques of integration
- apply integration to solve real-world problems
- evaluate improper integrals
- apply L'Hopital's Rule to evaluate limits of indeterminate forms
- use differentiation and integration to explore parametric equations and polar coordinates
- apply various tests to determine convergence or divergence of infinite series
- represent functions using infinite series and determine Taylor Series representations of functions as well as the radius of convergence of these representations.

Required Materials:

- Larson, Hostetler, and Edwards (2007), Calculus, Early Transcendental Functions, 4rd ed., Houghton Mufflin Co.
- Graphing Calculator, binder with loose-leaf paper, pencil, a small ruler, and eraser
- Student solution manual (optional)

Instructor: Habib Y. Far

Office: F-249

Office Hours: 9:30-10 am. on MWF or by appointment.

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Division Dean: Lawrence D. Brandyburg, Ph.D., F252, 936-273-7020

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Advising

For student problems or counseling, or for additional assistance or more information on degree plans or future courses that Lone Star College – Montgomery may offer, please contact one of the following:

Barbara Eckenfels, Counselor

F-240

936-273-7246

Barbara.A.Eckenfels@lonestar.edu

Juan C. Lebron

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936-273-7280

Juan.C.Lebron@lonestar.edu

Extended Learning Center (ELC, Tutoring): (936) 273-7373, 7404

Testing Center: (936) 273-7377

Evaluation:

Four 100-point exams	60%
Final exam	30%
<u>Homework assignments</u>	<u>10%</u>
Total	100%

Grading is the usual 100 points A, B, C, D, and F scale.

- The four tests will be administered as scheduled according to the proposed calendar.
- **Final Exam is on Monday December 7 at 8 am. and it is comprehensive.**
- There are four sets of homework. The homework assignments are due on the test dates. They should be in order (5 pts), clean (5 pts), stapled (5 pts), and done on loose paper (5 pts) and on time (10 pts). The points in parenthesis are the points you lose if your homework does not satisfy that requirement. For example, if homework is done in notebook or spiral paper then you will lose ten points. Homework assignments are graded based on their completeness.

Make-up Exams: You are expected to take all your tests with the class at the scheduled times. As a rule make-up exams are not given. In case of an **emergency and/or under extreme circumstances if you have to miss a test** please contact me by phone (leave a message if I am not available) or by email during or before the test to arrange a time for you to take your test. In any case the **test has to be taken before the next class meeting.**

Attendance Expectations:

- As this course emphasizes the development of discussion skills, the ability to work in a group and the honing of critical thinking skills, participation in the class discussions and activities is crucial. Therefore, **regular and punctual** attendance is extremely important for success in mathematics classes.
- Withdrawal from a course is a formal procedure, which YOU must initiate. If you just stop coming to class and do not officially withdraw, you will receive an “F.” If you are unable to complete this course, YOU must withdraw from it yourself!!
- **Last day to withdraw and receive a “W” is November 6, 2009.**

Classroom Behavior

- Cell phones and other electronic devices must be turned off during class.
- This is a smoke free campus and chewing tobacco is not allowed in class.

The Lone Star College Catalog [Student Conduct, Section 562.01d] states, “Disruptive activity that hinders other students’ learning or deters an instructor from effective teaching will not be tolerated under any circumstances.”

Certificate/Degree Plan: Degree plans for programs offered at Lone Star College – Montgomery can be located in the Lone Star College catalog or on the Lone Star College – Montgomery > web site at: <http://montgomery.lonestar.edu/8700/>

Syllabus Change: While every attempt has been made to prepare this syllabus and class schedule in final form, it will be the instructor's prerogative to make any changes as may be deemed necessary in order to meet the learning outcomes of the course. Students will be notified in writing of any change.

Academic Integrity: The district upholds the core values of learning; honesty, respect, fairness, and accountability. The district promotes the importance of personal and academic honesty. The district embraces the belief that the learners, students, faculty, staff and administrators will act with integrity and honesty and must produce their own work and give appropriate credit to the work of others. Fabrication of sources, cheating, or unauthorized collaboration is not permitted on any work submitted within the district.

Consequences for academic dishonesty determined by the professor, or the professor and academic dean, or the professor and chief student services officer can include but are not limited to:

1. Having additional class requirements imposed;
2. Receiving a grade of zero or “F” for an exam or assignment;
3. Receiving a grade of “F” for the course;
4. Being withdrawn from the course or program;
5. Being expelled from the college district;

Professors should clearly explain how the student’s actions violated the academic integrity policy, how a grade was calculated, and the action taken.

Lone Star College Academic Integrity Policy: <http://www.lonestar.edu/17997/>

Software Piracy: Law strictly prohibits unauthorized copying of software purchased by Lone Star College – Montgomery for use in laboratories. Lone Star College – Montgomery administration will take appropriate disciplinary action against anyone violating copyright laws.

Computer Virus Protection: Computer viruses are, unfortunately, a fact of life. Using the diskettes on more than one computer creates the possibility of infecting computers and diskettes with a computer virus. This exposes the computers of the campus, your personal computer, and any others you may be using to potentially damaging viruses. The campus has aggressive anti-virus procedures in place to protect its computers, but cannot guarantee that a virus might not temporarily infect one of its machines. It is your responsibility to protect all computers under your control and use and ensure that each diskette you use, whenever or wherever you use it, has been scanned with anti-virus software. Since new viruses arise continually, your anti-virus software must be kept current. And, since no anti-virus software will find every virus, keeping copies of data (backups) is extremely important.

Equal Opportunity Statement

The Lone Star College System is committed to the principle of equal opportunity in education and employment. The district does not discriminate against individuals on the basis of race, color, gender, religion, disability, age, veteran status, national origin, sexual orientation, or ethnicity in the administration of its educational policies, admissions policies, employment policies, scholarship and loan programs, and other district or college administered programs and activities.

Inquiries concerning the district's policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to the Associate Vice Chancellor for Human Resources, 832.813.6698. The Associate Vice Chancellor for Human Resources is designated as the district's Equal Opportunity Officer and Title IX Coordinator. Inquiries about the laws and about compliance may also be directed to the Assistant Secretary for Civil Rights, U.S. Department of Education.

For information about your rights or grievance procedures, contact the Title IX and Section 504 Coordinator at any Lone Star College System college.

See Lone Star College catalog or go to <http://www.lonestar.edu>

ADA Statement

Lone Star College System is dedicated to providing access and services in compliance with the Americans with Disabilities Act, Section 504 of the Rehabilitation Act of 1973.

If you are a student with a disability, it is your responsibility to apply for services and to provide your college with appropriate support of a disability claim. Contact the Disability Services Office (Building E, office 103H) at 936-273-7239 as soon as possible to better ensure that such accommodations are implemented in a timely fashion.

See Lone Star College catalog or go to <http://www.lonestar.edu/31254/>

Proposed Calendar for Math-2414, Calculus II, Fall 2009

Monday	Tuesday	Wednesday	Thursday	Friday
August 24 Introduction, 7.1	25	26 7.2	27	28 7.3
31 7.4	September 1	2 7.5	3	4 7.6
7 Labor Day Holiday	8	9 7.7	10	11 Review
14 Test I	15	16 8.1-8.2	17	18 8.2-8.3
21 8.4	22	23 8.5	24	25 8.6
28 8.7	29	30 8.8	1	2 Review
October 5 Test II	6	7 9.1	8	9 9.2
12 9.3	13	14 9.4	15	16 9.5
19 9.6	20	21 9.7	22	23 9.8
26 9.9	27	28 9.10	29	30 Review
November 2 Test III	3	4 6.1-6.2	5	6 6.3, "W" Day
9 6.4	10	11 6.5	12	13 10.1
16 10.2	17	18 10.3	19	20 10.4
23 10.5	24	25 10.6	26 TG Holiday	37 TG Holiday
30 Review	December 1	2 Test IV	3	4 Review
7 Final Exam @ 8 am	8	9	10	11

Calculus II Homework Assignments

<u>Section</u>	<u>Problems</u>
7.1	1 – 17 odd, 21 – 29 odd, 45, 47
7.2	1 – 15 odd, 21, 23, 27
7.3	1, 5, 9, 13, 17, 21, 27
7.4	1, 5, 9, 13, 39, 43
7.5	1, 3, 9, 11, 13, 15, 21, 23, 25, 31, 33
7.6	1, 3, 7, 9, 11, 13, 15, 21, 25, 27, 49, 51
7.7	1 – 13 odd
8.1	1 – 49 odd, 57
8.2	1 – 39 odd
8.3	1 – 45 every other odd, 51, 53, 59, 61, 65, 69
8.4	1 – 53 every other odd
8.5	1 – 27 odd, 41
8.6	1 – 49 every other odd
8.7	1 – 53 odd, 87, 89
8.8	1 – 61 every other odd, 67, 69
9.1	1 – 97 every other odd (Use Maple for plotting sequences.)
9.2	1 – 69 every other odd, 79, 81
9.3	1 – 41 every other odd
9.4	3 – 35 odd
9.5	13 – 61 every other odd
9.6	13 – 67 every other odd
9.7	1 – 4, 13 – 29 every other odd, 31
9.8	1 – 29 every other odd, 45, 47
9.9	1 – 25 odd
9.10	1 – 41 every other odd
6.1	1 – 41 every other odd
6.2	1 – 13 odd, 21, 23, 41, 71
6.3	1 – 21 every other odd, 29 – 41 every other odd
6.4	1 – 4 all, 5 – 17 every other odd
6.5	1 – 13 odd, 17, 21, 25, 27, 29
10.1	1 – 8 all, 9, 15, 21, 25, 29, 31, 33, 39, 41, 45, 47, 51, 57, 61, 67 – 75 odd
10.2	3, 7, 13, 19, 51, 53
10.3	1 – 15 odd, 27, 29, 31, 41, 43, 49, 67
10.4	1, 3, 11, 13, 27, 31, 33, 35, 37, 41, 43, 49, 59, 65, 67, 79
10.5	1, 3, 7, 13, 17, 33, 35, 45, 47, 55
10.6	1, 23, 25, 51, 53