



**Division of Mathematics
Mathematics Department**

<https://learning.hccs.edu/programs/mathematics>

Math 2414: Calculus II | Lecture | #10255

Fall 2020 | 16 Weeks (8.24.2020-12.13.2020)
flexCampus | SJAC 231 | MW 8 a.m.-9:50 a.m.
4 Credit Hours | 64 hours per semester

Instructor Contact Information

| | | | |
|-------------|--|------------------|--------------------------------|
| Instructor: | Victor Hernandez | Office Phone: | 713-718-6493 |
| Office: | SJAC Building, Room 369 | Office Hours: | MW: 10-11 a.m. TR: 3-5 p.m. |
| HCC Email: | victor.hernandez7@hccs.edu | Office Location: | Central College Math Dept |

Please feel free to contact me concerning any problems that you are experiencing in this course. Your performance in my class is very important to me. I am available to hear the concerns and just to discuss course topics.

Instructor's Preferred Method of Contact

It is best to communicate with me through the Canvas Inbox. Due to the volume of online communication that occurs during online and flexCampus class, contacting me through normal email might mean that I do not see your message quickly enough for a timely response but the Canvas inbox ensures that messages are properly handled. Students can expect a response from me within 24 hours on weekdays. Any email sent on Sunday, Saturday, or after 5pm on Friday will receive a response by the end of the day Monday.

Due to restrictions placed on the campus due to COVID-19 quarantine measures, in person meetings will not take place at the start of the semester. If the situation remains stable or improves, in person office hours may be announced at that time.

What's Exciting About This Course

At the end of Calculus 1 you are left with a big "promise" in the form of the First Fundamental Theorem of Calculus which basically states that a definite integral of a continuous function on a closed interval can be found easily ***IF*** you can find an antiderivative of that function. Calculus 2 is known as a "methods" course in which we spend a great deal of time learning and using the methods by which we can find antiderivatives and how we can use those in some more concrete settings. In a methods course you will often find the math that is most directly applicable to problems in related fields, making this class of particular interest to aspiring physicists, engineers, computer scientists, etc.

My Personal Welcome

I look forward to working with you through this course. I love math and it is the best part of my job to help you understand that which I enjoy.

Prerequisite

Prerequisite: Math 2413: Pass with a "C" or better. If you have enrolled in this course having satisfied these prerequisites, you have a higher chance of success than students who have not done so. Please carefully read and consider the repeater policy in the [HCCS Student Handbook](#).

Canvas Learning Management System

This section of MATH 2414 will use [Canvas](https://eagleonline.hccs.edu) (<https://eagleonline.hccs.edu>) to supplement in-class assignments, exams, and activities.

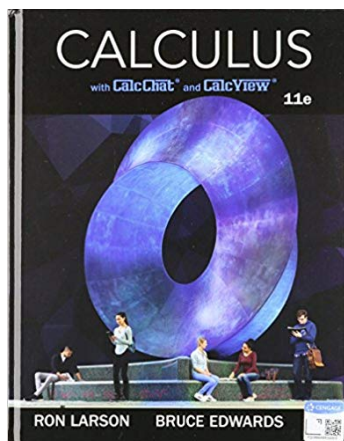
HCCS Open Lab locations may be used to access the Internet and Canvas. **USE [FIREFOX](#) OR [CHROME](#) AS THE INTERNET BROWSER.**

Scoring Rubrics, Sample Assignments, etc.

Look in Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course. <https://eagleonline.hccs.edu/login/ldap>

Instructional Materials

Textbook Information



The textbook listed below is **required** for this course.

Textbook: Calculus, 11th Edition, by Ron Larson & Bruce H. Edwards, ISBN-13: 978-1337275347

Textbook Options for: Calculus, 11th Edition, by Ron Larson & Bruce H. Edwards

Loose-leaf Textbook + WebAssign Multi-Term Printed Access Card: Edwards ISBN-13: 978-1337604741

Hardbound Textbook + WebAssign Multi-Term Printed Access Card: Edwards ISBN-13: 978-1337604758

Hardbound Textbook: ISBN-13: 978-1337275347

WebAssign Multi-Term Printed Access Card: ISBN-13: 978-1285858265

Temporary Free Access to E-Book

For temporary free access to WebAssign and the online eBook, log into your Canvas account and complete the sign in on the "Larson Calculus 11e Webassign" page which you can find in the Start Here Module

Other Instructional Resources

Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](#) website for services provided.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <http://library.hccs.edu>.

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <http://www.hccs.edu/resources-for/current-students/supplemental-instruction/>.

Course Overview

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

Core Curriculum Objectives (CCOs)

Given the rapid evolution of necessary knowledge and skills and the need to take into account global, national, state, and local cultures, the core curriculum must ensure that students will develop the essential knowledge and skills they need to be successful in college, in a career, in their communities, and in life. Through the Texas Core Curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning.

- **Critical Thinking:** to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
- **Communication Skills:** to include effective development, interpretation and expression of ideas through written, oral and visual communication.
- **Quantitative and Empirical Literacy:** to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Program Student Learning Outcomes (PSLOs)

Students in the Mathematics Program will:

1. Engage in problem solving strategies, such as organizing information, drawing diagrams and modeling.
2. Use symbolic representations to solve problems. This includes manipulating formulas, solving equations, and graphing lines.
3. Build the foundational mathematical skills that will enable a student to successfully complete a college level mathematics course.

Course Student Learning Outcomes (CSLOs)

Upon completion of MATH 2414, the student will be able to:

1. Explain and model the arithmetic operations for whole numbers and integers.
2. Use the concepts of definite integrals to solve problems involving area, volume, work, and other physical applications.
3. Use substitution, integration by parts, trigonometric substitution, partial fractions, and tables of anti-derivatives to evaluate definite and indefinite integrals.
4. Define an improper integral.
5. Apply the concepts of limits, convergence, and divergence to evaluate some classes of improper integrals.
6. Demonstrate the correct use of L'Hopital's rule and various techniques for solving improper integrals
7. Determine convergence or divergence of sequences and series.
8. Use Taylor and MacLaurin series to represent functions.
9. Use Taylor or MacLaurin series to integrate functions not integrable by conventional methods.

10. Use the concept of polar coordinates to find areas, lengths of curves, and representations of conic sections.

Learning Objectives

Upon completion of MATH 2414, the student will 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.

Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online
- Completing assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as a guide.

Instructor and Student Responsibilities

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar that will include a description of any special projects or assignments
- Arrange to meet with individual students before and after class as required

As a student, it is your responsibility to:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams

- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Be aware of and comply with academic honesty policies in the HCCS Student Handbook

Assignments, Exams, and Activities

Exams

In this class we will have 4 exams. This course does not allow make up exams, rather, ONE missed exam is dropped from your grade calculation. If you miss a second exam, it will remain a 0 in your grade calculation.

If you do not miss ANY exams, I will drop the lowest grade of the 4 exams from your grade calculation. You do not need contact me about dropping an exam, I take care of that automatically. This policy applies to the 4 module exams, the final exam cannot be dropped.

Final Exam

All students will be required to take a cumulative Final exam.

Grading Formula

Remember that you can look on Canvas for a record of your grades up to date.

| | |
|---------------------------|---|
| Homework (Extra Credit) | up to 10 points added to the corresponding exam |
| Highest of 4 exams | 20% of your grade |
| Second highest of 4 exams | 20% of your grade |
| Third highest of 4 exams | 20% of your grade |
| Final Exam | 40% of your grade |

| Grade | Overall Percentage |
|--------------|---------------------------|
| A | 90% + |
| B | 80%-89% |
| C | 70%- 79% |
| D | 60%-69% |
| F | <60% |

Incomplete Policy:

In order to receive a grade of Incomplete ("I"), a student must have completed at least 85% of the work in the course. In all cases, the instructor reserves the right to decline a student's request to receive a grade of Incomplete.

HCC Grading Scale can be found on this site under Academic Information:
<http://www.hccs.edu/resources-for/current-students/student-handbook/>

Course Calendar

| Week | Date | Material to be covered |
|------|-------|---|
| 1 | 8/24 | Class overview |
| | 8/26 | 5.5 and 5.6 |
| 2 | 8/31 | 5.6 and 5.7 |
| | 9/2 | 5.7 and 5.8 |
| 3 | 9/7 | 5.8 and 5.9 |
| | 9/9 | Labor Day |
| 4 | 9/14 | 7.1 and 7.2 |
| | 9/16 | 7.2 and 7.3 |
| 5 | 9/21 | 7.3 and 7.4 |
| | 9/23 | 8.1 and 8.2 |
| 6 | 9/28 | Module 1 Exam (Ch 5 and 7) |
| | 9/30 | 8.2 and 8.3 |
| 7 | 10/5 | 8.3 and 8.4 |
| | 10/7 | 8.4 and 8.5 |
| 8 | 10/12 | 8.5 and 8.7 |
| | 10/14 | 8.7 and 8.8 |
| 9 | 10/19 | Module 2 Exam (Ch 8) |
| | 10/21 | 9.1 and 9.2 |
| 10 | 10/26 | 9.2 and 9.3 |
| | 10/28 | 9.3 and 9.4 (Last day to withdraw 10-30-2020) |
| 11 | 11/2 | 9.4 and 9.5 |
| | 11/4 | 9.6 and 9.7 |
| 12 | 11/9 | 9.7 and 9.8 |
| | 11/11 | 9.8 and 9.9 |
| 13 | 11/16 | 9.9 ad 9.10 |
| | 11/18 | 10.2 and 10.3 |
| 14 | 11/23 | Module 3 Exam (Ch 9) |
| | 11/25 | 10.4 and 10.5 |
| 15 | 11/30 | 10.5 and 10.6 |
| | 12/2 | Module 4 Exam (Ch 10) |
| 16 | 12/7 | No class |
| | 12/9 | Cumulative Final Exam |

Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

Instructor's Practices and Procedures

Missed Assignments

There are no make-up exams in this class. The lowest class grade (which in includes a zero from a missed exam) will be dropped.

Academic Integrity

All forms of academic dishonesty including, but not limited to cheating, plagiarism, and collusion are serious offenses. Any student found cheating in any way during this course will be immediately dropped from the course with the grade of F.

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>

Attendance Procedures

This semester, there are three modalities for Developmental Math courses: Online Anytime, Online on a Schedule, and Flex Campus. Online Anytime classes are traditional online courses; coursework is online, and there are no meetings at specific times. Online on a Schedule classes are online courses with traditional meeting components; coursework is online, and there are specific times to log in for scheduled class meetings. Flex Campus are in-person classes; coursework is online, and students have the choice to come to campus or to participate online during scheduled class meetings.

This section of MATH 2414 is a flexCampus course and meets on Mondays and Wednesdays 8-9:50 am

Attendance is taken daily in class. Attendance will not be used when computing your average in this class, however, being absent for more than 4 days in a semester is grounds for being withdrawn from the course. The last day to withdraw from this course is October 30, 2020

Student Conduct

As your instructor and as a student in this class, it is our shared responsibility to develop and maintain a positive learning environment for everyone. I take this responsibility very seriously and will inform members of the class if their behavior makes it difficult for me to carry out this task. Students that behave disrespectfully to others will be asked to leave the class for the day.

Electronic Devices

Personal communication devices are to not be on the student desk, in a student's hand, or lap during examinations. Usage of such devices, along with headphones, is expressly prohibited during examinations and will be considered cheating.

The use of electronic devices by students in the classroom is up to the discretion of the instructor. Any use of such devices for the purposes other than student learning is strictly prohibited unless authorized as an appropriate ADA accommodation from the ADA Counselor.

Mathematics Program Information

- HCC Math Student Organizations: Mu Alpha Theta: Application: <https://www.hccs.edu/resources-for/current-students/stem--science-technology-engineering--mathematics/stem-clubs/mu-alpha-theta-application/>

HCC Policies

Here's the link to the HCC Student Handbook <http://www.hccs.edu/resources-for/current-students/student-handbook/> In it you will find information about the following:

- Academic Information
- Academic Support
- Attendance, Repeating Courses, and Withdrawal
- Career Planning and Job Search
- Childcare
- disAbility Support Services
- Electronic Devices
- Equal Educational Opportunity
- Financial Aid TV (FATV)
- General Student Complaints
- Grade of FX
- Incomplete Grades
- International Student Services
- Health Awareness
- Libraries/Bookstore
- Police Services & Campus Safety
- Student Life at HCC
- Student Rights and Responsibilities
- Student Services
- Testing
- Transfer Planning
- Veteran Services

EGLS³

The EGLS³ (Evaluation for Greater Learning Student Survey System) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS³ surveys are only available for the Fall and Spring semesters. -EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>

Campus Carry Link

Here's the link to the HCC information about Campus Carry:

<http://www.hccs.edu/departments/police/campus-carry/>

HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID](#) and activate it now. You may also use Canvas Inbox to communicate.

Housing and Food Assistance for Students

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their

college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (<http://www.hccs.edu/departments/institutional-equity/>)

disAbility Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including long and short term conditions, mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <http://www.hccs.edu/support-services/disability-services/>

Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
(713) 718-8271
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu
<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>

Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>

Department Chair Contact Information

College - Level Math Courses

| | | | | |
|--------------------|---------------------|-----------|--------------|------------------------------|
| Chair of Math | Susan Fife | SW Campus | 713-718-7241 | Stafford, Scarcella, N108 |
| - Admin. Assistant | Tiffany Pham | SW Campus | 713-718-7770 | Stafford, Scarcella, N108 |
| - Admin. Assistant | Christopher Cochran | SW Campus | 713-718-2477 | Stafford, Scarcella, N108 |
| Math Assoc. Chair | Jaime Hernandez | CE Campus | 713-718-7772 | San Jacinto Building, Rm 369 |
| Math Assoc. Chair | Mahmoud Basharat | NW Campus | 713-718-2438 | Katy Campus Building, Rm 112 |
| Math Assoc. Chair | Emmanuel Usen | NE Campus | 713-718-8062 | Northline, Rm 324 |

Developmental Math Courses

| | | | | |
|------------------------|--------------------|-----------|--------------|----------------------------------|
| Chair of Dev. Math | Marisol Montemayor | SE Campus | 713-718-7153 | Felix Morales Building, Rm 124 |
| - Admin. Assistant | Carmen Vasquez | SE Campus | 713-718-7056 | Felix Morales Building, Rm 124 |
| Dev. Math Assoc. Chair | Hien Nguyen | SE Campus | 713-718-2440 | Felix Morales Building, Rm 124 |
| Dev. Math Assoc. Chair | Jack Hatton | SW Campus | 713-718-2434 | Stafford, Learning Hub, Room 208 |

For issues related to your class, please first contact your instructor.

If you need to contact departmental administration, then contact the appropriate Associate Chair.

If further administrative contact is necessary, then contact the appropriate Department Chair.