2020 Summer, Term 2 July 6-August 13, 2020

Math 101 Course Syllabus

Course Information

Course Title	Course Code Number	Credit Value
Integral Calculus with Applications to Physical Sciences and Engineering	Math 101	3

Course website

See course website for links to Canvas and Piazza: https://babhrujoshi.github.io/20S2-101/

Course Requirements

One of MATH 100, MATH 102, MATH 104, MATH 110, MATH 120, MATH 180, MATH 184.

Contacts

Course Instructor(s)	Contact Details	Office Location	Office Hours
Babhru Joshi	b.joshi@math.ubc.ca	Online	Mondays and Friday 3-4 pm or by appointment

Course Structure

This course will be conducted entirely online. **The students are expected to attend the online lectures.** For most lectures, pre-recorded videos will be posted on Canvas before class. You are expected to watch these videos before attending the online lectures. Online lectures will be discussion based where we expand on topics covered in the videos.

Schedule of Topics

This is a tentative schedule. It may change often.

Lecture	Date Day	Topic	Section in CLP-2
1	06 July / Mon	Introduction, terminology, sequences	3.1
2	08 July / Wed	No lecture	
3	09 July / Thurs	Limits of sequences	3.1
4	10 July / Fri	Properties of sequences; Riemann sums	3.1, 1.1
5	13 July / Mon	Definite integrals; the fundamental theorem of calculus	1.2, 1.3
6	15 July / Wed	Quiz 1	
7	16 July / Thurs	FTC continued; indefinite integration, u-substitution	1.3
8	17 July / Fri	Even and odd functions; areas between curves	1.4
9	20 July / Mon	Volumes and work	1.5, 2.1
10	22 July / Wed	Quiz 2	
11	23 July / Thurs	Integration by parts, trigonometric integrals	1.7, 1.8
12	24 July / Fri	Integration by trigonometric substitution, partial fraction decompositions	1.9, 1.10
13	27 July / Mon	Partial fractions cont., improper integrals	1.10, 1.12
14	29 July / Wed	Quiz 3	
15	30 July / Thurs	Average value, centers of mass	2.2, 2.3
16	31 July / Fri	Approximation, separable differential equations	1.11, 2.4
17	03 August / Mon	No lecture (BC day)	
18	05 August / Wed	Quiz 4	
19	06 August / Thurs	Introduction to series, properties and examples, the integral test	3.2, 3.3
20	07 August / Fri	The comparison test, alternating series, absolute and conditional convergence	3.3
21	10 August / Mon	Power series, Taylor series	3.5, 3.6
22	12 August / Wed	Quiz 5	
23	13 August / Thurs	Power series, Taylor series (cont.) / Review	3.5, 3.6

Learning Materials

- We will be using CLP-2 Integral Calculus by Joel Feldman, Andrew Rechnitzer, and Elyse Yeager. (http://www.math.ubc.ca/ CLP/CLP2/)
- There are other free online textbooks you can refer to as well. (https://www.math.ubc.ca/ wachs/Teaching/MATH101/IICPages/notes.shtml)

Assessments of Learning

- assignments (Webwork): 20%
- quizzes (5): 40%
- final exam: 40%

Policies

- No makeup exam for quizzes or the final exam. If you missed a quiz you must document a justification.
- Lowest quiz grade will be dropped and only highest 4 of the 5 quizzes will count towards the quiz grade.
- To pass the course you must do the assigned coursework, write the quiz and final exams, pass the final exam, and obtain an overall pass average according to the grading scheme.

Collaboration

You may collaborate and consult with other students in the course, but you must work on your own assignments. If you have collaborated or consulted with someone while working on your assignment, you must acknowledge this explicitly in your submitted assignment. If you are unsure about any of these rules, feel free to consult with your instructor.

Late homework submissions

Each student has a three lecture-day allowance to use throughout the term. For instance, if an assignment is due by Thursday, then submission by Friday counts as one delay; a submission by Monday counts as two delays; a submission by the following Wednesday counts as three delays (and consumes the entire three-day allowance). Apart from using delays, late submissions are not accepted. Once a solution set has been posted, no more late submissions are permitted; consequently, you may not always be able to use all of your delays.

University Policies

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students

with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available on the `https://senate.ubc.ca/policies-resources-support-student-success`UBC Senate website.

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