

## Brief Summary of Important Course Information and Policies

**Course:** MA 642–OQ (40162) Calculus of Several Variables, Summer 2025

**Instructor:** Professor M. Nkashama

**Office/Hours:**

UH 4033/ My office hours this term will be by appointment. (Pease email!)

**Phone:** 934-2154 (Mathematics Department)

**E-mail:** nkashama@uab.edu

**Class Meeting times/location:** MWF 11:20 am – 12:40 pm, Room UH 4002

### Resources:

- [1] *Principles of Mathematical Analysis*, 3rd Edition, by Walter Rudin, McGraw-Hill, Inc., NY, 1976.

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- [2] *Analysis on Manifolds*, by James R. Munkres, Westview Press, Boulder, Co, 1991.

- [3] *Calculus on Manifolds*, by M. Spivak, Addison-Wesley Publishing Co., Reading, MA, 1965.

- [4] *Mathematical Analysis I & II*, by Vladimir A. Zorich, Springer, NY, 2004.

**Grading:** The course grade will comprise the following:

1 midterm (20%)

Regular homework and presentations (50%)

A comprehensive final examination (30%)

**Make-up(s):** *None.*

If you miss the final, you will receive a score of zero on the exam. If you miss the midterm for serious and verifiable circumstances, your score on the final will be used (proportionally) in its place.

### Homework:

Homework/presentations will be assigned regularly. Since the homework and presentations' grade constitutes 50% of your course grade, it is strongly recommended that you attend classes on a regular basis and complete all homework assignments when due. No late homework will be accepted, for any reason!

### Final Examination:

Monday, August 11, 2025, 10:45 am – 1:15 pm. (Note that the final exam will be a *comprehensive examination*.)

**Course content/Learning outcomes:**

- (Review of) Linear Transformations
- Differentiation
- Inverse Function Theorem
- Implicit Function Theorem
- Derivatives of Higher Order
- Differentiation of Integrals
- Integration
- Change of Variables
- Differential Forms
- Stokes' Theorem
- Closed Forms and Exact Forms

**Important Notice:** If you wish to request a disability accommodation, please contact DSS at 934-4205 or [dss@uab.edu](mailto:dss@uab.edu).

**Divisive Concepts:** All University faculty, instructors and teaching staff have the academic freedom to explore, discuss, and provide instruction on a wide range of topics in an academic setting. This class may present difficult, objectionable, or controversial topics for consideration, but will do so through an objective, scholarly lens designed to encourage critical thinking. Though students may be asked to share their personal views in the academic setting, no student will ever be required to assent or agree with any concept considered “divisive” under Alabama law, nor penalized for refusing to support or endorse such a concept. All students are strongly encouraged to think independently and analytically about all material presented in class and may express their views in a time, place, and manner, consistent with class organization and structure, and in accordance with the University’s commitment to free and open thought, inquiry, and expressions.

**Shared Values Statement:** Collaboration, integrity, respect, and excellence are core values of our institution and affirm what it means to be a UAB community member. A key foundation of UAB is diversity. At UAB, everybody counts every day. UAB is committed to fostering a respectful, accessible and open campus environment. We value every member of our campus and the richly different perspectives, characteristics and life experiences that contribute to UAB’s unique environment. UAB values and cultivates access, engagement and opportunity in our research, learning, clinical, and work environments. Our [School] aims to create an open and welcoming environment and to support the success of all UAB community members.