

MATH 101 Section 951

Course Outline

Session 2018S, Term 2(4, July-10, August 2018)

Instructor: Dr. Senping Luo

Textbook: CLP-II textbook and problem book for Integral Calculus, available on line.
<http://www.math.ubc.ca/~feldman/m101/clp/>

Time and location: MThF(1,4,5) 4:00PM-6:00PM W(3) 4:00PM-5:00PM, LSK200.

Office: Math Annex 1220; Office time: W(3) 5:00PM-7:00PM, or by appointment.

Midterm test: 20 July (during regular class time)

Course web site: www.math.ubc.ca/~spluo

Topics:

• Chapter 1: Integration

- Unit 1: Definition of the integral
- Unit 2: Basic properties of the definite integral, The Fundamental Theorem of Calculus
- Unit 3: Substitution Area between curves
- Unit 4: Volumes, Integration by parts
- Unit 5: Trigonometric integrals, Trigonometric substitutions
- Unit 6: Partial fractions, Numerical integration
- Unit 7: Improper integrals, Work

• Chapter 2: Application of Integration

- Unit 8: Averages, Centre of mass, Separable differential equations, Sequences

• Chapter 3: Sequence and series

- Unit 9: Series, The Divergence Test, The Integral Test
- Unit 10: The Comparison Test, The Alternating Series Test
- Unit 11: The Ratio Test, Absolute and conditional convergence, Power series: definitions
- Unit 12: Working with power series, Taylor series

• Assessment

20% homework(webwork), 20% midterm, 60% final.

• IIC The course in charge is professor Andrew Rechnitzer.