



Single Variable Calculus II

Classes:	Mon-Fri 9:00-10:00 a.m. in Room 2601
Instructor:	Tim Topper, Ph.D.
Office:	C2211 (in the southeast corner of the library)
Phone:	668-8775
Email:	ttopper@YukonCollege.yk.ca
Website:	http://ttopper.yukoncollege.yk.ca/Math101.W12
Office Hrs:	Will be arranged in class.

Course description

This is a second course in calculus with emphasis placed on integration. The topics include log and exponential functions, techniques of integration, improper integrals, linear differential equations, infinite series, polar coordinates and parametric equations.

Prerequisites

Math 100 or equivalent.

Required textbooks/materials:

Anton, Howard, Irl Bivens and Stephen Davis. *Calculus:Single Variable (Late transcendentals)*. Ninth edition. New York: Wiley, 2009. ISBN: 978-0-470-18347-2.

Equivalency/transferability:

KWAN	Math 1220 (3)	OC	Math 122 (3)
SFU	Math 152 (3) – Q	TRU	Math 1240 (3)
TRU-OL	Math 1241 (3)	TWU	Math 124 (3)
UAF	Math 201 (3)	UAS	Math 201 (3)
UBC	Math 101 (3)	UBCO	Math 101 (3)
UFV	Math 112 (3)	UNBC	Math 101 (3)
UR	Math 111 (3)	UVIC	Math 101 (1.5)
VIU	Math 122 (3)		

For more information about transferability contact the School of Science office.

Delivery methods/format

The course content is covered through lectures, tutorials and assignments using the prescribed textbook. *Most students find the course demanding. You should plan on spending between two and four hours in study and preparation outside class for each hour spent in class.*

Attendance and Participation

Attendance is mandatory. A student may be dismissed from a course if more than ten per cent (10%) of the scheduled contact hours are missed in any one course (*Yukon College Academic Regulations, 4.01*). Dismissal from a course may result in loss of full-time status and loss of sponsorship funding.

Missing a quiz or examination (either by absence or arriving too late to write) will normally mean forfeiture of the mark. An opportunity to write a missed quiz will be granted *only for documented medical illness or similar emergency*. Vacation scheduling is not an acceptable excuse for missing or re-scheduling a quiz or examination.

Students requesting extensions on assignments should note that extensions are granted for extraordinary circumstances only and will not be granted after the deadline for submission for any reason. Late assignments will not be accepted.

Assignments

The only way to learn math is to do math. The bulk of a student's time outside class should be spent doing problems. To this end, problems will be assigned in most classes. Your solutions to the problems assigned each week are due at the start of the first class the next week (i.e. usually the next Monday). Late assignments will not be accepted. Solutions to all assignments will be posted online.

Midterm

There will be one midterm test worth 20%.

Final Examination

A comprehensive final examination will be held at the end of the term. The examination date will be announced as soon as it is set.

Evaluation

Assignments	30%
Mid-term test	20%
Final examination	50%

Plagiarism

Plagiarism involves representing the words of someone else as your own, without citing the source from which the material is taken. If the words of others are directly quoted or paraphrased, they must be documented according to standard procedures (APA). The resubmission of a paper for which you have previously received credit is considered a form of plagiarism.

Plagiarism is academic dishonesty, a serious academic offence, and will result in you receiving a mark of zero (F) on the assignment or the course. In certain cases, it can also result in dismissal from the college.

Students with disabilities or chronic conditions

Reasonable accommodations are available for students with a documented disability or chronic condition. It is the student's responsibility to seek these accommodations. If a student has a disability or chronic condition and may need accommodation to fully participate in this class, he/she should contact the Learning Assistance Centre (LAC) at (867) 668-8785 or lassist@yukoncollege.yk.ca.

School of Science, Trades and Technology
Mathematics 101
Winter 2012
Course Outline

Week	Topic
1	0.4 Inverse Functions Log and exponential functions 6.1 Exponential and Logarithmic functions 6.2 Derivatives and integrals involving Logarithmic functions 6.3 Derivatives of inverse functions; Derivatives and integrals of exponential functions
2	6.4 Graphs and applications involving logarithmic and exponential functions 6.5 L'Hôpital's rule 6.6 Logarithmic functions from the integral point of view 6.8 Hyperbolic functions and hanging cables.
3	Techniques of Integration 7.2 Integration by Parts 7.3 Trigonometric Integrals
4	7.4 Trigonometric Substitutions 7.5 Integration using Partial Fraction Expansions
5	7.6 Tables of Integrals 7.8 Improper Integrals 7.7 Numerical Integration: Simpson's Rule
6	Differential Equations 8.1 First order Differential Equations
7	8.3 Modelling with first-order differential equations Midterm <i>Feb 23rd is the last day to withdraw without academic penalty.</i>
8	Infinite Series 9.1-9.2 Sequences
—	<i>Reading Week</i>
9	9.3 Infinite series 9.4 Convergence Tests 9.5 More Convergence Tests
10	9.6 Alternating Series 9.8 Maclaurin and Taylor series; Power series
11	9.7 Maclaurin and Taylor polynomials 9.9 Taylor Series Convergence 9.10 Differentiating and Integrating Power Series; Modeling with Taylor series
12	Analytic Geometry 10.1 Polar Coordinates 10.3 Area in Polar Coordinates 1.8 Parametric Equations
13	Review and Exam Preparation

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