

- Instructor:** Dr. Franz X. Tanner
- Office:** 209 Fisher Hall
- Phone:** 487 2190
- E-mail:** tanner@mtu.edu
- Lectures:** MWF 3:00–3:50 PM, 328 Fisher Hall
- Office Hours:** MWF 12:30–1:30 PM via Zoom and by appointment (Zoom Meeting ID: 690 838 7554)
- Prerequisites:** Calculus with Technology II or equivalent, or consent of instructor.
- Textbook:** *James Stewart, Calculus Early Transcendentals, 8th edition, Cengage Learning, 2015.* You need to buy the electronic version together with a **WebAssign Passcode**. (The Passcode is valid for MA1160/61, MA2160, and MA3160.) The purchase of a hardcopy of the text is optional.
- Homework:** The homework must be submitted online using WebAssign (<http://webassign.net/>). If you have missed a deadline you can request an *automatic* seven day extension. The online **Pre-Lectures** (listed at the end of the homework assignments) are optional. **Class Key: mtu 0001 5227**
- Math Lab:** Calculus III has a lab portion with its own Canvas page. All assignments for the lab and the details about how the lab is run can be found online on that Canvas page. If you do not have access to a Calculus III Lab page please contact the lab director at malabdir@mtu.edu.
- Quizzes:** A short in-class quiz will be given once a week.
- Hourly Exams:** There will be two hourly exams (dates given on the Course Schedule).
- Final Exam:** The final exam is a two-hour, comprehensive, in-class exam as scheduled by the university. **No early or late final exam will be given.**
- Grading:** The course grade will be calculated using the straight percentage scale

$A \geq 90\% > AB \geq 85\% > B \geq 80\% > BC \geq 75\% > C \geq 70\% > CD \geq 65\% > D \geq 60\% > F$

and the following weighting system:

Labwork	10%
Homework	10%
Quizzes	10%
Two hourly exams (20% each)	40%
Comprehensive Final Exam	30%

## Class Policies:

- Attendance of classes is mandatory.
- The lowest quiz grade and homework grade will be dropped.
- **No calculators (or other electronic devices) on exams or quizzes.**
- **There are no make-up quizzes.**
- **Makeup exams only with a written excuse from the Dean of Students.**

## Important Dates:

- Last day to drop full semester course without grade (no refund): Friday, September 17, 2021.
- Last day to drop full semester course with grade of "W": Friday, November 5, 2021.

**Affirmative Action Notice:** "MTU complies with all federal and state laws and regulations regarding discrimination, including the ADA Act of 1990. If you have a disability and a need, a reasonable accommodation for equal access to education or services can be made through the Dean of Students Office (Gloria Melton 487-2212). For concerns regarding discrimination of any kind, contact your advisor, department head, or affirmative action office."

## Course Schedule

(Subject to change)

Date	Section	Topic
Week 1: Mon Aug 30	12.1–12.4	Review
	12.5	Equations of Lines and Planes
	12.6	Cylinders and Quadratic Surfaces
Week 2: Mon Sept 06		<b>Labor Day</b> (no class Sept 06)
	13.1	Vector Functions and Space Curves <b>K Day</b> (no class Sept 10)
Week 3: Mon Sept 13	13.2	Derivatives and Integrals of Vector Functions
	13.3	Arc Length and Curvature
	13.3	(... continued ...)
Week 4: Mon Sept 20	14.1	Functions of Several Variables
	14.3	Partial Derivatives
	14.4	Tangent Planes and Linear Approximations
Week 5: Mon Sept 27	14.5	The Chain Rule
	14.6	Directional Derivatives and the Gradient Vector <b>Homecoming</b> (no class Oct 1)
Week 6: Mon Oct 04	14.7	Maximum and Minimum Values
	14.8	Lagrange Multipliers
	15.1	Double Integrals over Rectangles
Week 7: Mon Oct 11		Review
		<b>EXAM I: Tuesday Oct 12, 6–7:30 PM, Fisher 135</b>
	15.2	Double Integrals on General Regions
Week 8: Mon Oct 18	15.3	Double Integrals in Polar Coordinates
	15.5	Surface Area
	15.5	(... continued ...)
Week 9: Mon Oct 25	15.6	Triple Integrals
	15.7	Triple Integrals in Cylindrical Coordinates
	15.8	Triple Integrals in Spherical Coordinates
Week 10: Mon Nov 01	16.1	Vector Fields
	16.2	Line Integrals
	16.3	The Fundamental Theorem for Line Integrals
Week 11: Mon Nov 08	16.3	(... continued ...)
	16.4	Green's Theorem
	16.5	Curl and Divergence
Week 12: Mon Nov 15	16.6	Parametric Surfaces and their Areas
	16.6	(... continued ...)
	16.7	Surface Integrals <b>Exam I compensation</b> (no class Nov 19)
<b>Thanksgiving Break: November 22 – 26</b>		
Week 13: Mon Nov 29	16.8	Stokes' Theorem
		Review
		<b>EXAM II: Thursday, Dec 2, 6–7:30 PM, Fisher 135</b>
		<b>Exam II compensation</b> (no class Dec 03)
Week 14: Mon Dec 06	16.9	The Divergence Theorem
	16.10	Summary
		Review
<b>FINAL EXAM: TBA</b>		