

Korea University International Summer Campus (KU ISC) 2021

Embark on a unique summer

June 28, 2021 ~ August 5, 2021

ISC101B – Calculus II

I.Instructor

Professor	:	Hongshik Ahn
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Website	:	http://www.ams.stonybrook.edu/~hahn
Home Institution	:	State University of New York at Stony Brook
Class	:	10:30 am-12:10 pm KST, online via Zoom, synchronous
Office Hours	:	7:30-8:30 am KST or by appointment, online via Zoom, synchronous

II. Textbook

Required Textbook	:	Thomas' Calculus: Early Transcendentals 14th Edition
		by Hass, Heil & Weir, Pearson
		ISBN-13: 9780134439020
		Printed version or PDF eTextbook



III. Course Description and Objectives

This second course in the calculus sequence will cover integration techniques and applications, series and approximations. Students are expected to have completed a Calculus I course.

Upon successful completion Calculus II, the student will have an understanding topics listed in the class outline below, be able to solve routine problems, and be able to apply the ideas.

IV. Grading

Midterm Exam	:	40%
Final	:	40%
Quizzes	:	10%
Assignments	:	10%

V. Class Outline

Date	Торіс	Chapter	Remarks
Mon, June 28	The Dot Product, The Cross Product	12.3, 12.4	Online
Tue, June 29	Lines and Planes, Cylinders and Quadratic Surfaces	12.5, 12.6	Online
Wed, June 30	Curves in Space and Their Tangents, Integrals of Vector	13.1, 13.2	Online
	Functions		
Thu, July 1	Arc Length, Curvature and Normal Vectors of a Curve	13.3, 13.4	Online
Mon, July 5	Functions of Several Variables, Limits and Continuity in	14.1, 14.2	Online
	Higher Dimensions		
Tue, July 6	Partial Derivatives, Chain Rule	14.3, 14.4	Online
Wed, July 7	Directional Derivatives and Gradient Vectors	14.5	Online
Thu, July 8	Tangent Planes and Differentials, Extreme Values and	14.6, 14.7	Online
Mon, July 12	Orientation Day (no classes)		
Tue, July 13	Lagrange Multipliers	14.8	Online
Wed, July 14	Double Integrals over Rectangles	15.1	Online
Thu, July 15	Double Integrals over General Regions, Review for the	15.2	Online
Fri July 16	Midtern Exam		Online
Mon July 19	Double Integrals over General Regions, Area by Double	15 2 15 3	Online
Woll, July 15	Integration	13.2, 13.3	Unine
Tue, July 20	Double Integrals in Polar Form	15.4	Online
Wed, July 21	Triple Integrals in Rectangular Coordinates,	15.5, 15.6	Online
Thu, July 22	Triple Integrals in Cylindrical and Spherical Coordinates	15.7	Online
Mon, July 26	Substitutions in Multiple Integrals	15.8	Online
Tue, July 27	Line Integrals	16.1, 16.2	Online
Wed, July 28	Green's Theorem	16.4	Online
Thu, July 29	Surfaces and Area	16.5	Online
Mon, August 2	Surface Integrals, Stokes' Theorem	16.6, 16.7	Online
Tue, August 3	Review for the Final		Online
Wed, August 4	Final Exam		Online
Thu, August 5	Consultation on grades and graduation ceremony		