

## Course Syllabus

### Math 205 — Calculus I

(Credits: 4 / CRN#: 63483 / Mode: Online)

Instructor: *Navtej (Johnny) Singh*

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Office Location: *Manaopono 110*

Office Hours: *M F 9:00am – 10:00am; W F 12:00pm – 1:30pm, & by appointment*

Office Telephone #: *(808) 236 – 9278 << Use this during office hours for elaborate help>>*

Effective Date: *Fall 2016 Semester*

Website: [www.MyMathLab.com](http://www.MyMathLab.com) (Secondary Site: <https://laulima.hawaii.edu> )

### 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

Basic mathematical concepts, topics in differentiation, and introductory integration of algebraic and trigonometric functions. Applications of differentiation and integration will be demonstrated. (4 hours lecture). Pre-Requisite(s): Grade of "C" or better in MATH 140 or equivalent, satisfactory math placement test score, or consent of instructor.

### Learning Resources and Materials

Everything you need for this course is available online at the <http://www.MyMathLab.com> website. We will utilize most of the tools available through this website. You must get an access code for this course to use all course material. You can get this by one of two ways: Buy the access code directly from MyMathLab website when registering for the course online or buy the textbook which comes with the access code. **Textbook for this online course is " Calculus for Scientists and Engineers" by Briggs, Cochran, & Gillett (single variable portion or full textbook).** Purchase of the physical textbook is not required since all material including e-book is available online. If you are going to purchase a hard copy of this textbook, make sure that your textbook comes with a valid access code. Buying just an access code is cheaper than buy the textbook with code. I recommend that you have a graphing calculator utility to help you with homework. A free graphing utility is available at <http://www.graphcalc.com>. In addition, there are various graphing applications available for use on smartphones and tablets. If you are planning to buy a stand along graphing calculator TI 83 or higher is recommended. Reliable computer with access to broadband internet is required for this course. You are allowed to use a scientific calculator the exam.

## Getting Started with This Online Course

- Go to [www.MyMathLab.com](http://www.MyMathLab.com) and click on Register under students.
- Enter the Course ID **singh73307** when required.
- Follow the online instructions to complete the registration process.
- There will be an option to either buy an access code or enter the one that came with your textbook.
- Note that you may need to turn off pop-up blocker so that some plug-ins can be installed.

## Tasks and Grading

<b>Point Distribution</b>		
Consultations	Three Meetings @ 10 points each	030 pts
Homework	32 Assignments on MML @ 10 points each	320 pts
Portfolio	Written Work for HW and Exam Review	050 pts
Exams	Four @ 100 points each	400 pts
Final Exam	Combination of Everything Learned in Class	200 pts
Total Points		1000 pts

**Letter grades will be assigned based on the following standard scale:**

**A ⇒ 90% ↑ ; B ⇒ 80% ↑ ; C ⇒ 70% ↑ ; D ⇒ 60% ↑ ; F ⇒ below 60%;**

Other grade options include N, CR, NR, I, and W. See the following information for detail:

"The 'N' grade indicates that the student has 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." If you would like to request for N grade in this class, you must provide a formal letter of request to me no later than the time of final examination addressing how you have met the criteria for N grade. Then I will make a decision on whether or not you qualify for the N grade.

The CR/NC grades require written instructor consent. Overall score of 70% or higher is consider CR and below 70% is NC. 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.

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 option when a student has failed to complete a small part of a course because of circumstances beyond his or her control. The "I" grade is given by student request and must be approved by the instructor.

<b>Basic Rubrics for Grading Multistep and Word Problems</b>	
Full Credit	<ul style="list-style-type: none"> <li>- Shows complete understanding of a problem's mathematical concepts and procedures</li> <li>- Performs algorithms correctly using appropriate notation and precise mathematical language</li> <li>- Gives an elaborate and effective explanation of the solution process in an organized way</li> </ul>
Partial Credit	<ul style="list-style-type: none"> <li>- Shows near understanding of the problem's mathematical concepts and procedures</li> <li>- Using appropriate notation, performs algorithms completely that may contain minor errors.</li> <li>- Identifies most relevant information and shows a general understanding</li> <li>- selects an appropriate strategy for solving the problem</li> <li>- Shows effective explanation and some evidence of a systematic solution process</li> </ul>
Very Little Credit	<ul style="list-style-type: none"> <li>- Shows some understanding of a problem's mathematical concepts and procedures</li> <li>- Performs algorithms that may contain major computational errors</li> <li>- Identifies some relevant information and shows limited understanding</li> <li>- Shows little evidence of a solution process or use of appropriate mathematical language</li> <li>- Gives some explanation of the solution process but may be vague or difficult to interpret</li> </ul>
No Credit	<ul style="list-style-type: none"> <li>- Shows no understanding of a problem's mathematical concepts and procedures</li> <li>- Identifies no relevant information, algorithmic pattern, or evidence of a solution process</li> <li>- Fail to explain significant parts of the problem or omit it altogether</li> </ul>

**Exams**

There will be four scheduled written chapter exams (worth 100 points each) and a comprehensive computer based final exam (worth 200 points) for this course. Graphing calculators are not permitted on the exams, but you can use scientific calculators instead. A sample exam or review sheet will be provided to assist you in studying for each proctored exam. Best way to prepare for the exam is to study homework and fully understand how to do all review sheet problems. For the written exams, make sure to show you work since there will be an opportunity to earn partial credit. For exam dates, refer to the last page of this syllabus. Make-up for any missed exams is not allowed after the due date.

**Testing Site**

The website <http://www.hawaii.edu/dl/testcenters> provides information on all available testing sites in Hawaii. Your default test taking site will be The Testing Center (TTC) located in the WCC library Room 228. You may call at (808) 235 – 7498 to find out additional information at this testing site. If this location is inconvenient or you reside on one of the neighboring islands, please let me know your preferred test taking location at the beginning of the semester so that I can mail your exams to the appropriate testing location.

**Homework**

There are total of 32 homework assignments in this course that are available online at MyMathLab.com. Due date for each homework is indicated on the schedule page of this syllabus. On average student are expected to complete two homework assignments per week (Wednesdays and Saturdays). You may continue to work on the homework assignments after the due date, however, there will be a 2% penalty per day on the homework done after the due date. You may attempt a homework problem as many times as needed till you get it right. While this may not be much for a day or two late submissions, it will add up to a high percentage over longer period. Note that December 15th is the absolute last day you will be allowed to work on homework

assignments. I encourage you to work together on homework by utilizing the online tools such as message board to communicate with each other. To receive help on the homework, students are welcome to come by my office during the office hours or make an appointment for consultation.

### **Portfolio**

Since MyMathLab only requires you to enter the final answer, it is important that you understand the correct process leading to the final answer. Therefore, I am asking you to show your work for each homework problem on a separate sheet of paper that will be part of your portfolio. In addition, your portfolio should include written work for chapter exam review sheets and final exam review. To earn portfolio points, scan your written work after you complete each homework or exam review into a pdf file (one file per homework) and upload it to Drop Box in laulima. Make sure uploaded files are clearly labeled with correct assignment name and number. Note that your portfolio work will be graded based on neatness, competition, correctness, and organization at the end of the semester.

### **Getting Help**

I encourage you to stop by my office anytime you need help. If you live away from WCC campus, you can call my office during office hours or Skype me (ID: nsj006) with advanced noticed. You may get additional help by utilizing the free walking tutoring service by going to the math lab located in WCC library room 226 or at your native campus. There is a free online 24 hours live tutoring available through Brainfuse ([wcc.hawaii.edu/brainfuse](http://wcc.hawaii.edu/brainfuse)) via myuh.hawaii.edu (find Brainfuse link under my tools). You may also utilize the following websites:

<http://manoa.hawaii.edu/ola> - Provides free live interactive tutoring during weekdays

<http://www.khanacademy.org> – Provides small lecture videos on selected topics

[www.wolframalpha.com](http://www.wolframalpha.com) – Provides computational tools, facts, and examples.

<https://www.youtube.com/playlist?list=PLF797E961509B4EB5> – Provides complete lecture videos on topics in Calculus I by Professor Leonard.

### **Consultations**

There are three required consultations for this class worth 10 points each. I prefer students to come in person for these consultations but can be done via phone or video conference.

- 1st Consultation: This must be done within first week of classes so that I can go over any questions you may have regarding the syllabus, quizzes, homework assignments, exams, where to get help, or getting started to use the online system.
- 2nd Consultation: This can be done any time around mid-semester to get help on exam review, go over your mistakes on a particular exam, or discuss your progress in class (preferably before the drop date). This is to help you understand your mistakes from the first exam and ways to improve on future exams. Any general questions regarding the class and the assignments can be discussed.
- 3rd Consultation: This meeting should be take place somewhere close to the end of the semester. The time can be used to ask questions about the final exam or discuss overall grades.

Note that purpose these consultations is for us to connect with each other at least three times during the semester.

## Communication

The following methods will be used to communicate:

- You can send me an e-mail anytime and I will do my best to response within 24 hours on instructional days (perhaps much sooner). This is an effective method of communication if you expect a short response.
- If you need to speak with me, you can call me at my office (808) 236 – 9278 during my office hours or leave a message for me to return your call.
- If you go to windward community college or live nearby, you can stop by office anytime during my office hours or make an appointment to see me. This is a good way to get help of homework problems.
- If you live at a distance and visual communication is necessary such as help on complicated homework problems, you can connect with me (with advanced notice) via Skype using the id nsj006 or google video using the UH ID [navtej@hawaii.edu](mailto:navtej@hawaii.edu).
- Online discussion board can be used to interact with classmates by asking homework questions and answering previously posted problems.
- Additionally, I may utilized the blackboard celebrate through laulima to hold review session (more information will be provided if such tool need to be used).

## Student Learning Outcomes

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

- Understand and use the formal and intuitive definitions of limits and apply them in limit calculations and in determining continuity.
- Demonstrate proficiency in determining derivatives and apply different interpretations of the derivative.
- Utilize precise mathematical language and symbols to effectively communicate mathematics in written and/or oral form.
- Use calculus techniques to analyze and solve applied problems.
- Use derivatives to analyze and sketch graphs and/or to solve related problems.
- Demonstrate proficiency in determining antiderivatives and integrals.
- Utilize integration in applied problems.

*All SLOs assessment are embedded in class activities, homework, quizzes, or exams.*

## Foundations Hallmarks

Math 205 fulfills the three credits General Education Requirement for Foundations Symbolic for both the AA degree at WCC and a Bachelor's degree at UH Manoa as well as UH West Oahu. Consequently, it meets the hallmarks of the symbolic reasoning requirement.

- Students will be exposed to the beauty, power, clarity and precision of formal systems.
- Instructors will help students understand the concept of proof as a chain of inferences.
- Instructors will teach students how to apply formal rules or algorithms.

- Students will be required to use appropriate symbolic techniques in the context of problem solving, and in the presentation and critical evaluation of evidence.
- The course will not focus solely on computational skills.
- Instructors will build a bridge from theory to practice and show students how to traverse this bridge.

### **Disabilities Accommodation**

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 (808) 235-7448, [lemke@hawaii.edu](mailto:lemke@hawaii.edu), or you may stop by Hale 'Akoakoa 213 for more information.

### **Important Information**

Please check your @hawaii.edu e-mail account frequently for important announcements. Note this syllabus is subject to change in extenuating circumstances. All online homework assignments are due by midnight of the deadline date. All due dates for homework assignments and exams are listed on the schedule below. If you need to discuss your performance, I recommend you get in touch with me as soon as possible. E-mail is the preferred method of communication. Instructor will inform you of any additional opportunity such as extra credit when or if they become available. For important academic information refer to WCC website [www.windward.hawaii.edu](http://www.windward.hawaii.edu) or go to [www.hawaii.edu](http://www.hawaii.edu) for system wide information. Plagiarism, or copying and use of another's work without proper acknowledgment, is not permitted and may result in failing grade for the course.

### Math 205 Fall 2016 Schedule for Assignments and Exams

Week	Dates (M-F)	Homework Assignments (All HWs are Due by Midnight of Assigned Date)
1	8/22 – 8/26	HW #01 - Section 2.1 (Due on Wednesday, 8/24)
		HW #02 - Section 2.2 (Due on Saturday, 8/27)
2	8/29 – 9/2	HW #03 - Section 2.3 (Due on Wednesday, 8/31)
		HW #04 - Section 2.4 (Due on Saturday, 9/3)
3*	9/5 – 9/9	HW #05 - Section 2.5 (Due on Wednesday, 9/7)
		HW #06 - Section 2.6 (Due on Saturday, 9/10)
4^	9/12 – 9/16	HW #07 - Section 2.7 (Due on Wednesday, 9/14)
		HW #08 - Section 3.1 (Due on Saturday, 9/17)
Exam 1 (Written) on Chapter 2 Available at the Testing Center on 12-Sep & Must Complete by 16-Sep		
5	9/19 – 9/23	HW #09 - Section 3.2 (Due on Wednesday, 9/21)
		HW #10 - Section 3.3 (Due on Saturday, 9/24)
6	9/26 – 9/30	HW #11 - Section 3.4 (Due on Wednesday, 9/28)
		HW #12 - Section 3.5 (Due on Saturday, 9/31)
7	10/3 – 10/7	HW #13 - Section 3.6 (Due on Wednesday, 10/5)
		HW #14 - Section 3.7 (Due on Saturday, 10/8)
8	10/10 – 10/14	HW #15 - Section 3.8 (Due on Wednesday, 10/12)
		HW #16 - Section 4.1 (Due on Saturday, 10/15)
Exam 2 (Written) on Chapter 3 Available at the Testing Center on 10-Oct & Must Complete by 14-Oct		
9	10/17 – 10/21	HW #17 - Section 4.2 (Due on Wednesday, 10/19)
		HW #18 - Section 4.3 (Due on Saturday, 10/22)
10	10/24 – 10/28	HW #19 - Section 4.4 (Due on Wednesday, 10/26)
		HW #20 - Section 4.5 (Due on Saturday, 10/29)
11	10/31 – 11/4	HW #21- Section 4.6 (Due on Wednesday, 11/2)
		HW #22 - Section 4.7 (Due on Saturday, 11/5)
12*	11/7– 11/11	HW #23 - Section 4.9 (Due on Wednesday, 11/9)
		HW #24 - Section 5.1 (Due on Saturday, 11/12)
Exam 3 (Written) on Chapter 4 Available at the Testing Center on 7-Nov & Must Complete by 14-Nov		
13	11/14 – 11/18	HW #25- Section 5.2 (Due on Wednesday, 11/16)
		HW #26 - Section 5.3 (Due on Saturday, 11/19)
14*	11/21 – 11/25	HW #27- Section 5.4 (Due on Wednesday, 11/23)
		HW #28 - Section 5.5 (Due on Saturday, 11/26)
15	11/28 – 12/2	HW #29- Section 6.1 (Due on Wednesday, 11/30)
		HW #30 - Section 6.2 (Due on Saturday, 12/3)
Exam 4 (Written) on Chapter 5 Available at the Testing Center on 28-Nov & Must Complete by 2-Dec		
16	12/5 – 12/9	HW #31- Section 6.3 (Due on Wednesday, 12/7)
		HW #32 - Section 6.4 (Due on Saturday, 12/10)
Final Exam (MML Computer Based) Available on 12-Dec & Must complete by 15-Dec at the Testing Center		

^Drop Dates: September 12, 2016 – Last day to withdraw without a W grade

\*Holidays: September 5, 2016 – Labor Day  
 November 8, 2016 – Election Day  
 November 11, 2016 – Veterans' Day  
 November 24-25, 2016 – Thanksgiving Break