APPLIED SCIENCE & MANAGEMENT DIVISION
School of Science
Winter 2017

COURSE OUTLINE

MATH 101
SINGLE VARIABLE CALCULUS II

45 HOURS
3 CREDITS

PREPARED BY: Jaclyn Semple, Instructor DATE: November 21, 2016

APPROVED BY: DATE:

APPROVED BY ACADEMIC COUNCIL: (date)

RENEWED BY ACADEMIC COUNCIL: (date)

YUKON COLLEGE

Course Outline prepared Jaclyn Semple, November 2016.

Yukon College
P.O. Box 2799
Whitehorse, YT
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APPLIED SCIENCE & MANAGEMENT DIVISION
MATH 101
3 Credit Course
Winter 2017

Single Variable Calculus II

INSTRUCTOR: Jaclyn Semple

OFFICE HOURS: Mon & Thurs, 10-11am

OFFICE LOCATION: A2433

CLASSROOM: A2601

E-MAIL: jsemple@yukoncollege.yk.ca

TIME: Mon – Fri (9am – 10am)

TELEPHONE: 867-456-8548

DATES: January 4 – April 21, 2017

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

EQUIVALENCY OR 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.

COURSE FORMAT

Lectures: 3 hours per week
Tutorials: 2 hours per week
The course content is covered through lectures, tutorials, and homework assignments using the prescribed textbook. Students with a sound mathematical background can expect to spend between two and four hours in preparation and study for every hour spent in class.

COURSE REQUIREMENTS

Homework Assignments
Problems (not graded by the instructor) will be assigned each week and solutions will be available on the course Moodle page or in the textbook.

Tutorials
Students will be given problems (not graded) to work on during the tutorial sessions.

Quizzes (30%)
There will be around ten quizzes during the term, worth 30% of the final mark. Most questions on the quizzes will be drawn from the assigned problems, thus completing the homework should guarantee good quiz results. Missed quizzes cannot be made up, but the lowest quiz result will be discarded.

Midterm Test (30%)
There will be one midterm test worth 30% of the final mark.

Final Examination (40%)
The final examination will cover the entire course and is worth 40% of the final mark. It will be held at the end of the term sometime during the exam period. The exact date of the exam will be announced as soon as it is set by the School of Science.

EVALUATION
The student's grade will be calculated as follows:

Quizzes	30%
Midterm Test	30%
Final Examination	40%

REQUIRED TEXTBOOKS AND MATERIALS
Anton H, Bivens I, Davis S. *Calculus: Single Variable*. 11th Edition. New York: Wiley, 2016. ISBN 978-1-118-88561-1 (binder-ready version)

ACADEMIC AND STUDENT CONDUCT

Information on academic standing and student rights and responsibilities can be found in the Academic Regulations that are posted on the Student Services/Admissions & Regulations web page.

PLAGIARISM

Plagiarism is a serious academic offence. Plagiarism occurs when students present the words of someone else as their own. Plagiarism can be the deliberate use of a whole piece of another person's writing, but more frequently it occurs when students fail to acknowledge and document sources from which they have taken material. Whenever the words, research or ideas of others are directly quoted or paraphrased, they must be documented according to an accepted manuscript style (e.g., APA, CSE, MLA, etc.). Resubmitting a paper which has previously received credit is also considered plagiarism. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may also result in dismissal from a program of study or the College.

YUKON FIRST NATIONS CORE COMPETENCY

Yukon College recognizes that a greater understanding and awareness of Yukon First Nations history, culture and journey towards self-determination will help to build positive relationships among all Yukon citizens. As a result, to graduate from ANY Yukon College program, you will be required to achieve core competency in knowledge of Yukon First Nations. For details, please see www.yukoncollege.yk.ca/yfnccr.

ACADEMIC ACCOMMODATION

Reasonable accommodations are available for students requiring an academic accommodation to fully participate in this class. These accommodations are available for students with a documented disability, chronic condition or any other grounds specified in section 8.0 of the Yukon College Academic Regulations (available on the Yukon College website). It is the student's responsibility to seek these accommodations. If a student requires an academic accommodation, he/she should contact the Learning Assistance Centre (LAC) at (867) 668-8785 or lassist@yukoncollege.yk.ca.

OUTLINE OF TOPICS

Week	Content (numbers refer to textbook sections)
1	Exponential, Log, and Inverse Functions (Appendix E, 6.1)
2	Derivatives and Integrals of Exponential, Log, and Inverse Functions (6.2–6.3)
3	L'Hôpital's Rule, Exponential, Log, and Inverse Functions (6.4–6.6)
4	Techniques of Integration (7.2–7.3)
5	Techniques of Integration cont'd (7.4–7.5)
6	Techniques of Integration cont'd (7.6–7.8)
7	Differential Equations (8.1) **Midterm**
8	*Reading Week*
9	Modelling with Differential Equations (8.3)
10	Sequences & Series (9.1–9.2)
11	Sequences & Series cont'd (9.3–9.6)
12	Sequences & Series cont'd (9.7–9.10)
13	Parametric Equations & Polar Coordinates (10.1–10.2)
14	Review