University of Victoria
Faculty of Science | Department of Mathematics and Statistics
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Course Outline
MATH 101: Calculus II

Instructors

Anthony Cecil **Lecture Section**: A01 **MML Course ID**: math52485
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Asad Asaduzzaman **Lecture Section**: A02 **MML Course ID**: math92379
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Christopher Eagle **Lecture Section**: A03 **MML Course ID**: math15547
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Christopher Eagle **Lecture Section**: A04 **MML Course ID**: math46432
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General Course Information

Number of Units 1.5

Pre-requisites MATH 100 or MATH 109 or permission of the department.

Office Hours and Assistance

	Anthony Cecil	Asad Asaduzzaman	Christopher Eagle
Monday	1:30-2:20pm (DTB A202)		3:30-4:20pm (DTB A441)
Tuesday			1:30-3:30pm (DTB A202)
Wednesday		10:30-11:20am (DTB A554)	
Thursday	1:30-2:20pm (DTB A202)		3:30-4:20pm (DTB A441)
Friday		10:30-11:20am (DTB A554)	

Note: You are welcome to attend the office hours of any of the instructors, regardless of the lecture section in which you are enrolled.

Drop-in Help The Mathematics & Statistics Assistance Centre is a large space where students can go to work, on their own or in groups, and to discuss math & stats problems. The Centre is staffed with talented Teaching Assistants who are happy to discuss primarily first and second year course material with you. Please see http://www.uvic.ca/science/math-statistics/current-students/undergraduate/msac/ for more information.

Math Club Students in Undergraduate Mathematics and Statistics (SUMS) was founded in 2014 as the reincarnation of a previous undergraduate course union that had been inactive for a few years. Please see http://www.uvic.ca/science/math-statistics/current-students/undergraduate/sums/index.php for more information.

Learning Objectives

This course is a continuation of Math 100/Math 109. By the end of this term you should understand several techniques for calculating antiderivatives, a variety of applications of integration, the concepts of infinite sequences and series, and the use of calculus on parametric curves. This course will continue the development of your problem solving skills, as the questions we will consider can be approached in many ways, and you will learn how to decide which approach is most likely to succeed. We also aim to develop your ability to communicate mathematical ideas and arguments.

Course Material and Online Resources

Textbook *Thomas' Calculus Early Transcendentals, 13th Edition*, Weir and Hass, published by Pearson/Prentice Hall. You may purchase a print copy of the textbook packaged together with access to MyMathLab (see below) from the UVic bookstore. If you do not want a print copy, you are not required to purchase one – MyMathLab comes with an e-book version of the textbook.
Note: This is the same textbook that was used in MATH 100 and MATH 109.

MyMathLab (MML) This is a required tool, which you will use to study the material and complete weekly assignments. If you purchased the text bundled with access to MML then you do not need to purchase an MML access code. If you did not purchase a new print copy, then you must purchase an access code to MML separately. MML access codes are available at the UVic bookstore. MML comes with an e-book version of the text and an e-book version of the Student's Solution Manual. You may access MML for a free 14-day trial if you are not yet ready to purchase it; as long as you eventually purchase access your work and scores will be preserved.
Note: If you purchased a MyMathLab code for this book recently (within the last year or so), you should not need to purchase a new one. This is likely to be the case if you took MATH 100 or MATH 109 last term.

Course webpage The course webpage will be on `coursespaces.uvic.ca`. We will make frequent use of CourseSpaces to post course announcements, answer student questions, and record student grades. It is your responsibility to read announcements posted on CourseSpaces. If you do not have regular access to your own device that can access CourseSpaces, you can use one of the many computers available to students on campus.

Calculator If a calculator is allowed in tests and examinations in a course offered by the Department, then the only acceptable calculator is the Sharp EL-510R, Sharp EL-510RN, or Sharp EL-510RNB. It may be purchased at the UVic Bookstore or elsewhere for about $15. A calculator **is** permitted in this course.

Class Meetings

Lectures Your lecture days and times depend on your lecture section. Prepare for each lecture by briefly reading the relevant section of the textbook; this should take only 10

- 15 minutes. You do not need to understand everything, but you will get much more out of lecture if you are already familiar with the relevant definitions. Attendance in lectures is expected, except in the case of illness, accident, family affliction, or religious observation. You should take notes during lecture; they will not be provided for you.

Tutorials All tutorials meet on Mondays, but your time depends on your tutorial section. Tutorials will be spent working in small groups on worksheets related to the previous week's lectures. Your tutorial TA will facilitate your group's discussion by assigning the groups, asking probing questions, giving hints, occasionally answering questions (sometimes with another question), and having groups explain solutions to each other. You will submit complete solutions to these worksheets the following week (see below), so participate actively in your tutorials in order to maximize the amount of assistance you get. Because your tutorial TA will collect and mark these solutions, you must attend the tutorial for which you are registered.

Evaluation and Grading

In this multi-section course, all of the homework and midterms will be set up by the instructors in collaboration and marking will be monitored to ensure consistency across all sections.
Your final percentage grade will be computed according to the following scheme.

Item	Date(s)	Weight
Online Homework	Most weeks	5%
Tutorial Assignments	Most weeks	5%
Test 1 (120 minutes)	Tuesday, January 31, 6-8pm (location TBA)	15%
Test 2 (120 minutes)	Tuesday, February 28, 6-8pm (location TBA)	15%
Test 3 (120 minutes)	Wednesday, March 22, 6-8pm (location TBA)	15%
Final exam (180 minutes)	TBA	45%

Grading Percentage scores will be converted to letter grades according to the university-wide standard table (`http://web.uvic.ca/calendar2017-01/undergrad/info/regulations/grading.html`).

Online homework Online homework will be assigned through the MyMathLab system. Homework is due at 11:59pm on Sundays, and the amount of time needed will vary greatly by student. Each assignment will be available for at least a week, so you should start it several days before it is due. The purpose of the homework is to practice your skills, with instant feedback so you can gauge your own level of understanding. For most problems, you will be able to attempt it an unlimited number of times, and you will have access to the "Help Me Solve This" and "View An Example" buttons. You are also free to get help from other students, the Math & Stats Assistance Centre, and the instructors' office hours. All homework assignments will be equally weighted. Your lowest homework score will be dropped, and you can continue to work on assignments after they are due for half credit.

Tutorial assignments During most tutorials, you will submit complete solutions to the previous tutorial's worksheet. Because your tutorial TA will collect and mark these solutions, you must attend the tutorial for which you are registered. You are welcome to discuss the concepts on the tutorial assignments with other students, but the solutions you write up and hand in must be your own, individual work. If you are uncertain about how much collaboration with other students is acceptable, please ask your lecture instructor early in the term. Your lowest tutorial assignment score will be dropped, and nothing is due in the first tutorial (January 9).

Tests Each test is 120 minutes long and will take place during an evening, from 6-8pm (see above for the dates). If you are unable to attend a test at this time due to a schedule conflict, you can write a conflict test. Schedule your conflict tests by contacting the Department of Mathematics and Statistics Senior Lab Instructor at `mssli@uvic.ca` **no later than one week before the test**. Conflict tests will be held during the same week as the regularly scheduled test, but depending on a variety of factors we may schedule the conflict test for either before or after the regular test. Your tests will be returned to you in your tutorial.

Final Examination Off-schedule final examinations (i.e., deferred examinations) are given only in accordance with the university policy as outlined in the Calendar. If you are unable to write a final examination due to illness, accident or family affliction, please refer to the following webpages for detailed instructions how to proceed: `http://web.uvic.ca/calendar2017-01/undergrad/info/regulations/concessions.html` and `http://web.uvic.ca/calendar2017-01/undergrad/info/regulations/exams.html`. Students are **strongly advised not to make plans for travel or employment during the final examination period** as special arrangements will not be made for examinations that conflict with such plans.

Supplemental Examinations. The Department of Mathematics and Statistics does not award 'E' grades or offer Supplemental Examinations in any of its courses.

Accessibility Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach your lecture instructor and/or the Resource Centre for Students with a Disability (RCSD) as soon as possible. The RCSD staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations `http://www.uvic.ca/services/rcsd/`. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

Commitment to Inclusivity and Diversity The University of Victoria is committed to promoting, providing and protecting a positive, supportive and safe learning and working environment for all its members.

Policies and Ethics

Specific to Math 101:

Missing tests No test extensions or make-ups will be offered other than the regularly-scheduled conflict tests (see above). If you are unable to write the a test due to serious illness then you must provide adequate documentation as soon as possible, and your final exam score will replace your missed test score. If you miss two or more tests for valid reasons with appropriate documentation, you will need to meet with your instructor to discuss your course reweighting.

Missing online homework No homework extensions or make-ups will be offered. If you are unable to complete a homework assignment due to technical difficulties then that assignment will be the assignment that is dropped, or you can complete it up late for half credit. If you are unable to complete a homework assignment due to serious illness or religious observance, then you must provide adequate documentation to your instructor as soon as possible, and the homework assignment will be dropped.

Missing tutorial assignments If you are unable to attend a tutorial due to serious illness or religious observance then you must provide adequate documentation to your tutorial TA as soon as possible, and the tutorial assignment will be dropped.

Re-mark requests If you believe that your test has been incorrectly marked, you must write a short explanation and staple it to the front of your test. Your written explanation should be limited to at most one page, but typically just a few sentences is enough. This request must be submitted to your course instructor **in lecture** no later than the Monday after tests are returned to you. Late re-mark requests, or requests submitted outside of lecture, will not be considered except in the case of absence due to serious illness or religious observance.

Departmental Policies:
(See `https://www.uvic.ca/science/math-statistics/current-students/undergraduate/course-policies/index.php` for more information.)

Attendance The university Calendar states 'Students are expected to attend all classes in which they are enrolled.' (see `http://web.uvic.ca/calendar2017-01/undergrad/info/regulations/attendance.html`). Our courses are conducted on that basis. If you miss an announcement (information concerning tests, corrections to assignment, etc.) because you did not attend class, you must accept the consequences of not having learned of the change.

Guidelines on Religious Observances Where classes or examinations are scheduled on the holy days of a religion, students may notify their instructors, at least two weeks in advance, of their intention to observe the holy day(s) by absenting themselves from classes or examinations. Instructors will provide reasonable opportunities for such students to make up work or missed examinations.

Academic Integrity Academic integrity is intellectual honesty and responsibility for academic work that you submit individual or group work. It involves commitment to the values of honesty, trust, and responsibility. It is expected that students will respect these ethical values in all activities related to learning, teaching, research, and service. Therefore, plagiarism and other acts against academic integrity are serious academic

offenses.

The responsibility of the institution

Instructors and academic units have the responsibility to ensure that standards of academic honesty are met. By doing so, the institution recognizes students for their hard work and assures them that other students do not have an unfair advantage through cheating on essays, exams, and projects.

The responsibility of the student

Plagiarism sometimes occurs due to a misunderstanding regarding the rules of academic integrity, but it is the responsibility of the student to know them. If you are unsure about the standards for citations or for referencing your sources, ask your instructor. Depending on the severity of the case, penalties include a warning, a failing grade, a record on the students transcript, or a suspension.

It is your responsibility to understand the University's policy on academic integrity: `http://web.uvic.ca/calendar2017-01/undergrad/info/regulations/academic-integrity.html`

How to Succeed in This Course

Visit CourseSpaces There is a forum set up for class discussion, which the instructors will monitor fairly regularly. Feel free to *answer* questions there as well as ask them; the instructors will chime in if we spot any errors. If you have a question about course policies, it is almost certain to be answered in an announcement (or this course outline) – so please check before emailing!

Check your progress Read the feedback your TA gives you on your tutorial assignments – that is a good indication of how your test solutions would be marked. Keep an eye on the CourseSpaces grade book to see your current expected grade in the course.

Email the instructors If you have not yet learned the value of being wrong, you might find it uncomfortable to ask a question publicly. You can always email the instructors instead. Due to the number of students enrolled in each lecture, if you ask a question whose answer already appears in the Course Outline or in a post on CourseSpaces we will probably just send you a link. Our reply time will of course depend on many factors. Please be aware that we might keep very different hours than you do! If you will see your instructor in the next 48 hours, you might get a faster reply by asking your question in person.

Set up your MML account Please do not wait to get your MML account set up. Some basic setup advice is available on our CourseSpaces page, as well as information about how to get advanced troubleshooting assistance. If you do not have regular access to your own device that can access MML, you can use one of the many computers available to students on campus. You might need to enable both cookies and pop-ups in order for MML to work properly. Be aware that because of all the help available to you on MML homework, a score of less than **90%** is alarming – if you make use of all the available assistance and enter your answers carefully then you should be able to solve nearly all of the problems correctly.

Use the MML Study Plan The Study Plan in MyMathLab is customized to you – if there's a section that is giving you trouble then go work through the Study Plan for that section. You can quiz yourself (as many times as you like; there is no penalty for failing the Study Plan quizzes) to see if you have mastered the material.

Start preparing early Homework is due on Sundays, but you can (and *should*) start it several days before that. If you are able to maintain a constant moderate level of work then you will not have intense weeks that are hard to keep up during. Begin reviewing for the tests a week or two ahead of time, by re-working tutorial worksheets and homework assignments.

Course Schedule

Lecture schedule and topics are approximate and subject to change.

Week of	Lecture	Tutorial	Important Dates
2/1/17	8.1, 7.3 Review of antiderivatives Hyperbolic functions	None	**Classes begin** January 4
9/1/17	8.2, 8.3, 8.4 Integration by parts Trigonometric integrals Trigonometric substitution	Tutorials begin	
16/1/17	8.5, 8.8 Partial fractions Improper integrals	Tutorial 1 worksheet due	
23/1/17	6.1, 6.2 Volumes	Tutorial 2 worksheet due	
30/1/17	6.3, Appendix 7 Arc length Complex numbers	Tutorial 3 worksheet due	**Test 1**: January 31, 6-8pm
6/2/17	7.1, 7.2 Logarithms and exponentials Exponential change Separable differential equations	Tutorial 4 worksheet due	
13/2/17	**No classes**	**No tutorials**	**Reading break**
20/2/17	10.1, 10.2 Infinite sequences Infinite series	Tutorial 5 worksheet due	
27/2/17	10.3, 10.4, 10.5 The integral test for convergence Comparison test Ratio test Root test	Tutorial 6 worksheet due	**Test 2**: February 28, 6-8pm
6/3/17	10.6, 10.7 Alternating series test Power series	Tutorial 7 worksheet due	
13/3/17	10.8, 10.10 Taylor and Maclaurin series Binomial series	Tutorial 8 worksheet due	
20/3/17	11.1, 11.2, 11.3 Parametric equations Calculus on parametric curves Polar coordinates	Tutorial 9 worksheet due	**Test 3**: March 22, 6-8pm
27/3/17	11.4, 11.5 Graphing polar curves Area between polar curves	Tutorial 10 worksheet due	
3/4/17	Catch-up		**Classes end** April 4
10/4/17	**Exam Period**		
17/4/17	**Exam Period**		
24/4/17	**Exam Period**		**Exam Period** ends: April 25