

Mathematics 1AA3/1ZB3 - Term 2, Winter 2018

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Instructors:

Course:	Section:	Lecturer:	Office	Phone Ex.	E-Mail:
1AA3	C01	A. Nicas	HH 310	23427	nicas@mcmaster.ca
1AA3	C02	F. Galetto	HH 407	26079	galettof@math.mcmaster.ca
1ZB3	C01	C. McLean	BSB B124	20142	mcleac3@mcmaster.ca
1ZB3	C02	M. Thomas	HH 409	27031	thomam17@mcmaster.ca
1ZB3	C03	C. Yang	HH 423	27365	yangc74@math.mcmaster.ca
1ZB3	C04	F. Galetto	HH 407	26079	galettof@math.mcmaster.ca

Contacting the Instructors:

E-mails are the preferred method of communication. All inquiries should either be done in person after class, during the office hours, or by an e-mail *with the course code in the subject line*. In general, phone messages will not receive a response.

Office Hours:

Times of all office hours will be posted on the course web page during the first full week of lectures. Specific times will be announced in-lecture and posted on the course website.

Required Textbook:

-*Calculus: Early Transcendentals, 8th ed.*, by J. Stewart (Brooks/Cole, ISBN 978-1-285-74155-0)

-*Calclabs with Maple for Single Variable & Multivariable Calculus*

(or *Calclabs with Maple Custom Edition*, which includes the sections that you will need from both of the above *Calclabs manuals*.)

Reference (Optional) Text:

-Student Solutions Manual for the above text(s), both single & multivariable versions, which contains answers to odd-numbered questions

Note: A copy of the textbook and solutions manual will be made available on reserve in Thode Library

Course Software:

Maple 11 (or any later version. Earlier versions of Maple cannot be used.)

Maple can be purchased at the campus bookstore or online directly from Maplesoft's website:

<http://www.maplesoft.com/>

Maple is also available to use for free on most of the computer labs on campus. Further information about labs is available on the Lab information page.

Objectives:

To learn the basic concepts and skills associated with sequences, series, polar and parametric equations and basic differential equations.

Topics:

Assorted topics will be covered from chapters 9 through 11, chapters 14 and 15 and selected appendices. See the course calendar on the website for an exact topic list.

Lectures:

There will be two lecture sections of 1AA3, and four sections of 1ZB3:

Course Code	Section #	Lecture Day	Time	Location
1AA3	C01	Tues., Thurs., Fri.	2:30-3:20pm (14:30-15:20)	JHE 376
1AA3	C02	Thurs	7:00-10:00pm (19:00-22:00)	BSB/B136
1ZB3	C01	Tues., Thurs., Fri.	8:30-9:20am (8:30-9:20)	TSH/120
1ZB3	C02	Tues., Thurs., Fri.	11:30am-12:20pm (11:30-12:20)	HSC/1A1
1ZB3	C03	Tues., Thurs., Fri.	2:30-3:20pm (14:30-15:20)	CNH/104
1ZB3	C04	Thurs	7:00-10:00pm (19:00-22:00)	BSB/B136

Tutorials:

There will be two tutorial sections for 1AA3 and four for 1ZB3. Each has one 50 minute session per week. Times and locations can be found listed on [MOSAIC](#)

Math Help Centre:

Weekday afternoons there are TAs available to answer your questions and assist you in the Help Centre in Hamilton Hall. More information can be found at the Help Centre website:

<http://www.math.mcmaster.ca/HelpCentre/>

Homework

Assignments:

Approximately every other week a problem set will be assigned. These problems will be both assigned and completed through our online assignment system. Questions will be very similar to the practice problems from the chapter end questions in the course textbook, and the question types that will be appearing on your tests.

Availability, due date, and the exact assignment questions will all be posted on the course website, so please make sure you read the announcements regularly.

These problem sets are MANDATORY and will be used as part of the course grade for ALL students. So do NOT forget to complete an assignment.

Laboratory Assignments:

In addition to the regular online assignments, there will be four (4) Maple "laboratory" assignments which will require the use of Maple(version 11 or later). These will be submitted using the online lab system linked on the course web page. You do not have to attend any scheduled lab times, but TAs will be available if you need help at the times given on the Lab information page.

Due dates are posted in the course calendar, and this and all other information on the Maple assignments and the assignments themselves will be available on the course web page.

Supplemental Problems:

Practice problems for each section of the course are posted on the course website. These materials pertain to the chapters covered. Note that these questions are *not* assignments, and thus will neither be asked to be handed in, nor graded. Nevertheless, it is *very important* that you at least attempt these problems as they are assigned to assist your familiarization with the course material.

Tests:

There will be **TWO** (2) term tests, each approximately 90 minutes in length. They have **Tentatively** been scheduled to take place on the dates of **Monday, February 5th** , and **Monday, March 12th** All tests will be held during the evenings outside of class time. These are tentative dates, and as such may be adjusted during the term. Any changes to the dates, as well as the times, locations, and test content *will be announced in lecture* and posted on the course website at least one week before the actual test date.

Calculator Policy:

This term, *All calculator use is prohibited.*

Final Examination:

There will be an April Final Examination. This will be a cumulative final exam, two and a half (2.5) hours in duration and covering all materials from the term. Final date, time, and composition will all be confirmed in the weeks leading up to the examinations.

Remember: You are responsible for bringing your student ID to all tests and exams.

Grading Scheme:

Students will be graded according to the following scheme:

5 Online Assignments	5x2%	=	10%
4 Computer Laboratories	4x2.5%	=	10%

2 Term Tests	2x20%	=	40%
Final Examination		=	40%
<hr/>			
Total		=	100%

Note: The instructor reserves the right to change the weight of any portion of this marking scheme.

At the end of the course the grades may be adjusted but this will be done uniformly. We will use the grade equivalence chart published in the Undergraduate Calendar to convert between percentages and letter grades.

"Make-up" Work/Assignments:

There are no "make-up assignments" or similar projects available in the course. All contribution to the grades will come only from the tests, assignments, MAPLE 'laboratories' and the examination: no other sources will be considered.

Excused Absences:

If you are absent from the university for a minor medical reason, or non-medical (personal) situations lasting fewer than 3 days, you may report your absence, *once per term*, without documentation, using the McMaster Student Absence Form.

Absences for a longer duration or for other reasons must be reported to your Faculty/Program office, with documentation, and relief from term work may not necessarily be granted.

Please note that the MSAF may not be used for term work worth 25% or more, nor can it be used for the final examination.

The MSAF can be found at: <https://pinjap01.mcmaster.ca/msaf/>

And further information regarding MSAF policies can be found at: [This Web Site](#)

When using the MSAF for this course, please report your absence immediately to Chris McLean, the course coordinator, at mcleac3@math.mcmaster.ca (normally within 2 working days) to confirm the absence.

In the event of such an absence, no make up test will be given, but your course grade will be re-weighted by increasing the weight of the final examination to compensate for the missed test.

Marks and Mark Corrections:

As the term progresses, all test marks will be posted on the course website. It is your responsibility to check for errors in the grades before the day of the final exam, and to report any discrepancies to your instructor. *No errors will be corrected unless reported by this time.*

In The Event of Unforeseen Circumstances:

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites *at least weekly* during the term and to note any changes.

Academic Dishonesty Policy:

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences. ie: The grade of zero on an assignment, loss of credit with a notation on the transcript

(reads " Grade of F assigned for Academic Dishonesty "), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at:

<http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf>

- Plagiarism, e.g. the submission of work that is not one's own or for which other credits has been obtained.
- Improper collaboration in group work.
- Copying or using unauthorized aids in tests and examinations.

Math 1AA3/1ZB3 Course Calendar – Winter 2018

(Timing is VERY approximate and WILL be subject to adjustment)

Updated Dec. 1, 2017

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Week	Dates	Topic
Week #1	January 4-5	<p>Introduction - Who, What, Where, Why, When?</p> <p>Lectures:</p> <ul style="list-style-type: none"> - 7.5 Integral review - 7.8 Improper Integrals
Week #2	January 8-12	<p>Lectures:</p> <ul style="list-style-type: none"> - App. E Induction - 11.1 Sequences (<i>Omit Defn. 2</i>) - 11.2 Series
Week #3	January 15-19	<p><i>Approximate Assignment #1 Due Date: Thurs. January 18</i></p> <p>Lectures:</p> <ul style="list-style-type: none"> - 11.2 Series (Continued) - 11.3 Integral Test & Sum Estimates
Week #4	January 22-26	<p><i>Approximate Lab #1 Due Date: Thursday, January 25</i></p> <p>Lectures:</p> <ul style="list-style-type: none"> - 11.4 Comparison Tests (<i>Omit sum estimates</i>) - 11.5 Alternating series - 11.6 Absolute Convergence, Ratio & Root tests
Week #5	Jan. 29 - Feb. 2	<p><i>Approximate Assignment #2 Due Date: Thursday, Feb. 1</i></p> <p>Lectures:</p> <ul style="list-style-type: none"> - 11.8 Power Series - 11.9 Functions as Power Series (<i>Omit example 8b</i>)
Week #6	February 5-9	<p>Test #1 - Monday, February 5th: (Tentative date)</p> <p><i>1.5hr (90 min) duration, in the evening. See Announcements for details</i></p> <p>Lectures:</p> <ul style="list-style-type: none"> - 11.10 Taylor & MacLaurin (<i>Omit Mult. and Division of Series</i>) - 11.11 Taylor Polynomials and Error (<i>Omit other</i>)

		<i>applications)</i> - 8.2 Surface Area of Revolution
Week #7	February 12-16	<p>Approximate Laboratory #2 Due Date: Thursday Feb. 15</p> <p>Lectures:</p> <ul style="list-style-type: none"> - 8.3 Hydrostatic Force and Pressure (<i>Omit other applications</i>) - 9.1 Intro. to ODE & Modeling - 9.3 Separable ODE
Week #8	February 19-23	READING WEEK, NO CLASSES
Week #9	Feb. 26-Mar. 2	<p>Approximate Assignment #3 Due Date: Thursday March 1</p> <p>Lectures:</p> <ul style="list-style-type: none"> - 3.8 Exponential Growth and Decay - 9.5 Linear ODE - 10.1 Parametric Equations
Week #10	March 5-9	<p>Approximate Lab #3 Due Date: Thursday March 8</p> <p>Lectures:</p> <ul style="list-style-type: none"> - 10.2 Calculus of Parametric Curves - 10.3 Polar Functions - 10.5 Conic Sections
Week #11	March 12-16	<p>Test #2 - Monday, March 12th: (Tentative date)</p> <p><i>1.5hr (90 min) duration, in the evening. See Announcements for details</i></p> <p>Lectures:</p> <ul style="list-style-type: none"> - 14.1 Multivariate Functions - 14.1 Multivariate Functions (Continued) - 2.3 Squeeze Theorem - 14.2 Limits/Continuity in Three Dimensions
Week #12	March 19-23	<p>Approximate Assignment #4 Due Date: Thursday, March 22</p> <p>Lectures:</p> <ul style="list-style-type: none"> - 14.3 Partial Derivatives (<i>Omit the Cobb-Douglas Production Function</i>) - 14.4 Tangent Planes and Linear Approx. - 14.5 Multivariate Chain Rule
		<p>Approximate Laboratory #4 Due Date: Thursday, March 29</p>

Week #13	March 26 - 29	Lectures: <ul style="list-style-type: none">- 14.6 Gradient and $D_u f$ (<i>Omit Tangent Planes and Gradients</i>)- 15.1 Multivariate Riemann Sums and Double Integrals <p style="text-align: center;"><i>GOOD FRIDAY HOLIDAY - NO CLASSES</i></p>
Week #14	April 2-6	<p style="text-align: center;"><i>Approximate Assignment #5 Due Date: Thursday, April 6</i></p> Lectures: <ul style="list-style-type: none">- 15.1 Multivariate Riemann Sums and Double Integrals (cont)- 15.2 Integrals on General Regions (Type I and II)- Catch up and review