Course Guide Calculus III: Spring 2026:

	Topic	My notes	Comments	Assignment Collected
M: 1-19	vectors, points, components	9 - 18		
T: 1-20	dot products, angles, projections	18 - 28		
W: 1-21	cross product	28 - 37	(should be done with SAM 1 by now)	
TH: 1-22	Lines and planes	38 - 50		
F: 1-23	Curves and Surfaces	51 - 75		
M: 1-26	curvelinear coordinates	75 - 83		
T: 1-27	calculus of curves	89 - 101		
W: 1-28	Arclength	101 - 105	(should be done with SAM 2 by now)	
TH: 1-29	geometry of curves	105 - 115		Mission 1
F: 1-30	3D motion	115 - 125		
M: 2-2	3D motion continued, possibly covering Kepler's Laws	125 - 130		
T: 2-3	Integration along a curve	130 - 134	(should be done with SAM 3 by now)	
W: 2-4	Integration along a curve	130 - 134		
TH: 2-5	Further examples			
F: 2-6	HENCHMEN FIGHT I: an in-class group challenge			Mission 2
M: 2-9	Questions ? (discuss SAM 1,2,3 etc.)			
T: 2-10	BOSS FIGHT I		Covers Chapters 1 and 2 of my notes.	
W: 2-11	open sets and limits for several variables	137 - 142		
TH: 2-12	open sets and limits for several variables	143 - 148		
F: 2-13	directional derivatives & partial differentiation	149 - 157		
M: 2-16	directional derivatives via partial differentiation	158 - 162		
T: 2-17	gradient vector field, level curves, contour plots	162 - 169	(should be done with SAM 4 by now)	
W: 2-18	partial diff. with three-variables & applications	170 - 179		
TH: 2-19	general concept of differentiation	180 - 192		Mission 3
F: 2-20	chain rules	192 - 205		
M: 2-23	tangent spaces & their equations	206 - 212		
T: 2-24	differentials and constrained partial diff.	212- 219	(should be done with SAM 5 by now)	
W: 2-25	gradients in curvelinear coordinates	220 - 222		
TH: 2-26	Lagrange multipliers	231 - 245		
F: 2-27	Lagrange multipliers	231 - 245		Mission 4
M: 3-2	multivariate Taylor	246 - 251		
T: 3-3	second derivative test	252 - 257		
W: 3-4	closed set test	258 – 262	(should be done with SAM 6, 7 by now)	
TH: 3-5	Further examples			
F: 3-6	HENCHMEN FIGHT II: an in-class group challenge			Mission 5
M: 3-9	Questions? (discuss SAM 4,5,6,7 etc.)			
T: 3-10	BOSS FIGHT II		Covers Chapters 3, 4, 5 of my notes	
W: 3-11	definition and basic multivariate integrals	265 - 270		
TH: 3-12	double integrals and TYPE I and II regions	270 - 285		
F: 3-13	double integrals and TYPE I and II regions	270 - 285		
	SPRING BREAK (3-16 to 3-20)			
M: 3-23	cartesian triple integrals	286 – 295	(should be done with SAM 8 by now)	

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Date	Topic	Pages	Note	Mission
T: 3-24	cartesian triple integrals	286 – 295		
W: 3-25	cartesian triple integrals	286 – 295		
TH: 3-26	change of variables for double integrals	295 - 307		
F: 3-27	change of variables for double integrals	295 - 307		
M: 3-30	change of variables for triple integrals	308 - 319		
T: 3-31	change of variables for triple integrals	308 - 319		
W: 4-1	algebra and geometry of volume elements	320 - 322	(should be done with SAM 9 by now)	
TH: 4-2	Further examples			
F: 4-3	HENCHMEN FIGHT III: an in-class group challenge			Mission 6
M: 4-6	Questions? (discuss SAM 8, 9)			
T: 4-7	BOSS FIGHT III		Covers Chapter 6 of my notes	
W: 4-8	Assessment Day (no class)			
TH: 4-9	vector fields and the gradient operator	325 – 328		
F: 4-10	On the calculation and properties of grad, curl and div	329 – 332		
M: 4-13	line integrals	332 – 335	(should be done with SAM 10 by now)	
T: 4-14	conservative vector fields	335 – 338		
W: 4-15	Green's theorem	339 - 345		
TH: 4-16	Deformation thm, conservative vector fields	345 – 353	(should be done with SAM 11 by now)	
F: 4-17	Surface integrals	354 – 364		
M: 4-20	Surface integrals	354 – 364		Mission 7
T: 4-21	Surface integrals	354 – 364	(should be done with SAM 12 by now)	
W: 4-22	Stokes' theorem & Gauss' Theorem	365 – 383		
TH: 4-23	Stokes' theorem & Gauss' Theorem	365 – 383	(should be done with SAM 13 by now)	
F: 4-24	Stokes' theorem & Gauss' Theorem	365 – 383		
M: 4-27	Stokes' theorem & Gauss' Theorem	365 – 383	(should be done with SAM 15 by now)	
T: 4-28	HENCHMEN FIGHT IV: an in-class group challenge			Mission 8
W: 4-29	Questions ? (discuss SAM 10, 11, 12, 13, 15)			
TH: 4-30	BOSS FIGHT IV		Covers Chapter 7 of my notes	
F: 5-1	Theory of Potentials	384 – 400		
M: 5-4	Calculus with Differential Forms part I	401 – 425		
T: 5-5	Calculus with Differential Forms part II	401 – 425		
W:	Reading Day			
M:	Final BOSS FIGHT is on Monday May 11, 9am-noon.		Comprehensive	

- ❖ Tests 1,2,3,4 = 4(120pts) = 480pts, Final Boss Fight = 240pts, Missions = 200pts, (keep highest 7 scores), Henchmen Fights 80pts.

Make-up policy: if an assignment is missed for legitimate reasons such as university approved excuse then weight may be added to Final Exam to replace those missed points. Generally late work is not accepted once the solution is posted. Notice there is built-in grace in the Missions in that the lowest score(s) are dropped. In addition, I will replace scores for Tests 1, 2 & 3 with the Final Exam score if it is helpful. However, Test 4 is only replaced with extreme, university approved, circumstances.