Calculus II
SYLLABUS FOR MATH 2414
(INTERNET)

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Office hours: TBA
Office Phone: 713-718-2438, (Please leave a message); Cell: 713-385-7177.
➢ I will return your email, text, or call within 48 hours.

DE link and Student’s User ID Be sure to us the link https://eo2.hccs.edu/login/index.php to log in to Eagle Online. Your Eagle Online ID is now the same as your HCC User ID which is used for Online Registration. [For example: W0034567] If you do not know your User ID you can look it up using the following links: https://hccsaweb.hccs.edu:8080/psp/cspwd/EMPLOYEE/HRMS/c/HCCS_CUST_MENU.HC C_UAT.GBL
Your default Eagle Online password at the beginning of the term is: "distance". This password is independent of your Online Registration password. You will be required to change your password when you first log in.

Browser troubles? Use the latest version of Firefox.

Please visit the DE website http://de.hccs.edu/student-services// for students services.

Internet Course Description: Welcome to Calculus II Online. Calculus II, Integral calculus including discussions of transcendental functions, applications of integration, integration techniques and improper integrals, infinite series, Taylor series, plane curves, and polar coordinates. The student will achieve these general outcomes by completing a combination of assignments; textbook reading and/or explanation of concepts using the NOTES POSTED BY THE INSTRUCTOR.

Prerequisites: Math 2413: Pass with a “C” or better, or consent of the Department Head.

Course Intent: This course provides a detailed study of the logarithmic, exponential, and other transcendental functions, integration techniques with applications, L’Hôpital’s rule, an introduction to infinite series and power series, as well as Taylor polynomials and approximations, plane curves, parametric equations, and polar coordinates.

Course Objectives: Upon completion of this course, a student should be able to:
1. Define and use transcendental functions including logarithmic and exponential functions.
2. Compute derivatives and antiderivatives involving transcendental functions.
3. Apply integration to various applications.
4. Show various integration techniques
5. Show correct usage of L’Hôpital’s rule.
6. Describe and solve improper integrals.
7. Recognize and use infinite series.
8. Recognize and apply Taylor series to various problems
9. Demonstrate knowledge of plane curves and polar coordinates.

**Materials Needed:**
1. **WebAssign:** You must purchase an access code for WebAssign. With WebAssign, you will have access to an electronic version of the textbook. 

WebAssign is an online homework/quiz system. You may purchase WebAssign access code online, which will allow you to view electronic copy of the textbook. I will post the course key for WebAssign on the first day of class in order to get advantage of the 10 days free trial; the directions are posted on the course homepage to help you create an account in WebAssign.


Web assign offers you a free trial period of 10 days to access the homework. So please sign up for the homework the first day of class. Make sure you buy the access code before the trial period expires.

**Printed Textbook (optional):** Calculus, by Larson, Hostetler, and Edwards, Tenth Edition. Brooks/Cole, Cengage Learning, 2013. If you have the Ninth Edition you may use it if you wish, but it's your job to match sections, topics, and HW problems.

![Calculus Book Image](image)

**Optional Material:**
1. The textbook has an optional student supplement that contains worked out odd numbered problems in the text. You may find this useful since most of the suggested homework problems that you will be doing are odd numbered.
2. Calculator: A graphing calculator is recommended (i.e. TI-83 or 83 plus).

**HCC Course Withdrawal Policy**
Texas imposes penalties on students who drop courses excessively. Students are limited to no more than SIX total course withdrawals throughout their educational career at a Texas public college or university. To help students avoid having to drop/withdraw from any class, HCC has instituted an Early Alert process by which your professor will “alert” you and distance education (DE) counselors that you might fail a class because of excessive absences and/or poor academic performance. Contact
your DE professor or a DE counselor to learn about what, if any, HCC interventions might be available to assist you – online tutoring, child care, financial aid, job placement, etc. – to stay in class and improve your academic performance. **It is the student responsibility to withdraw from the class before the withdrawal deadline** If you do not withdraw before the deadline, you will receive the grade that you have earned by the end of the semester. Zeros averaged in for required assignments/tests not submitted will lower your semester average significantly, most likely resulting in a failing grade (“F”). Please check the course calendar posted on Eagle Online for The final withdrawal deadline date.

**Note:**
(1) Students who repeat a course for a third or more times may soon face significant tuition/fee increases at HCC and other Texas public colleges and universities. Please ask your instructor / counselor about opportunities for tutoring / other assistance prior to considering course withdrawal or if you are not receiving passing grades.

(2) INTERNATIONAL STUDENTS: Receiving a W in a course may affect the status of your student Visa. Once a W is given for the course, it will not be changed to an F because of the visa consideration. Please contact the International Student Office at 713-718-8520 if you have any questions about your visa status and other transfer issues.

PLEASE REMEMBER THAT AS A MEMBER OF THE HCCS ACADEMIC COMMUNITY YOU ARE BOUNDED TO OBSERVE THE ACADEMIC HONESTY CODE (SEE THE HCCS STUDENT HANDBOOK) IN ALL YOUR SCHOOL WORK.

**Grading & Evaluation:** Your grade will be determined based upon how many points that you accumulate from quizzes, web activity, homework, and exams. The approximate number of points is as follows:

1. Four major examinations each is a 100 points.
2. A comprehensive final (100 points) **The final exam will be onsite at one of the designated testing centers. If you are out of town then you will have to provide me with the information of the nearest college testing center near you. I will update you with the available testing centers when the time comes. If you can’t make it to the designated testing center please consider an alternative section that meets your needs.**
3. Homework and Quizzes via WebAssign (100).

**Final average** = {Exam 1 + Exam 2 + Exam 3 + Exam 4 - (Lowest Exam) + Final Exam + HW and Quizzes in WebAssign} Divided by 5.

**No make-up exams will be given.** If a student misses an exam then that will be his/her lowest exam. **If a student misses a second exam, then that is a zero**

- The final course average will be used in the usual manner (90-100 ”A”; 80-89 “B”; 70-79 “C”; 60-69 “D”; Below 60 “F”).
It is important that your name on all your work for this class matches HCCS record. I will not change any grade if you use different last name or median name or merge name!!!!

The dates for all the exams and the daily assignments will be posted on the Course Calendar on Eagle-Online.

Where to get help
- Come see me during my office hours.
- Go to the nearest hccs Mathlab for tutoring.
- Watch a youtube Video; just type in the topic in the search engine!!
- Visit http://www.khanacademy.org/
- Visit http://www.MathTV.com

Internet Course Policies:
- It is important that we behave as an adult in this course!! I will not tolerate any rudeness or any inappropriate language; so please if there is an issue or a problem let me know and I’ll do my best to resolve the issue.

- You need, constantly on a daily basis, to check the calendar, course work, e-mail and other links on your web page to ensure a successful and timely completion
- Check the course calendar for events, and examination dates.
- The results of the exam will be communicated to you within a week through WebCT. If you have any question over any test grade and you would like to review it, you must arrange an appointment with me to discuss your grade.
- All students must acquire access code to the Course Material i.e. User name and Password. If you have any problem with logging to the course website please contact one of the Distance Education Technicians: desupport@hccs.edu
- It is extremely important that you take the exam during the scheduled time!!!!
- Communication is the most problematic area in distance education. Remember that we don't see face to face, and so we are not able to read body languages and interact with each other as in a traditional class room.
- It is important that you do your homework and practice in this course. It is absolutely essential that you do as much of the homework as possible, if you don’t do the assigned homework, I can almost guarantee that you will not be successful in this course. I will be glad to answer questions about the homework problems during chat sessions and on the Discussion Forums.
**Caution:** There is one word that best summarizes the major difficulty that most people have taking a course online: **procrastination**! You will have great excitement and good intentions in the beginning, but as the course progresses, there will be a tendency to put off it just one more day while you do other urgent tasks. Soon the ‘one more day’ becomes a week and you are hopelessly behind! I will do my best to help keep you on track, but of the discipline must come from you. It is imperative that you follow the calender that I will lay out for you if you plan to succeed.

**Resource Materials:** Any student enrolled in Math 2414 at HCCS has access to the Academic Support Center where they may get additional help in understanding the theory or in improving their skills. The Center is staffed with mathematics faculty and student assistants, and offers tutorial help, videotapes and computer-assisted drills. Also available is a student’s Solutions manual, which may be obtained from the Bookstore.

**Math Lab Hours:** (North East College) Please call 713-718-8000 for Northline mall campus, and 713-718-8400 for the Pinemont campus.

**Note that almost every HCCS campus has a MATH LAB.**

Please feel free to come to the North Line Mall Campus, and/or Pinemont Campus and take advantage of our professional tutoring in the Math Lab. Also please feel free to come to my office during my office hours. I will publish them as soon as they are finalized the first week of class. Also please feel free to call or email me for an appointment.

**Americans with Disabilities Act (ADA):** "Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) Who needs to arrange reasonable accommodations must contact the appropriate Disability Support Service Counselor at the beginning of each semester? Faculty is authorized to provide only the accommodations requested by the Disability Support Services Office. Students who are requesting special testing accommodations must first contact the appropriate Disability Support Service Counselor for assistance. Please contact the Distance Education Counselor at 713-718-7014 or de.counseling@hccs.edu in order to be referred to the appropriate Disability Support Service Counselor.

Students who require testing accommodations need to schedule an appointment for testing to ensure that staff will be available for proctoring and to arrange for any adaptive equipment that may be required. Students should contact their distance education instructor's "Instructional Support Specialist" the week prior to each of their exams throughout the semester to confirm that the requested testing accommodations will be met. If you need assistance in determining your instructor's Instructional Support Specialist, please contact your instructor or the Distance Education Counselor."
Course Outline:

**Unit I - Logarithmic, Exponential, and Other Transcendental Functions**

*Sections: 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8*

This unit presents the concept of logarithms. The instructor should emphasize the natural logarithmic function with respect to differentiation and integration. Inverse functions, exponential functions with respect to differentiation and integration, bases other than $e$ and applications. Inverse trigonometric functions should also be presented. This unit concludes with a study of hyperbolic functions.

**Unit II - Applications of Integration**

*Sections: 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7.*

This unit presents applications of integration. The instructor should emphasize area of a region between two curves, volume-the disc method, volume-the shell method, arc length and surface of revolution, work, and fluid pressure and fluid force. This unit concludes with moments, centers of mass, and centroids.

**Unit III - Integration Techniques, L’Hopital’s Rule, and Improper Integrals**

*Sections: 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8*

This unit includes integration techniques. The instructor should emphasize basic integration rules, integration by parts, trigonometric integrals and substitution, partial fractions, integration by tables, other integration techniques, and indeterminate forms and L’Hopital’s Rule. This unit concludes with improper integrals.

**Unit IV- Infinite Series**

*Sections: 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10*

This unit includes the basic concepts of infinite series. The instructor should emphasize sequences, series and convergence, the integral test and p-series, comparisons of series, alternating series, ratio and root tests, Taylor polynomials and approximations, power series, and representation of functions by power series. This unit concludes with a discussion of Taylor and Maclaurin series.

**Unit V - Plane Curves, Parametric Equations, Polar Coordinates**

*Sections: 10.1, 10.2, 10.3, 10.4, 10.5, 10.6*

This unit includes the basic concepts of Plane Curves, Parametric Equations, and Polar Coordinates. The instructor should emphasize plane curves and parametric equations, parametric equations and calculus, polar coordinates and polar graphs, and area and arc length in polar coordinates. This unit concludes with a discussion of polar equations of
conics and Kepler’s laws. Section 1 of this chapter reviews conics and may be covered optionally but is not required.

Student Services

INTERNATIONAL STUDENTS: Receiving a W in a course may affect the status of your student Visa. Once a W is given for the course, it will not be changed to an F because of the visa consideration. International Students are restricted to ONLY ONE online/distance education course each semester. Please contact the International Student Office at 713-718-8520 if you have any questions about your visa status and other course issues.

STUDENTS WITH DISABILITIES:
"Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc) who needs to arrange reasonable accommodations must contact the appropriate HCC Disability Support Service (DSS) Counselor at the beginning of each semester. Faculty is authorized to provide only the accommodations requested by the Disability Support Services Office."

Students who are requesting accommodations must first contact the appropriate (most convenient) DSS Counseling office for assistance:
Central: 713.718.6164
Northwest: 713.718.5422
Northeast: 713.718.8420
Southeast: 713.718.7218
Southwest: 713.718.7909
System: 713.718.5165
*Deaf and Hard of Hearing Services – Central
*Students living outside of the HCC District service areas – Central

After student accommodation letters have been approved by the DSS office and submitted to DE Counseling, students will receive a confirmation email along with instructions regarding completion of the requested accommodation(s).

DISTANCE EDUCATION ADVISING AND COUNSELING SERVICES:
Advising can be accomplished by telephone at 713/718-5275 - option # 4 or via email at decounseling@hccs.edu. Confidential sessions with the distance education counselors will help students understand admissions, registration, entrance testing requirements, degree planning, transfer issues, and career counseling. HCC counselors also maintain a local referral base in order to provide appropriate referrals to students with personal or family issues that may require long-term solutions.

NOTICE FOR STUDENTS WHO LIVE OUTSIDE OF HOUSTON:
Students who live outside the Houston area and cannot take paper exams at one of our HCC testing locations MUST make arrangements for a proctor. Please see the DE
VIRTUAL CLASSROOM CONDUCT:
As with on-campus classes, all students in HCC DE courses are required to follow all HCC Policies & Procedures, the Student Code of Conduct, the Student Handbook, and relevant sections of the Texas Education Code when interacting and communicating in a virtual classroom with faculty and fellow students. Students who violate these policies and guidelines will be subject to disciplinary action that could include denial of access to course-related email, discussion groups, and chat rooms or being removed from the class.

USE OF CAMERAS OR RECORDING DEVICES:
Use of recording devices, including camera phones and tape recorders, is prohibited in classrooms, laboratories, faculty offices, and other locations where instruction, tutoring, or testing occurs. Students with disabilities who need to use a recording device as a reasonable accommodation should contact the Office for Students with Disabilities for information regarding reasonable accommodations.