

MTH 243 – Fall 2019

Section-1 MWF 9am (Swan 305)

Topics and Practice Problems

Week	Event	Topics	Suggested Practice Problems
Sep 4	Start	12.1: Functions of 2 Variables: 12.2: Graphs & Surfaces	12.1: #3-5,7,12-16,19,26,29,39 12.2: # 1-4,6,7,16-18,20-22,30,31,40
Sep 9		12.3: Contour Diagrams 12.4: Linear Functions 12.5: Functions of 3 Variables	12.3: #1,2,3,5,7,10,14-16,23,40 12.4: #1-11 odd, 21,27,31 12.5: # 1,2,5,12-15,17,19
Sep 16	Quiz1	13.1: Displacement Vectors 13.2: Vectors in General 13.3: The Dot Product	13.1: #3,9,12,15,21,26,29-31,33,41 13.2: #7,11,15,20,21,23 13.3: # 3,5,12,13,17,21,25,29,31,36,53
Sep 23		13.4: Cross Product 14.1: Partial Derivative 14.2: Computing Partial Derivatives Algebraically	13.4: #7,11,13,15,17,25,29,33,37 14.1: #1,3,10-22,29,30,32,35 14.2: #1-13 odd, 23-28,45
Sep 30	Quiz2	14.3: Local Linearity & Differential 14.4: Gradients & Directional Derivatives in the Plane	14.3: #1-11 odd,29,35,37 14.4: # 1,7,11,15-21 odd,23-42,45-49,75,82
Oct 7		14.5: Gradients & Directional Derivatives in the Space 14.6: The Chain Rule	14.5: #5,9,13,17,19,23,25,27,31,39,43,47,69 14.6: # 1-15 odd,21,25
Oct 14	Exam1 (Tue)	14.7: 2nd Partial Derivatives 15.1: Critical Points & Local Extrema	14.7: # 3-11 odd,13,15,21,23,41,43 15.1: #1,7,13,15-27 odd,29,31
Oct 21		16.1: Definite Integral of a Function of 2 Variables 16.2: Iterated Integrals	16.1: #1,3,9,11,17 16.2: # 1-33odd,39-49odd,57
Oct 28	Quiz 3	16.3: Triple Integrals 16.4: Double Integrals in Polar	16.3: #1-13odd,35,37,43,45,51,55 16.4: # 1-21odd, 31,33,35

		Coordinates	
Nov 4		16.5: Integrals in Cylindrical & Spherical Coordinates 17.1: Parameterized Curves	16.5: #1,3,5,9,11-21,25,29-41odd 17.1: # 1-11odd, 21-31odd, 41,69,75
Nov 11	Quiz 4	17.2: Motion, Velocity & Acceleration 17.3: Vector Fields	17.2: # 1-19odd, 29,30,37,39 17.3: #1-15odd,20,29,31,35
Nov 18		18.1: Idea of a Line Integral 18.2: Computing Integrals over Parameterized Curves	18.1: #1-6,7-27odd,28-32,35,43 18.2: #5-23odd, 29,31,33,35,39
Nov 25	Exam2	Monday for Exam2 15.3: (Read only)	<i>Thanksgiving Break. Enjoy!</i>
Dec 2		18.3: Gradient Fields & Path-Independent Fields 18.4: Path-Dependent Vector Fields & Green's Theorem	18.3: # 1-15odd, 19,23,25,29,35,47 18.4: # 1-25 odd
Dec 9	End	Review	Final Exam Dec 13, 8-11am

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Weekly HWs due **Sunday (11pm)** at the end of the lecture week. Late HWs will be accepted with 50% deduction. For each problem, students have 3 attempts.

Exams: There are two exams and one final exam. Exams are currently scheduled as

- Exam I in-class, Tuesday, October 15th
- Exam II in-class, Monday, November 25th
- Final exam December 13, 8-11am.

Quizzes: 4 quizzes will be given on Fridays of September 20, October 4, Nov 1, 15.