

MATH 231 – CALCULUS III (3 Credits)

INSTRUCTOR: Jody-Lynn Storm
OFFICE: Mana'opono 105
OFFICE HOURS: MWF 10:00 am – 11:00 am
TR 12:00 pm – 1:00 pm
And by appointment
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WEBSITE: <http://www.jodystorm.com>
EFFECTIVE DATE: Fall 2014

CRN	Days	Time	Classroom
62557	TR	8:30 am – 9:45 am	Mana'opono 113

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 O'ahu's Ko'olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

COURSE DESCRIPTION

Vector-oriented study of functions of several variables; partial differentiation and *line integrals; multiple integrals*. (3 hours lecture)

Note: Italicized topics are optional and generally covered in Math 232. Other topics covered in Math 231 include parametric curves, polar curves, vector algebra, and vector calculus.

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

STUDENT LEARNING OUTCOMES

Upon completion of the course, the student will be able to:

1. Analyze and apply principles, concepts, and properties from algebra, geometry, trigonometry, and calculus to solve problems.
2. Apply concepts and calculus properties of Cartesian space coordinates and vectors.
3. Apply principles and concepts from calculus to multivariable functions.
4. Use various strategies from this course to solve problems.
5. Utilize precise mathematical language and symbols and effectively communicate in written and/or oral form.

Note: All SLO assessments are embedded in class activities, homework, quizzes, or Exams.

FOUNDATION HALLMARKS

Math 231 fulfills 3 credits of the General Education requirements (Foundations: Symbolic) for both an A.A. degree at WCC and a Bachelor's degree at UH Manoa.

Consequently, it meets the hallmarks of the symbolic reasoning requirement.

1. Students will be exposed to the beauty, power, clarity and precision of formal systems.
2. Instructors will help students understand the concept of proof as a chain of inferences.
3. Instructors will teach students how to apply formal rules or algorithms.
4. Students will be required to use appropriate symbolic techniques in the context of problem solving, and in the presentation and critical evaluation of evidence.
5. The course will not focus solely on computational skills.
6. Instructors will build a bridge from theory to practice and show students how to traverse this bridge.

LEARNING RESOURCES & MATERIALS

REQUIRED MATERIALS:

- Textbook: Multivariable Variable Calculus for Scientists and Engineers, by Briggs & Cochran, bundled with MyMathLab
 - If preferred you may just use the ebook on MyMathLab
- MyMathLab (MML) Access Code with ebook
 - Register online at <http://pearsonmylabandmastering.com/>
 - Use Course ID: **storm93236**
- Calculator: TI-83, TI-83+, TI-84, or TI-84+

LEARNING RESOURCES:

- Supplemental Instruction Leader (SIL): Alexander Bopp-Whyne
Email: asbw@hawaii.edu
- Math Lab: La'akea (Library Learning Commons) Room 220
http://windward.hawaii.edu/About_WCC/Math_Lab/index.php
- The Testing Center (TTC): La'akea (Library Learning Commons) Room 228
Phone: (808) 235-7498
http://windward.hawaii.edu/Testing_Center/index.php
- Brainfuse Online Tutors: <http://windward.hawaii.edu/brainfuse/>
- OLA (UH online tutoring program): <http://manoa.hawaii.edu/ola/>
- Kahn Academy Videos: <http://www.khanacademy.org>

DISABILITIES ACCOMMODATION STATEMENT

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 Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, lemke@hawaii.edu, or you may stop by Hale 'Akoakoa 213 for more information, or visit <http://windward.hawaii.edu/Disabilities/>

COURSE TASKS & GRADING

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

3 unit exams @ 100 pts ea	300 pts	52% of possible pts
Final Exam	130 pts	22% of possible pts
Course Activity:		
Graded Problems	110 pts	19% of possible pts
MyMathLab	40 pts	7% of possible pts
Total	580 pts	

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

<u>Letter Grade</u>	<u>Definition</u>
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
N	See below
CR	70% or above of the cumulative points possible
NC	Less than 70% of the cumulative points possible
W	Official Withdrawal
I	See below

Note: The N grade indicates that the student has worked conscientiously, attended class regularly, finished all work, fulfilled course responsibilities, and has made measurable progress. However, either the student has not achieved the minimal student learning objectives and is not yet prepared to succeed at the next level, or the student has made consistent progress in the class but is unable to complete the class due to extenuating circumstances, such as major health, personal, or family emergencies.

The N grade is an optional grade that instructors do not have to give. All requests for the N grade must be submitted by the student in writing and is contingent upon the instructor's approval.

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 option 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. The I grade is given by student request and must be approved by the instructor.

ADDITIONAL INFORMATION

ABSENCES

It is your responsibility to attend class. If you are absent, you are responsible for any important announcements or assignments given during the class you missed. It is your responsibility to meet with your instructor to review any missed lecture material. You may drop in during posted office hours or make an appointment to meet one-on-one. Please do not send email requests for missed lecture material. If you are absent frequently or for an extended period of time, contact the instructor as soon as you can to discuss your situation. Frequent absences could negatively impact your grade.

MAKE-UP POLICY

Exams will be available for 2-3 days in the Testing Center. If you know in advance that you will be unable to take an exam during the assigned period, discuss your situation with the instructor. It may be possible for you to take the exam earlier than the specified dates. If there is a documented emergency preventing you from taking an exam during the assigned period, a make-up exam will be scheduled. For each student, **ONLY ONE** make-up exam may be taken. There are no make-up opportunities for assigned graded problems.

CALCULATORS

Some problems require the use of a graphing calculator. You are free to use any type of graphing device for homework problems, but may only use a TI-84+ or lower model graphing calculator on exams. You may not use higher models, such as the TI-89 or the TI-Nspire on exams as these come equipped with CAS.

EXAMS

There are no retests for exams. The final exam is cumulative.

SUPPLEMENTAL INSTRUCTION (SI)

For each hour of SI one point will be added to the Course Activity portion of your grade. Points cannot exceed the maximum Course Activity allotment of 150 points.

This class is supported by the Supplemental Instruction (SI) program. SI is a FREE, collaborative, peer-study program that helps students succeed in difficult classes. Your SI Leader is a peer who has taken this class (or a higher level class) previously and has an understanding of the course material. In SI sessions, students will work together with the SI Leader name to explore important concepts, review class notes, discuss test taking strategies, and review for tests. All students in this class are encouraged to attend!

Note: At WCC, students who attend SI sessions earn A, B, and C grades at nearly a 20% higher rate than non-attendees and are less likely to withdraw from their courses. WCC data has also shown that the more sessions students attend, the more likely they are to pass.

HOMEWORK

There is one homework assignment per textbook section. Most of the assignments will be given in two parts:

- 1) MyMathLab Assigned problems
 - a) Submitted online
 - b) Due on the last day of each exam period
 - c) 20% point deduction for late submissions
- 2) Assigned graded problems (mostly from the textbook) to turn in.
 - a) 5 pts each
 - b) Must be turned in at the start of class
 - c) No late submissions

Assignments and due dates are posted on the instructor's webpage. You may need to do more than the assigned homework problems to become comfortable with the concepts and skills.

Note: Chapters 10, 11, 12 in the multivariable textbook (paperback) correspond to chapters 12, 13, 14 in the eBook.

GRADING

To receive full credit for problems done on exams or graded homework, you must show sufficient work in a clear and organized manner. Your work must be neat and organized. "Messy" and/or disorganized work will not receive full credit.

CELL PHONES & OTHER ELECTRONIC DEVICES

Cell phones and other electronic devices should be silenced and put away prior to the start of class.

DISRUPTIVE BEHAVIOR

Please respect your fellow students and act accordingly. If a student takes part in disruptive behavior, the instructor reserves the right to exclude the student immediately from the class meeting. Examples are activated cell phones, texting, making offensive remarks, prolonged chattering, smokeless cigarettes, etc.

ACADEMIC HONESTY

All exams must be done by your own individual effort. You may not consult with any classmates while taking exams. This would fall under the guidelines of academic integrity and any evidence of cheating will result in a score of 0 for all parties involved. An "F" will be assigned to students involved in cheating and will be reported to the Dean. See <http://windward.hawaii.edu/Policies/> for more information on the UH system-wide student conduct code.

Graded homework assignments may be discussed with your classmates and you may seek guidance from the instructor, the Math Lab tutors, the Trio tutors (if you are a Trio client), or the SIL (if assigned to your course). However, the write up of the solution for each problem must be done on your individual effort.

**MATH 231 TENTATIVE SCHEDULE
STORM – FALL 2014**

	Tuesday		Thursday
AUG 26	Orientation, 10.1	AUG 28	10.1, 10.2
SEP 2	10.2, 10.3	SEP 4	10.3
SEP 9	10.4	SEP 11	11.1
SEP 16	11.2	SEP 18	11.3
SEP 23	11.4	SEP 25	Exam Review Exam 1
SEP 30	11.5	OCT 2	11.6
OCT 7	11.6	OCT 9	11.7
OCT 14	11.8	OCT 16	11.9
OCT 21	12.1	OCT 23	12.2
OCT 28	Exam Review Exam 2	OCT 30	12.3
NOV 4	No Class Election Day	NOV 6	12.3, 12.4
NOV 11	No Class Veteran's Day	NOV 13	12.4
NOV 18	12.5	NOV 20	12.6
NOV 25	12.7	NOV 27	No Class Thanksgiving
DEC 2	12.8	DEC 4	Exam Review Exam 3
DEC 9	12.9	DEC 11	Final Exam Review
DEC 16	FINAL EXAM In Testing Center 12/15-12/18	DEC 18	
DEC 23		DEC 25	MERRY CHRISTMAS!!

Important Dates	
AUG 29	Last day to register/add/drop and to receive 100% refund of tuition
SEP 15	Last day for 50% refund of tuition and to withdraw without a "W" grade.
OCT 30	Last day to withdraw with a "W" or choose CR/NC grade option. Last day to make up "I" grade from previous semester