MATH 231 – CALCULUS III - 3 credits – CRN 61277
TR 8:30 – 9:45 a.m.

INSTRUCTOR:	**Jean Okumura**
OFFICE:	**Mana'opono 112A**
OFFICE HOURS:	**TW 10:00 – 11:00 a.m.**
	Other Hours by Appointment
TELEPHONE:	**236-9282**
FAX NUMBER:	**247-5362 Attention: Jean Okumura**
EMAIL ADDRESS:	**jokumura@hawaii.edu**
EFFECTIVE DATE:	**Fall 2017**

MY MATH LAB (MML) Course ID: okumura99777

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.

Catalog Description

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

PREREQUISITES: Grade of "C" or better in Math 206 or equivalent, satisfactory placement test score, or consent of instructor.

Suggested Basic Skills

Good study skills and habits; Competency with Calculus I & II.

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.

Learning Resources and Materials

Required Texts: Multivariable Calculus for Scientists and Engineers by Briggs, Cochran, & Gillett   (You may use the full textbook - Calculus for Scientists and Engineers by Briggs, Cochran, & Gillett)

Required Technology Tool: TI-83, TI-83+, or TI-84+ calculator.

Required Material: MyMathLab (MML) access code

MyMathLab (MML) Course ID: okumura99777

MATH LAB: La'akea 220 – free drop-in tutorial assistance

THE TESTING CENTER (TTC): La'akea 228 – phone number 235-7498

UH Manoa Online Learning Academy: http://manoa.hawaii.edu/ola/
        Free online tutorial assistance M – F: 9 am to 10 pm and Sundays: 5 to 10 pm

Brainfuse: http://windward.hawaii.edu/Brainfuse/
                Free online tutorial assistance accessed via the MyUH portal.

Khan Academy: https://www.khanacademy.org/
                Free supplemental materials

STUDENT LEARNING OUTCOMES

These student learning outcomes will be assessed via course activities (homework, in-class work, and/or additional assignments) and via tests or quizzes.

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.

Course Goals

1.   To acquire skills with various analytical problem-solving strategies.

2.   To gain competency with the theoretical and practical foundations of differential and integral calculus.

3.   To learn about Cartesian space coordinates, vectors and vector applications, functions of multiple variables, and partial differentiation.

4.   To inculcate the relevance of calculus through applications.

5.   To prepare the student for endeavors which have Calculus III as a prerequisite.

Activities Required at Scheduled Times Other Than Class Times

Homework; possibly quizzes or exams; consultation with instructor.

It is expected that students spend, at the minimum, 9 hours per week outside of class time studying and doing homework and readings for this class.

Responsibilities of Students

Success in this course will be enhanced by:

1.   A positive, inquiring attitude toward mathematics;

2.   Setting aside adequate time for studying, working on problems, and careful cogitation of the material;

3.   Reading the text carefully and making use of other learning materials whenever necessary;

4.   Seeking assistance from the instructor and the Math Lab whenever necessary;

5.   Regularly attending class and, notifying the instructor of an absence and responsibly obtaining and completing assignments by the designated date.

Email and Laulima Website

You are responsible for checking your UH email regularly for important announcements. You are also expected to check the Math 231 course homepage at the Laulima website for important resources for the course.

Academic Honesty

All quizzes and exams are **closed books and notes and must be done by your individual effort.** You may not consult with any classmates while taking quizzes or exams. You are not allowed to tell a friend the type of questions on the quiz or exam, the answers, or help a classmate in any way (e.g. by explaining how to solve the problem). 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. Also keep in mind that we are assessing your knowledge and understanding of the concepts and strategies – attempting to find the answers online or through other sources is not in the spirit of academic honesty. An "F" will be assigned to students involved in **cheating** and will be reported to the Dean.

Graded assignments that apply to the course activities portion of your grade may be discussed with your classmates and you may seek guidance from the instructor, the Math Lab tutors, online tutors, or the Trio tutors (if you are a Trio client), however, the write up of the solution for each problem must be done on **your individual effort** unless otherwise specified by the instructor. Graded assignments are **not group assignments** where all members of the group write the same responses for each problem. Any evidence of plagiarism will result in a score of 0 for all parties involved. If plagiarism persists, then an "F" will be assigned to the students involved in **plagiarism** and will be reported to the Dean.

All students are required to follow the Student Conduct Code described at https://www.hawaii.edu/policy/?action=viewPolicy&policySection=Ep&policyChapter=7&policyNumber=208

Disruptive Behavior

Disruptive Behavior leads to a loss of learning time. Examples are activated beepers and cell phones, texting messages, making offensive remarks, packing books before class is over, making noise, leaving class early, coming to class late, sleeping in class, prolonged chattering, reading other materials not relevant to this class, etc. If a student takes part in disruptive behavior, the instructor reserves the right to exclude the student immediately from the class meeting, and will be marked absent.

Remember that class time is learning time.   Also, be respectful of others and their learning time.

MyMathLab (MML)

This course will utilize MML for many homework assignments. The new textbook purchased from the WCC bookstore is packaged with MML. If you purchase the textbook from elsewhere, be sure that it comes with the MML access code. If you used the textbook Calculus for Scientists and Engineers in either Math 205 or 206, you do not need to purchase another access code. You should be able to register for my MML Math 231 class without paying for access again.

The MML access code also provides an e-book for the textbook for this course so if you prefer, you may purchase just the MML access code online through my MML Math 231 course.

For those who prefer a hard back textbook, you are welcome to purchase the textbook "Calculus for Scientists and Engineers" by Briggs, Cochran, & Gillett from WCC's bookstore. The new textbook sold at WCC's is packaged with an access code for MML that you need for the course.   The WCC bookstore sells the Multivariable portion of the book "Calculus for Scientists and Engineers" by Briggs, Cochran, & Gillett.

Before you start using MML for assignments, be sure to do the browser check. A link to do a browser check is available at the MML home. Your computer needs to have certain free programs. The browser check will check what you have and let you know what you need to obtain and how to download it.

After doing the browser check, it is recommended that you view the "How to Enter Answers" tour that is also available from MML Home. Then, do the first assignment – "Orientation" found at the Homework site of MML.

For most MML problems, you will have 3 chances to get the right answer for a given problem. If you still get the problem wrong after 3 chances, then the correct answer is given. If after 3 chances, you still get the problem wrong, you may be able to request a similar problem and have another 3 chances to get the problem correct. For each problem, you may be able to have at most 3 similar problems to be able to get that problem correct. Where the MML problem is a multiple choice problem with very few choices or if the problem is just a true or false problem, you will not be able to have as many chances or similar problems to be able to get the problem correct.

For MML homework/course activities, a deadline will be given. You may do MML problems/activities past the deadline and a 25% penalty on the points earned after the initial due date will be assessed.   There will be a final deadline, usually the class meeting before the exam covering that section, and you will not be able to earn any more points on that assignment after that final deadline.

Course Tasks and Grading Information

Grades for this course are based on the following course tasks:

3 exams @100 pts	300 pts	(52% of possible pts)
Course Activities	150 pts	(26% of possible pts)
(Total percent earned)(150) = pts for CA		
Final Exam	<u>125 pts</u>	(22% of possible pts)
Total points	575 pts	

Course activities may include but are not limited to:

Written Homework Problems	In-Class or Other Problems
Journal entries (writing assignments)	MML Homework Problems
Reports or Presentations	Guided Projects

There are no make-up opportunities for missed or late assignments, in-class activities, or other activities that are graded for the course activities portion of your grade. The total percent correct will be multiplied by 150 (rounded to the nearest whole number) to obtain your score for the course activities portion of your grade. However, the maximum score possible for the course activities portion of your grade is 150 points.

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% - 100% of the cumulative points possible
NC	Less than 70% of the cumulative points possible
W	Official Withdrawal
I	Incomplete - given when a student has failed to complete a SMALL part of the course due to circumstances beyond his/her control.

Note: Cr/NC grades require written instructor consent. Students <u>must</u> 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) will be assigned for the course.

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

Additional Information

1.   ABSENCES:

It is your responsibility to attend class. If you are absent, borrow a classmate's notes or my notes and copy them for the day you were absent. You are responsible for those topics and examples discussed on the day of your absence. Furthermore, you are responsible for any important announcements or homework assignments given during the class you missed. Frequent absences can negatively affect your grade. You should also check the class Laulima site for any announcements.

2.   MAKE-UP POLICY:

There are no make-up opportunities for any quizzes, graded assignments, or graded in-class activities that you miss due to absences or tardiness. A <u>few</u> extra credit opportunities may be available for the course activities portion of your grade. You will have 5 one business day late graces (LG) for the written homework for course activities.

If you are unable to attend class on an exam day, discuss your situation with the instructor as soon as possible before the exam day. It may be possible for you to take the exam earlier than the specified day/time. IF YOU UNEXPECTEDLY MUST BE ABSENT ON AN EXAM DAY, NOTIFY THE INSTRUCTOR BY THE END OF THAT EXAM DAY. YOU MAY LEAVE A VOICE MAIL MESSAGE FOR THE INSTRUCTOR (236-9282) OR EMAIL JOKUMURA@HAWAII.EDU. BE SURE TO STATE THE REASON FOR THE ABSENCE. <u>If no notification is received by the day of the exam or if the reason is not justified, then you will receive a 0 for that exam and no make-up will be allowed.</u> If notification is received and the reason is justified then a make-up exam will be scheduled. You must take the make-up exam as soon as possible after you return to school. The instructor has the right to request documentation of the student's absence and determine if the reason for the absence is justified. FOR EACH STUDENT, NOT MORE THAN ONE MAKE-UP EXAM MAY BE TAKEN.

3.   There are NO RETESTS for this course.

4.   FINAL EXAM: The final exam is cumulative.

5.   CALCULATOR:

A TI-83, TI-83+, or TI-84+ calculator is required for this class. The calculator is required for some parts of the exams and assignments and not allowed for other parts. The TI-89 and TI-NSPIRE calculators are not allowed for exams.

Additional Information (continued)

6.   HOMEWORK:

Read the sections to be covered in a class session prior to that class session. As you read each section, write down terminology or symbols and its definition and properties/rules that are important and that are not already listed in the in-class notes. This will become helpful additional notes. Try to do as much of the recommended problems as possible. Also look at the in-class examples and try to do as much of those problems as possible.

After the class lecture/discussion on a section, you should complete some problems from those sections. Those problems and concepts that you still do not understand or that you need further clarification on should be asked about in the class meeting after the section is discussed in class. Because there is very little class time, you will probably need to seek assistance from the instructor or from the Math Lab if not all your questions on problems are handled during class time or if you are still having difficulties. Complete, review, and analyze all of the recommended problems to help you learn and get a better understanding of the material. You may need to do more than the recommended problems to become comfortable with the concepts and skills.

After the section(s) are covered in class, graded work that count towards the course activities (CA) portion of your grade will be given with a due date. Some homework will be given in MML. Course activities may also include other activities such as journals (writing assignments), oral presentations, etc.

Any item collected for grading purposes for the course activities portion of your grade are due at the <u>BEGINNING OF CLASS</u> unless otherwise specified by the instructor and <u>WILL NOT RECEIVE ANY POINTS IF TURNED IN LATE</u>. However, you will have 5 one day late graces (LG). You may turn in your graded work before the due date and/or time without losing points. There will be opportunities to earn some extra credit points towards your course activities portion of your grade.

Although there are usually no points associated with recommended problems (problems from the text or on handouts that have answers provided as a way to practice the strategies learned), it is expected that students do recommended problems to assist them in their learning. Not doing recommended problems and/or waiting to work on recommended problems until right before an exam generally results in poor exam results and a lack of success in this course.

Be sure to review and analyze your graded homework and other course activities after it is returned to you. This will help you to get a better understanding of the material, concepts, and notation.

7.   CELL PHONES:

Please put your cell phone on silent mode or turn it off prior to the start of the class so that it does not disturb the class session.

Additional Information (continued)

8.   HELP:

Your instructor is your primary human resource for help when you are lost or having trouble.   Seek help immediately if you are encountering problems even after reading and re-reading the text section(s) and listening to/thinking about the discussion in class on that section(s). See the instructor during office hours, make an appointment, email or call. Don't wait too long to get help!! The Math Lab is also available for drop-in assistance.   There are also free online tutoring available via OLA and Brainfuse.

If a crisis comes up that interferes with the class, communicate with your instructor in a timely manner. Too many students wait until it is too late to inform their instructor about their crisis and that reduces the options that students may have to complete the course with a grade of C or better.

9.   GRADING ON HOMEWORK, QUIZZES, OR EXAMS:

To receive full credit for problems done on exams, on quizzes, or for graded homework, you must show sufficient work in a clear, logical, mathematically precise and organized manner.   This is to assess student learning outcome #6. It also helps me determine where your error is (hence, you might be able to obtain partial credit) and if you are logically applying the mathematical tools learned to solve the given problem.   Your work must be neat and organized.   "Messy" and/or disorganized work will not be accepted.

10.   DON'T PROCRASTINATE

Mathematics is not a subject that you can consistently be successful in by "cramming" a day or two before the test.   By "cramming" you don't develop proficiency in doing the problems, knowledge of what to do on a particular problem and long-term understanding of the process. Also, if you procrastinate, you may fall so hopelessly behind that it becomes impossible to catch up. It requires constant work to keep on top of the material.

11.   N Grade

The N grade indicates that the student worked conscientiously, attended 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. Instructors do not have to give an N grade.

GRADING INFORMATION
MATH 231 - OKUMURA

Grades for this course are based on the following:

3 exams @100 pts	300 pts	(52% of possible pts)
Course Activities	150 pts	(26% of possible pts)
(Total percent earned)(150) = pts for CA		
Final Exam	<u>125 pts</u>	(22% of possible pts)
Total Possible Points	575 pts	

Course activities may include but are not limited to:

Written Homework Problems	In-Class or Other Problems
Journals (writing assignments)	MML Homework Problems
Reports or Presentations	Guided Projects

COURSE ACTIVITIES THAT ARE TURNED IN LATE WILL NOT RECEIVE ANY POINTS (no matter what the reason). All assignments are due at the **BEGINNING** of class on the due date unless otherwise specified by the instructor. The "beginning of class" means that assignments must be given to the instructor by 5 minutes after the start of class. For example, if the class meets 8:30 - 9:45 then, the assignment must be turned in by 8:35. The clock of the classroom is the official time clock.

There are no make-up opportunities for missed written assignments, quizzes, in-class activities, or other written assignments that are graded for the course activities portion of your grade. However, you will have 5 one-business day late graces (LG) for the written homework for course activities. There may also be a <u>few</u> opportunities to earn extra credit points for the course activities portion of your grade. The total percent correct will be multiplied by 150 and will be rounded to the nearest whole number to obtain your score for the course activities portion of your grade. The <u>maximum</u> score for the course activities portion of your grade is 150 points.

Instructor:	Jean Okumura	Office phone:	236-9282
Office:	Mana`opono 112A	Email: jokumura@hawaii.edu	
Office Hrs:	T: 10:00 am – 11:00 am	School Fax Number: 247-5362	
	W: 10:00 am – 11:00 am	Attention: Jean Okumura	
	Other hours by appointment		

TENTATIVE SCHEDULE - MATH 231 – CRN 61277
FALL 2017 – OKUMURA - TR 8:30 am – 9:45 am

	TUESDAY		THURSDAY
AUG 22	Orientation, 11.1 (HB 12.1)	AUG 24	11.1, 11.2 (HB 12.1, 12.2) *Last Day for 100% Refund – Fri., 8/25*
AUG 29	11.2, 11.3 (HB 12.2, 12.3)	AUG 31	11.3, 11.4 (HB 12.3, 12.4)
SEPT 05	11.4, 12.1 (HB 12.4, 13.1)	SEPT 07	12.1 (HB 13.1)
SEPT 12	12.2, 12.3 (HB 13.2, 13.3) *Erase and 50% Refund Deadline*	SEPT 14	12.3, 12.4 (HB 13.3, 13.4)
SEPT 19	**EXAM 1 - Ch 11 and Sections 12.1 – 12.2** (HB Chap 12 and Sections 13.1 – 13.2)	SEPT 21	12.4, 12.5 (HB 13.4, 13.5)
SEPT 26	12.5, 12.6 (HB 13.5, 13.6)	SEPT 28	12.6, 12.7 (HB 13.6, 13.7)
OCT 03	12.7, 12.8 (HB 13.7, 13.8)	OCT 05	12.9 (HB 13.9)
OCT 10	12.9 (HB 13.9)	OCT 12	13.1 (HB 14.1)
OCT 17	13.1, 13.2 (HB 14.1, 14.2)	OCT 19	13.3 (HB 14.3)
OCT 24	**EXAM 2 - Sections 12.3 – 12.9** (HB Sections 13.5 – 13.9)	OCT 26	13.3, 13.4 (HB 14.3, 14.4) *Withdrawal, CR/NC Deadline – Mon., 10/30*
OCT 31	13.4 (HB 14.4)	NOV 02	13.5 (HB 14.5)
NOV 07	13.6 (HB 14.6)	NOV 09	13.6, 13.7 (HB 14.6, 14.7)
NOV 14	13.7 (HB 14.7)	NOV 16	13.8 (HB 14.8)
NOV 21	13.8 (HB 14.8)	NOV 23	HOLIDAY: THANKSGIVING
NOV 28	**EXAM 3 - Sections 13.1 – 13.7** (HB Sections 14.1 – 14.7)	NOV 30	13.9 (HB 14.9)
DEC 05	13.9 (HB 14.9)	DEC 07	Final Exam Review
DEC 12	No class Study for Final Exam	DEC 14	**FINAL EXAM!!! 8:00 am-11:00 am**