



UNIVERSITY of HAWAII®  
**WINDWARD**  
COMMUNITY COLLEGE

## **MATH 242 – CALCULUS II**

4 Credits (CRN 62045 & 62119)

Online Asynchronous

**INSTRUCTOR:** Jody-Lynn Storm  
**OFFICE:** Hale Mana 'opono 105A, Windward Community College  
**OFFICE HOURS:** Tuesdays & Thursdays 2-3pm via Zoom, and by appointment.  
**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:** Summer 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**

Differentiation and integration concepts of trigonometric, exponential, logarithmic and hyperbolic functions. Integration implements, infinite series, and applications of derivatives and integrals are also featured. (4 hours lecture)

Pre-Requisite(s): Grade of "C" or better in MATH 205 or MATH 241 or equivalent or consent of instructor.

### **STUDENT LEARNING OUTCOMES**

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

- Demonstrate proficiency in determining limits, derivatives, and integrals associated with the topics in the course
- Use concepts from the course to solve applied problems
- Demonstrate proficiency in working with sequences or series
- 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:

| Point Distribution |   |         |
|--------------------|---|---------|
| Forums             | 6 posts @ 5 points each                         | 30 pts  |
| Homework           | 26 assignments @ 10 points each                 | 260 pts |
| Portfolio          | Written work for Homework                       | 50 pts  |
| Quizzes            | 5 quizzes @ 50 points each (best of 2 attempts) | 250 pts |
| Final Exam         | Cumulative exam                                 | 200 pts |
| Total Points       |   | 790 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 |
| W                   | Official Withdrawal                             |
| I                   | Incomplete                                      |
| N                   | N-Grade   |

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

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 by the deadline and (b) taking the final exam could possibly raise their course grade.

The N grade is given at the instructor's discretion. 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.

## COURSE CONTENT

- Logarithmic and Exponential functions
  - Inverse functions
  - Natural Logarithmic and Exponential Functions
  - Logarithmic and Exponential functions with Other Bases
  - Exponential Models
  - Inverse Trigonometric Functions
  - L'Hôpital's Rule and Growth Rates of Functions
- Integration Techniques
  - Integration by Parts
  - Trigonometric Integrals
  - Trigonometric Substitution
  - Partial Fractions
  - Numerical Methods of Integration
  - Improper Integrals
- Differential Equations
  - Direction Fields
  - Separable Differential Equations
  - Special First-Order Linear Differential Equations
- Sequences and Infinite Series
  - Sequences
  - Infinite Series
  - Divergence and Integral Tests
  - Comparison Tests
  - Alternating Series
  - Ratio and Root Tests
- Power Series
  - Approximating Functions with Polynomials
  - Properties of Power Series
  - Taylor Series
  - Working with Taylor Series

## REQUIRED MATERIAL

- The MyLab Math (MLM) Online Program.
- A graphing calculator, hand-held or online (i.e., Desmos)

MLM comes with the eBook *Calculus* 3<sup>rd</sup> 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/math-lab/>

### UH System Resources

- 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 through MLM. The final exam is worth 200 points. The exam is timed. The exam is not proctored and can be taken on any computer. Most of the questions on the final exam will come from the weekly quizzes.

**Quizzes:** There will be 5 weekly computer-based quizzes through MLM. The quizzes are scheduled every Friday (except on August 12). Each quiz is worth 50 points. The quizzes are timed. The quizzes are not proctored and can be taken on any computer. You will have 2 tries for each quiz. The 1<sup>st</sup> attempt must be submitted by the Friday deadline. The 2<sup>nd</sup> attempt can be submitted after the due date with no penalty. The final day to submit 2<sup>nd</sup> attempt on quizzes is Wednesday, August 10. The highest quiz score will go towards your course grade.

**MLM Homework:** Computer-based homework due daily through the MLM program. There will be a 1% deduction per day for problems submitted after the due date. Final date of submission for late homework is Wednesday, August 10..

**Portfolio:** For each MLM homework assignment you will show your work on a separate sheet of paper (or a tablet). Save your work as a pdf file (one file per MLM homework assignment) and upload the file to the Laulima Drop Box. Each file should be labeled with the appropriate MLM assignment name.

**Forum Posts:** There will be 6 forum posts at 5 points each. The posts are due on Thursdays. The forum posts are not math related, instead they are an opportunity for us to get to know each other.

#### **Extra Credit**

1. **CES Survey:** 10 points of extra credit for completing the end-of-semester student survey.
2. **Final Exam Review:** Up to 10 points of extra credit.

### **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](mailto:royinouy@hawaii.edu), or you may stop by Hale Kāko‘o 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](mailto:advocate@hawaii.edu)

Desrae Kahale, Mental Health Counselor & Confidential Resource  
 Phone: (808) 235-7393  
 Email: [dkahale3@hawaii.edu](mailto:dkahale3@hawaii.edu)  
 Office: Hale Kāko‘o 101

Karla K. Silva-Park, Title IX Coordinator  
 Phone: (808) 235-7468  
 Email: [karlas@hawaii.edu](mailto:karlas@hawaii.edu)  
 Office: Hale Kāko‘o 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/](https://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: Alaka‘i 121
- Phone: (808) 235-7422

### IMPORTANT DATES & SEMSTER SCHEDULE

|           |   |
|-----------|---|
| 7/6/2022  | Last day to register                                |
| 7/6/2022  | Last day to receive 100% tuition refund             |
| 7/12/2022 | Last day to receive 50% tuition refund              |
| 7/12/2022 | Last day to drop (No "W" on transcript)             |
| 7/28/2022 | Last day to withdraw from class ("W" on transcript) |

| Math 242 Summer 2022 Schedule |         |        |                               |        |                                       |        |                              |        |   |
|-------------------------------|---------|--------|-------------------------------|--------|---------------------------------------|--------|------------------------------|--------|---|
|                               | MONDAY  |        | TUESDAY                       |        | WEDNESDAY                             |        | THURSDAY                     |        | FRIDAY                                  |
| JUL 4                         | Holiday | JUL 5  | Orientation (optional)<br>7.1 | JUL 6  | 7.2                                   | JUL 7  | Forum 1<br>7.3               | JUL 8  | 7.4<br>Quiz 1 (7.1-7.3)                 |
| JUL 11                        | 7.5     | JUL 12 | 7.6                           | JUL 13 | 8.1-8.2                               | JUL 14 | Forum 2<br>8.3               | JUL 15 | 8.4<br>Quiz 2 (7.4, 7.5, 7.6, 8.2, 8.3) |
| JUL 18                        | 8.5     | JUL 18 | 8.6-8.7-8.8                   | JUL 20 | 8.9                                   | JUL 21 | Forum 3<br>9.1-9.2           | JUL 22 | 9.3<br>Quiz 3 (8.4, 8.5, 8.9, 9.2)      |
| JUL 25                        | 9.4     | JUL 26 | 10.1                          | JUL 27 | 10.2                                  | JUL 28 | Forum 4<br>10.3              | JUL 29 | 10.4<br>Quiz 4 (9.3, 9.4, 10.1-10.3)    |
| AUG 1                         | 10.5    | AUG 2  | 10.6                          | AUG 3  | 10.7                                  | AUG 4  | Forum 5<br>11.1              | AUG 5  | 11.2<br>Quiz 5 (10.4-10.7, 11.1)        |
| AUG 8                         | 11.3    | AUG 9  | 11.4                          | AUG 10 | Deadline to submit quizzes & homework | AUG 11 | Forum 6<br>Final Exam Review | AUG 12 | FINAL EXAM                              |