Yukon University

COURSE OUTLINE

MATH 101
Single Variable Calculus II

3 CREDITS

PREPARED BY: Jaclyn Semple, Instructor
DATE: November 20, 2020

APPROVED BY: Joel Cubley, Chair, School of Science
DATE: December 17, 2020

SINGLE VARIABLE CALCULUS II

INSTRUCTOR: Jaclyn Semple	**OFFICE HOURS:** TBD
OFFICE LOCATION: A2410	**CLASSROOM:** Online
E-MAIL: jsemple@yukonu.ca	**TIME:** Asynchronous self-study
TELEPHONE: 867-456-8548	**DATES:** Jan 4 – Apr 20, 2021

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, or by permission of the instructor.

RELATED COURSE REQUIREMENTS

In Winter 2021, MATH101 will be delivered remotely using the Zoom platform. Students are required to have access to a computer with a reliable internet connection. A headset with a microphone is recommended.

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: asynchronous, self-study
Tutorials: 1 hour per week, online via Zoom (schedule TBD)

Course content will be delivered asynchronously. Expect to spend at least 15 hours per week on self-paced study and homework problems in order to fully understand the material. A one-hour tutorial will be held weekly, and students are encouraged to join the Zoom session so that they can ask questions in real-time and directly engage with the instructor.

Material will be posted on Moodle, including lecture notes, homework, course announcements, suggested textbook problems, and other useful or interesting material related to the course.

ASSESSMENTS:

Homework Sets (15%)
Homework problems will be assigned each week in order for you to practice the concepts learned in class. These problems will be marked by the instructor **for completion only**, worth 15% of the final grade. Solutions will be available on the course Moodle page or in the textbook.

Quizzes
There will be around twelve practice quizzes during the term, which will **not** be graded by the instructor. These are meant for you to use on your own to test your understanding. Most questions on the quizzes will be drawn from the assigned homework problems.

Midterm Test (35%)
There will be one midterm test held during the term, worth 35% of the final grade.

Final Examination (50%)
The final examination will cover the entire course and is worth 50% of the final grade. **A minimum mark of 50% on the final exam is required in order to pass the course.**

EVALUATION

Homework	15%
Midterm Test	35%
Final Exam	50%
Total	**100%**

TEXTBOOKS AND MATERIAL

Anton H, Bivens I, Davis S. *Calculus: Single Variable*. 11th Edition. New York: Wiley, 2016. ISBN 978-1-118-88561-1

ACADEMIC AND STUDENT CONDUCT

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

PLAGIARISM

Plagiarism is a serious academic offence. Plagiarism occurs when a student submits work for credit that includes the words, ideas, or data of others, without citing the source from which the material is taken. Plagiarism can be the deliberate use of a whole piece of work, but more frequently it occurs when students fail to acknowledge and document sources from which they have taken material according to an accepted manuscript style (e.g., APA, CSE, MLA, etc.). Students may use sources which are public domain or licensed under Creative Commons; however, academic documentation standards must still be followed. Except with explicit permission of the instructor, resubmitting work 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 University.

YUKON FIRST NATIONS CORE COMPETENCY

Yukon University 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 University program, you will be required to achieve core competency in knowledge of Yukon First Nations. For details, please see www.yukonu.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 University Academic Regulations (available on the Yukon University website). It is the student's responsibility to seek these accommodations. If a student requires an academic accommodation, they should contact the Learning Assistance Centre (LAC): lac@yukonu.ca.

TOPIC OUTLINE

Week	Dates	Content (numbers refer to textbook sections)
1	Jan. 4-8	Course Intro
2	Jan. 11-15	Exponential, Log, and Inverse Functions (Appendix E, 6.1)
3	Jan. 18-22	Derivatives and Integrals of Exponential, Log, and Inverse Functions (6.2–6.3)
4	Jan. 25-29	L'Hôpital's Rule, Exponential, Log, and Inverse Functions (6.4–6.6)
5	Feb. 1-5	Techniques of Integration (7.2–7.3)
6	Feb. 8-12	Techniques of Integration cont'd (7.4–7.5)
7	Feb. 15-19	Techniques of Integration cont'd (7.6–7.8)
	Feb. 22-26	**READING WEEK**
8	Mar. 1-5	**Midterm**
9	Mar. 8-12	Differential Equations (8.1-8.2)
10	Mar. 15-19	Modelling with Differential Equations (8.3-8.4)
11	Mar. 22-26	Modelling with Differential Equations cont'd (8.4)
12	Mar. 29-Apr. 2	Sequences & Series (9.1–9.2)
13	Apr. 5-8	Sequences & Series cont'd (9.3–9.6)
14	Apr. 13-17	Sequences & Series cont'd (9.7–9.10)

Specific dates of topic coverage may be subject to change. Some topics may not be covered depending on time constraints.