UNIVERSITY of HAWAI'I®
WINDWARD
COMMUNITY COLLEGE

MATH 243 – CALCULUS III

3 Credits (CRN 60193)
Online Asynchronous

INSTRUCTOR: Jody-Lynn Storm
OFFICE: Hale Mana'opono 105A, Windward Community College
OFFICE HOURS: By request via Zoom
TELEPHONE: (808) 236 - 9277
EMAIL: jstorm@hawaii.edu

Email is the preferred method of communication. Instructor will respond within 24 hours excluding weekends and holidays.

EFFECTIVE DATE: Spring 2022

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide the Ko'olau region of O'ahu and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

CATALOG DESCRIPTION

Vector algebra, vector-valued functions, differentiation in several variables, and optimization. (3 hours lecture)

Pre-Requisite(s): Grade of "C" or better in MATH 206 or MATH 242 or equivalent or consent of instructor.

STUDENT LEARNING OUTCOMES

As a result of taking this course, students can expect to attain the following outcomes:

1. Apply concepts and techniques in vector calculus.
2. Apply principles and concepts from calculus to multivariable functions.
3. Use strategies from this course to solve applied problems
4. Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form.

RESPONSIBILITIES OF STUDENTS

- Have access to a reliable high-speed internet connection
- Have adequate computer skills.
- Check emails regularly
- Be self-motivated
- Set aside adequate study time

COURSE TASKS AND GRADING

Grades are posted in the Laulima Gradebook. Grades for this course are based on the following course tasks:

ASSIGNMENT	POINTS	TOTAL
2 Midterms	100 pts each	200
1 Final Exam	100 pts	100
MLM Homework		200
2 Graded Problem Sets	15 pts each	30
4 Forum Posts	5 pts each	20
Total		**550**

Each letter grade for the course will be assigned according to the level of achievement as provided in the table below:

Letter Grade	Definition
A	90% - 100% of the cumulative points possible
B	80% - 89% of the cumulative points possible
C	70% - 79% of the cumulative points possible
D	60% - 69% of the cumulative points possible
F	Less than 60% of the cumulative points possible
CR	70% or above of the cumulative points possible
NC	Less than 70% of the cumulative points possible
W	Official Withdrawal
I	Incomplete

Note: CR/NC grades require written instructor consent. **Students must apply** for CR/NC grading option at the Admissions Office by the posted deadline. If a student does not apply for CR/NC grading option at the Admissions Office by the required deadline and if s/he does not withdraw, a letter grade (A, B, C, D, F, N) will be assigned for the course.

Note: The W grade is given only when the student officially withdraws from the course by the posted deadline.

Note: The I grade is a temporary grade given at the instructor's discretion when a student has failed to complete a small part of a course because of circumstances beyond his or her control. A student may qualify for the I grade if (a) they are unable to take the final exam and (b) taking the final exam could possibly raise their course grade.

COURSE CONTENT

- Parametric Curves, Polar Curves, and Conic Sections
- Vectors and the Geometry of Space
    - Vectors in the plane and in space
    - Dot and Cross Products
    - Lines and Planes in Space
    - Cylinders and Quadratic Surfaces
- Vector-Valued Functions
    - Calculus of Vector-Valued Functions
    - Motion in Space
    - Length of Curves
    - Curvature and Normal Vectors
- Functions of Several Variables
    - Graphs and Level Curves
    - Limits and Continuity
    - Partial Derivatives
    - The Chain Rule
    - Directional Derivatives and the Gradient
    - Tangent Planes and Linear Approximation
    - Maximum and Minimum Problems
    - Lagrange Multipliers

REQUIRED MATERIAL

The MyLab Math (MLM) Online Program. MLM comes with the eBook *Calculus* 3rd ed., by Briggs. MLM registration will be through IDAP via the VitalSource link in Laulima.

This course will be participating in the Bookstore's Interactive Digital Access Program (IDAP). Through this program, you will access your course material digitally, and it will be available to you by the first day of class.

A charge for the digital course material through IDAP will be added to your MyUH account.

You have the option to opt-out of receiving your course material through IDAP. By opting-out, you will lose access to the course material and the charge will be refunded on your MyUH account. If you do not opt-out, the charge will stay on your MyUH account. Any unpaid charges on your MyUH account will turn into a hold. Holds on your account will prevent you from accessing various services within the University.

You may opt-out by visiting your unique Inclusive Access Student Portal, which can be found in your IDAP welcome email (Subject Line: "IMPORTANT: You have enrolled in an IDAP Course").

For more information regarding IDAP, please contact your campus bookstore.

ADDITIONAL RESOURCES

WCC Resources

- Ka Piko Tutoring: https://windward.hawaii.edu/services-for-students/tutoring/ka-piko/

UH System Resources

- OLA (UH online tutoring program: http://manoa.hawaii.edu/ola/
- Tutor.com: https://windward.hawaii.edu/tutor.com/
- Distance Learning Homepage: http://www.hawaii.edu/dl/home

Other Online Resources

- Symbolab: https://www.symbolab.com
- Wolfram Alpha: http://www.wolframalpha.com
- Desmos Calculator: https://www.desmos.com
- Professor Leonard Videos: https://www.youtube.com/user/professorleonard57
- Khan Academy Videos: http://www.khanacademy.org
- Numerade: https://www.numerade.com/courses/

ADDITIONAL INFORMATION

Attendance and Class Preparation

This is an online class and students are expected to keep pace with module assignments. Students are required to complete assignments by the posted deadlines, and interact with the instructor and other members of this online class with professionalism. There will be no make-up work and no extensions of due dates.

Final Exam

There will be one cumulative computer-based final exam. The exam is timed (4 hours). The exam will be available for 4 days. You may take the exam on any computer.

Midterms Exams

There will be two computer-based midterm exams. The exams are timed (3 hours per exam). The exams will be available for 3 to 5 days. You may take the exam on any computer. There are no re-takes, make-ups, or extensions for the exams. Students who fail to take an exam during the assigned period will receive a zero score on the exam.

Note: If the score earned on the final exam is higher than the lowest midterm exam score, then the lowest midterm exam score will be replaced with the score earned on the final exam. If a student misses an exam, then that exam will be counted as the lowest exam score. Only one exam score can be replaced by the score earned on the final exam.

MyLab Math (MLM) Homework

Computer-based homework submitted online through the MLM program. Homework is due on Sundays by 11:59 pm. There will be a 20% deduction for problems submitted after the due date. Final submission for late homework will be the Sunday before finals week.

Graded Problem Sets

There will be 2 graded problem sets to turn in. You will work the problems on separate paper and upload them to Laulima. To receive full credit, you must show sufficient work

neatly, with proper notation, and in an organized manner. Messy or disorganized work will not receive full credit.

Forum Posts

Throughout the semester forum topics will be posted on Laulima. You will be graded on your responses to 4 forum posts. Each post is worth 5 points.

Extra Credit

- There will be 2 exam reviews and a final exam review. Each review is worth 5 points of extra credit.
- The end of semester student survey (CES) is worth 5 points of extra credit.
- Participating in the Discussion Board is 5 points of extra credit.
- There may be other extra credit opportunities available during the semester.

DISABILITIES ACCOMMODATIONS

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Accessibility Counselor to discuss reasonable accommodations that will help you succeed in this class. Roy Inouye can be reached at (808) 235-7448, royinouy@hawaii.edu, or you may stop by Hale Kākoʻo 106 for more information.

SEX DISCRIMINATION AND GENDER-BASED VIOLENCE RESOURCES (TITLE IX)

Windward Community College is committed to providing a learning, working, and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, WCC has staff and resources to support and assist you. To report an incident of sex discrimination or gender-based violence, as well as receive information and support, please contact one of the following:

UH Confidential Advocate
Phone: (808) 348-0663
Email: advocate@hawaii.edu

Desrae Kahale, Mental Health Counselor & Confidential Resource
Phone: (808) 235-7393
Email: dkahale3@hawaii.edu
Office: Hale Kākoʻo 101

Karla K. Silva-Park, Title IX Coordinator
Phone: (808) 235-7468
Email: karlas@hawaii.edu
Office: Hale Kākoʻo 128

As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title

IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

For more information regarding sex discrimination and gender-based violence, the University's Title IX resources and the University's Policy, Interim EP 1.204, go to manoa.hawaii.edu/titleix/

ALTERNATE CONTACT INFORMATION

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office:

- Location: Alakaʻi 121
- Phone: (808) 235-7422

IMPORTANT DATES

01/18/2022	Last day to register
01/18/2022	Last day to receive 100% tuition refund
02/02/2022	Last day to receive 50% tuition refund
02/02/2022	Last day to drop (No "W" on transcript)
03/28/2022	Last day to withdraw from class ("W" on transcript)

MATH 243 – SPRING 2022 SCHEDULE		
Week	Dates (Mon - Sun)	Assignments Due Sunday
1	1/10 – 1/16	IDAP (MLM) Registration Orientation (optional)
2	1/17 – 1/23	MLM: 12.1, 12.2 Forum #1
3	1/24 – 1/30	MLM: 12.3, 12.4
4	1/31 – 2/6	MLM: 13.1 Graded Problem Set #1
5	2/7 – 2/13	MLM: 13.2, 13.3
6	2/14 – 2/20	MLM: 13.4, 13.5 Forum #2
7	2/21 – 2/27	MLM: 13.6, Exam 1 Review
EXAM 1: Available 2/28 – 3/4		
8	2/28 – 3/6	MLM: 14.1
9	3/7 – 3/13	MLM: 14.2, 14.3
10	3/14 – 3/20	SPRING BREAK – NO CLASS
11	3/21 – 3/27	MLM: 14.4, 14.5 Forum #3
12	3/28 – 4/3	MLM: 15.1, 15.2 Graded Problem Set #2
13	4/4 – 4/10	MLM: 15.3, 15.4
14	4/11 – 4/17	MLM: 15.5, Exam 2 Review
EXAM 2: Available 4/18 – 4/22		
15	4/18 – 4/24	MLM: 15.6
16	4/25 – 5/1	MLM: 15.7, 15.8
17	5/2 – 5/8	MLM: Final Review Forum #4
18	5/9 – 5/15	Final Exam Week
FINAL EXAM: 5/9 – 5/12 Note: The final exam is not available Friday 5/13		