College of Natural & Applied Sciences
Division of Mathematics & Computer Science

MA203-02 Calculus I (5 Credits)

Fall (Fanuchånan) 2021

Synchronous Online Learning (Moodle)

Course Code Moodle	Encryption Key
MA-203-02-FA21	MA20302FA21

Instructor: Dr. Hyunju Oh

Class Meeting: MTWTh 11:10-12:25pm

Room: Virtual Classroom (Moodle BBB)

Office: ALS Rm316

Phone: 671-735-2142

Email: ohh@triton.uog.edu **(best way to contact me)**

Office Hours: (BBB in Moodle) MW 1:30 – 3:30pm, T 2:30-4:30pm, or by appointment (Email me to use office hours)

Textbook: Single Variable Calculus: Early Transcendentals, 7th edition by James Stewart.
ISBN-13: 978-0-538-49867-8; ISBN-10: 0-538-49867-6

Catalog Description:
This is the first semester of a standard calculus course. Topics include limits; continuity; the definition of derivatives; derivatives of algebraic and transcendental functions; product, quotient, and chain rules; applications; and Riemann Sums.

Prerequisite:
Grade of C or better in MA161b or MA165 or placement or equivalent.

Skills and Background Required or Expected:
Students should know algebra, some geometry, and some trigonometry. Students should have been exposed to mathematical modeling. Courses in college algebra and trigonometry or precalculus suffice, which usually means MA161a and MA161b or MA165.

Rationale for Course:
This course introduces students to the fundamental ideas of calculus: limits, derivatives and the definite integral. Though not highly stressed, the mathematical foundations of these ideas

are provided, so that students receive an introduction to mathematical precision and rigor. Calculus is then used to investigate ideas from physics, such as velocity, acceleration, centers of mass; from geometry, such as areas and volumes; from finance, such as capital formation; and from other disciplines. Students thus receive an introduction to mathematical modeling and applied mathematics, that is, how mathematics is used to study the physical world.

Learning Objectives for Students:

- Demonstrate understanding of limits, continuity, and derivatives of functions.
- Use the product, quotient and chain rules for direct and implicit differentiation.
- Find derivatives of polynomial, rational, exponential, logarithmic, trigonometric and hyperbolic functions.
- Use differential calculus in curve sketching and problems solving.
- Find definite and indefinite integrals of a limited number of elementary functions.
- Appreciate the Fundamental Theorem of Calculus.

Calculators:

A scientific calculator such as TI-83 is required for this course. Students are expected to have a working calculator for HW/Test with exception. No electronic calculators on tablets, smartphones, or laptops permitted during testing periods.

Instruction:

- **Use UOG triton email for communication this class.** If you use personal email, it will be sent in junk mail. I will not open the email.
- Please login your Moodle account before your class 11:10 am and join at Big Blue Button (BBB) for our synchronous online classes.
- I will upload class materials (lecture notes) and all information in Moodle. **Please check the Moodle every day.**
- I will give you daily assignments from your textbook.
- I will give you four tests during our class time 11:10-12:25 pm. You must upload your solutions in Moodle by 12:55 pm. Here is the instruction for tests:
  - ✓ **ProctorU---Please turn on your webcam during the test. I will check your face and your desk (Set up webcam in your computer).**
  - ✓ Download or print your tests from Moodle.
  - ✓ Use your blank note to solve the problems. Write the course number, test number, date, and your Full Name on the top.
  - ✓ Solve the problems by 12:25 pm.
  - ✓ Take pictures (or scan) your solutions.
  - ✓ Convert to pdf file (download pdf app or scanner app your phone). Collect **ONLY one pdf file**
  - ✓ Make a filename: MA203-02_Test number_Your name.
  - ✓ Upload the pdf file in Moodle.
  - ✓ **No collect/grade for late submission**

Tentative Schedule:

Weeks 1 – 2	Ch. 1: Functions and models
Weeks 3 – 5	Ch. 2: Limits and derivatives
Weeks 6 - 10	Ch. 3: Differentiation rules
Week 9	Fall Break
Weeks 10 – 14	Ch. 4: Applications of differentiation
Weeks 15 – 17	Ch. 5: Integrals

(This is a tentative schedule, and is subject to change, should a topic require more or less time in class)

Tentative Test Schedule:

Test 1: 4th Week
Test 2: 8th Week
Test 3: 12th Week
Test 4: 16th Week
Final Exam (Cumulative) 10:00 – 1:50pm, Dec. 15 (Wednesday)

Evaluation:

The grade distribution and grading scheme are as follows:

Tests 80% Final Exam 20%

Grading Scale:

90-100%: A 80-89%: B 70-79%: C 60-69%: D 0-59%: F

Students work is usually graded on a partial credit basis. **Students written solutions must include all work needed to solve problems**. Points will be deducted (or given none) for omitting any work even if the answer is correct.

Homework:

Homework will be assigned each class. To be successful, a student must complete all assigned homework even if they are not collected and graded. Keep in mind that tests are based on homework problems, so practice, practice, practice!

Exams/Final Exam:

There will **four tests** and **a cumulative final exam**. All notes and the textbook are prohibited from use on exams and on the final exam. It is crucial to do well on Tests and Final Exam. Missing any single test or final exam will result in grade F. Very special circumstances will be handled very specially by consultation with the instructor. Except for true emergencies, these special cases are arranged in advance with the instructor.

Any evidence of cheating will result in a "0" for that test/Final exam and an "F" for the entire course regardless of your total points!!!

Attendance:
Students are expected to attend every scheduled synchronous online class using BBB in Moodle. It is the students' responsibility to keep informed of any announcements, syllabus adjustments or policy changes made during scheduled classes. Please inform the instructor if you will be absent. In case you must leave early, you need to inform the instructor in advance about your leaving class early.

Make-up policy:
There will be no make-up tests unless you contact the instructor **IMMEDIATELY** for extenuating circumstances. For example, you have to go off-island, you will be hospitalized or under serious medical treatment, deployment, etc.

Withdrawal from Class: [*UOG Student Handbook, p.33-34*]
Students may withdraw from a class or classes during the first week of instruction of a regular semester and the first two days of a summer session without anything being recorded on their transcripts. From the second through the eighth week of instruction of a regular semester and from the third day of classes through the third week of a summer term, students may withdraw by using the Withdrawal feature in their Webadvisor account.

Required Skills, Materials, and other Resources:

Taking online classes is very different from taking a traditional face-to-face class. There are certain skills and equipment needed as well as other resources such as Internet access. Here are some things you will need in order to take this class:

- Reliable access to a computer with broadband Internet access. Broadband Internet access is commonly available for residential customers. The UOG campus also has a few computer labs for student use. Many coffee shops and other public spaces also have WiFi hotspots. We strongly recommend that you use malware protection and a VPN app to protect yourself from infection or hacking on public WiFi networks.

  A desktop or laptop computer is highly recommended. Mobile devices such as iPads, Android tablets, and smart phones are not recommended as they may have compatibility issues. You may use them for convenience to view most content for this class, but you should use a full computer for the more important class activities.

- This computer should also have the following:
  - Mozilla Firefox browser with Cookies enabled and the Pop-up Blocker disabled so that you can access and work in this class. Firefox is the most compatible browser for use with UOG Moodle.
  - MS Word and PowerPoint so that you can read, edit, or create documents and presentations for this class. Contact the UOG Computer Center to ask about Office365 which includes these Microsoft products. It may be included with your official GoTriton email account.
  - Adobe Acrobat Reader so that you can open PDF documents provided in this class.
  - A media player such as Windows Media Player or VLC Player Free so that you can play audio and video files provided in this class.
  - Virus and spyware protection so that you can protect yourself and your classmates while you are working on the Internet.
- You need to be comfortable enough with computers to perform the following tasks without help from anyone:

    - Send and receive email messages as well as send a message with an attachment.
    - Be able to find files on your computer that you have saved or downloaded.
    - Be able to navigate through web pages.
    - Be able to search for items on the Internet by using a search engine.
- You need to be able to communicate clearly and effectively in writing to help avoid miscommunications. And you will need a good understanding of online etiquette (also known as "netiquette"). You can find some netiquette guidelines below under "Virtual Classroom Interaction".
- You need to be self-motivated, disciplined, and you should have good time-management skills. Even though you can access this class at any time of the day on any day of the week, you still need to follow the set course schedule. You need to be able to manage your time and meet deadlines set for the class. **This is not a self-paced class.** For a typical class in a regular 17-week semester, you should be able to commit 6-10 hours per week to your course work. Remember that procrastination can cause you more problems online than in a face-to-face class. There are chances that your computer can crash; your Internet connection can drop; or the UOG Moodle system may become unavailable.
- You will need an account with the UOG Moodle system. For assistance with the UOG Moodle system, please contact the UOG Moodle Help team by email at moodlehelp@triton.uog.edu or call (671) 735-2620.
- You will be expected to carefully read and follow instructions.
- You will be expected to keep track of deadlines and due dates.
- You will be expected to have all the skills and resources listed above.
- You will be expected to ask for help if and when you need it.

Virtual Classroom Interaction: There are a number of things to keep in mind with regards to interaction in the virtual classroom.

- Communicating with the Instructor
    - At any point during this course, you are welcome to contact me via email with questions regarding grades, instructions, advisement, or even for personal issues. I check my email frequently and will typically respond to messages within 24 hours. **Only accept through UOG triton email!!!**
- Communicating with classmates
    - In the virtual classroom, you will see a "Participants" list in the left column. This will include links to all students enrolled in the class. You will be able to send messages through this system or you can send them email messages directly.
- **Online Etiquette (aka: Netiquette)**
    - Do not SHOUT. Using All Caps when you type is considered to be "shouting" online. Remember to turn off your Caps Lock.
    - Be prompt. Follow class schedules and respond to email messages promptly.
    - Participate. Participation is part of your grade and also helps to move the class along. Especially for group activities, be sure to do your share of the work.
    - No flaming, trolling, or cyber bullying. You are all expected to be respectful and professional. If you have any concerns with classmates, please contact your instructor regarding the problem.
    - Stay on topic and try to back up any claims or statements that you make.
    - Do not dominate any discussion. Give other students the opportunity to join in the discussion.
    - Use and cite credible sources.
    - Do not plagiarize.
    - Avoid jokes and sarcasm as these are often misinterpreted online.
    - Use emoticons if they will help to convey the tone of your message.

- Always re-read what you type before you send it. Remember that you cannot take back anything that you post. Also remember that people cannot see you or hear you. That means that they cannot see your body language or hear the tone of your voice. They can only rely on what you type. So, try to make sure that what you type cannot be misinterpreted. Be clear and brief.
- Be patient and open-minded. Do not judge others or jump to conclusions. Remember that, just as others might misunderstand you… you might misunderstand them. If something sounds confusing or offensive, ask for clarification before you jump to conclusions. Never respond out of emotion because what you say online can stay online and may be used against you in the future. Also remember that other students may not be native English speakers and may have difficulty in saying what they really mean online.
- Respect the privacy of others. Do not post or communicate personal or confidential information in the virtual classroom.
- Remember that the UOG Moodle system keeps logs of all your activity inside of UOG Moodle.

Student Support: The following is a list of resources that students can turn to when they need support:

- Problems with the course instructions or other content?
  Contact your Instructor for clarification and assistance.
- Technical problems with UOG Moodle system?
  Contact the UOG Moodle Help team by email at moodlehelp@triton.uog.edu or by phone at (671) 735-2620.
- Problems with WebAdvisor or GoTritons student email service?
  Contact the UOG Office of Information Technology (aka: the Computer Center) by email at helpdesk@uog.edu or by phone at (671) 735-2640.
- UOG Library Resources and Services
  Go online to https://www.uog.edu/student-services/rfk-library/
- UOG Student Services
  Go online to https://www.uog.edu/student-services/enrollment-management-student-success/ to contact the Admissions and Records office, Financial Aid office, Student Life office, Housing and Residence, Counseling, Student Health, and other services

Academic Dishonesty:
All assignments and Quiz/Test/Exam must be your own work. The term plagiarism includes, but is not limited, to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials. Plagiarizing in your essay or **CHEATING on Quiz/Test/Exam will result in Course Grade F regardless of your total points.** If you are not sure what plagiarism is and how to avoid it in using sources for your work, see www.indiana.edu/~wts/pamphlets/plagiarism.shtml but be careful when paraphrasing not to change the meaning of scientific information. Answers you write on Quiz/Test/Exam must come only from in your head or the information supplied in the test papers; anything else is cheating. The term cheating includes, but is not limited to: (1) use of any unauthorized assistance in taking quizzes, tests, or examinations, e.g., looking at other students answers, using crib notes (including electronic), getting information from another person via any kind of communication; (2) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; or (3) the acquisition, without permission, of tests

or other academic material belonging to a member of the University faculty or staff. If you need to use an electronic translator, you must discuss this with me in advance.

STUDENT LEARNING OBJECTIVES AND MA203 CURRICULAR MAPPING:

MA203 Course Learning Outcomes (**SLOs**)	Mathematics Degree Program Learning Outcomes (**PLOs**)	UOG's Institutional Learning Outcomes (**ILOs**)
SLO1: Demonstrate understanding of limits, continuity, and derivatives of functions.	**PLO1:** Demonstrate critical thinking, problem solving skills and ability to use mathematical methods by identifying, evaluating, and classifying, analyzing, synthesizing, data and abstract ideas in various contexts and situations.	**ILO1:** Mastery of critical thinking & problem solving.
SLO2: Use the product, quotient and chain rules for direct and implicit differentiation.	**PLO2:** Demonstrate the knowledge of current mathematical applications, computing practices and technology use in industry, and science and education.	**ILO2:** Mastery of quantitative analysis
SLO3: Find derivatives of polynomial, rational, exponential, logarithmic, trigonometric and hyperbolic functions.	**PLO3:** Demonstrate ability to use modern software, abstract thinking, and mathematical practices connected to scientific and industrial problems, and demonstrate these skills that are currently used by technologies in society and education.	**ILO3:** Effective oral and written communication
SLO4: Use differential calculus in curve sketching and problems solving.	**PLO4:** Perform skills that enable them to evaluate, propose and convey novel solutions to scientific and business problems, etc.	**ILO4:** Understanding & appreciation of culturally diverse people, ideas & values in a democratic context
SLO5: Find definite and indefinite integrals of a limited number of elementary functions.	**PLO5:** Demonstrate a sense of exploration that enables students to pursue lifelong learning and currency in their careers in mathematics, statistics, education, high-tech and bi-tech industries.	**ILO5:** Responsible use of knowledge, natural resources, and technology
SLO6: Apply basic optimization techniques to selected problems arising in various fields such as physical modeling , economics and population dynamics.		**ILO6:** An appreciation of the arts & sciences
		ILO7: An interest in personal development & lifelong learning

CURRICULAR MAPPING FOR MA203			
COURSE SLOs	**PROGRAM PLOs**	**UOG ILOs**	**METHODS OF ASSESSMENT**
SLO1	PLO1	ILO1, ILO2, ILO3	Questions on homework assignments, quizzes, workshop problems and tests.
SLO2	PLO1	ILO1, ILO2	Questions on homework assignments, quizzes, workshop problems and tests.
SLO3	PLO1, PLO4	ILO1, ILO2	Questions on homework assignments, quizzes, workshop problems and tests.
SLO4	PLO1, PLO3	ILO1, ILO2	Questions on homework assignments, quizzes, workshop problems and tests.
SLO5	PLO1, PLO3	ILO1, ILO2	Questions on homework assignments, quizzes, workshop problems and tests.

Mathematics Program Learning Outcomes (PLOs):

Students completing the mathematics program at the UOG will:
MA PR PLO1 – demonstrate critical thinking, problem solving skills and ability to *use* mathematical methods by identifying, evaluating, classifying, analyzing, synthesizing data and abstract ideas in various contexts and situations;
MA PR PLO2 – exhibit a sound conceptual understanding of the nature of mathematics, and *demonstrate* advanced mathematical skills in mathematical analysis, modern algebra and other mathematical discipline(s);
MA PR PLO3 – argue and *reason* using mathematics, read, *create* and *write* down logically correct mathematical proofs, *use* exact mathematical language and *communicate* mathematics efficiently orally, in writing and using information technology tools;
MA PR PLO4 – apply abstract thinking, mathematical methods, models and current practices in the sciences, including state-of-the-art mathematical software, to solve problems in theoretical mathematics or in a diverse area of mathematical applications;
MA PR PLO5 – show maturity in mathematical knowledge and thinking that prepares and encourages students to pursue graduate studies in mathematics or in related fields;
MA PR PLO6 – demonstrate an appreciation of and enthusiasm for inquiry, learning and creativity in mathematical sciences, a sense of exploration that enables them to pursue lifelong learning and up-to-date professional expertise in their careers through various areas of jobs, including governmental, business or industrial jobs in mathematics, related sciences, education or technology.

UOG Institutional Student Learning Outcomes (ILOs):

For more information about the following ILOs, please refer to www.uog.edu/adminstration/academic-and-student-affairs/accreditation/assessment-and-program-review.

ILO-1 Mastery of critical thinking and problem solving
ILO-2 Mastery of quantitative analysis
ILO-3 Effective oral and written communication

ILO-4 Understanding and appreciation of culturally diverse people, ideas and values in a democratic context
ILO-5 Responsible use of knowledge, natural resources, and technology
ILO-6 An appreciation of the arts and sciences
ILO-7 An interest in personal development and lifelong learning

Academic Integrity Policy:
Academic Integrity is about performing in your role as student in ways that are honest, trustworthy, respectful, responsible, and fair (see www.academicintegrity.org for more information). As a student, you will complete your academic assignments in the manner expected by the instructor. Academic dishonesty, including but not limited to cheating and plagiarism may result in suspension or expulsion from the University. Refer to the UOG Student Handbook and Code of Conduct for more information.

COVID Statement

The University of Guam is experiencing continued disruption to delivery of instruction during the global coronavirus pandemic. The University will follow executive orders and may be forced to close again, causing more modifications as the semester progresses. All changes will be posted on the UOG website, www.uog.edu.

- Contact OIT for technical support at 735–2630 or oit@triton.uog.edu
- Contact the Triton Advising Center at 735–2271 or tac@triton.uog.edu
- Contact Isa Psychological Services center at 735–2883 or isa@triton.uog.edu

In face to face courses, wearing masks and social distancing is required. Anyone who has a fever, or any other symptom, should stay home. If you do not comply with these directions, you will be asked to leave, and if you do not, class will be cancelled. Patience, respect, and cooperation are needed from all of us to persist through these uncomfortable times.

Reminder of some best practices for the online course meetings:

- Pick a quiet room so background noise is minimized.
- Log in a little early so there is no delay in your efforts to connect. Maybe 10 minutes
- before start time.
- Stay on mute until ready to speak. Then re-mute when done speaking. Speak loudly,clearly, and not too fast.
- If your internet is not robust, you could stay on audio versus video until you are ready to speak.

Guidance on Alternate Grading Option

Students have the right to use the alternate grading option this semester, but you should be aware that this option may not be appropriate in all courses. [This course is such a course.] In most courses required for professional certification, or programs requiring specialized accreditation, letter grades are required. Think carefully, and talk through your options with a trusted advisor, before exercising this option.

No Recording Policy

Recording of online class meetings is not allowed. Not only is the delivery of course content the intellectual property of the instructor, but students enrolled in the course have privacy rights. Unauthorized recording and distribution of online courses may violate federal law.

UOG Disabilities Policy
In accordance with the Americans with Disabilities Act (ADA) of 1990 and the Rehabilitation Act of 1973, the University of Guam does not discriminate against students and applicants on the basis of disability in the administration of its educational and other programs. The University offers reasonable accommodations for a student or applicant who is otherwise qualified, if the accommodation is reasonable, effective and will not alter a fundamental aspect of the University's program nor will otherwise impose an undue hardship on the University, and/or there are not equivalent alternatives. Students are expected to make timely requests for accommodation, using the procedure below.

DSS Accommodation Services
If you are a student with a disability who will require an accommodation(s) to participate in this course, please contact the Student Counseling and Advising Service Disability Support Services office to discuss your specific accommodation needs confidentially. A Faculty Notification letter will be emailed to me specifying your approved accommodations. If you are not registered, you should do so immediately at the Student Center, Rotunda office #5, sssablan@triton.uog.edu or ph/TTY: 735-2460, to coordinate your accommodation request.

Tobacco-free/Smoke-free/Vaping-free campus:
UOG is a tobacco-free/smoke-free, vaping/e-cigarette free campus. Thank you for not using tobacco products or e-cigarettes on campus, for helping to fight cancer, and for helping make UOG a healthy learning and living environment.

Notification of Rights Under FERPA:
The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights for students, parents and school officials can be viewed at http://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html