

# MTH 243: Calculus for Functions of Several Variables

## Section 0004 – Spring 2016

- Instructor:** Dr. Vasilije Perovic  
**Email:** perovic@uri.edu (*preferred way of communication*)  
**Email Policy:** The only address that should be used for communication is the one associated with your URI account.  
**Office:** Lippitt Hall, 200B (401) 874-4463  
**Office Hours:** **Tue: 3:30 – 4:30 pm; Wed: 11:00 – 12:00 pm & 3:00 – 4:00 pm; Thur: 3:30 – 4:30pm.**  
You may also see me at other times by arrangement.  
**Classroom:** Lippitt Hall 205; Tue/Thur: 2:00 – 3:15pm.  
**Class Website:** This course will use **SAKAI**. The SAKAI should be checked regularly for announcements, grades, updates, lecture notes, etc! You might also find the following website helpful  
[http://math.uri.edu/~perovic/Teaching/Spring2016/MTH\\_243\\_Spring2016.html](http://math.uri.edu/~perovic/Teaching/Spring2016/MTH_243_Spring2016.html)  
**Prerequisite:** MTH 142 – Intermediate Calculus (or Calculus II).  
**Textbook:** McCallum, Hughes-Hallett, et.al., *Multivariable Calculus*, 6th Edition, **with** WileyPLUS.

*Bring the textbook to each class, since we will refer to it frequently. It is essential to read the text regularly, and read material before we cover it in class!*

**Course Description:** MTH 243 is a third calculus course, with the focus on functions of two, three, and more variables and the extensions of the ideas of elementary calculus to higher dimensions. It covers coordinates for space vector geometry, partial derivatives, directional derivatives, extrema, Lagrange multipliers\*, and multiple integrals.

**Syllabus:** We will cover *most* of the sections from chapters 12 – 18 of our textbook.

**Course Goals and Learning Outcomes:** During the course you should be able to build proficiency in working with functions of more than one variable as well as vectors and operations on vectors. You will learn about partial and directional derivatives of multivariable functions, gradients, double and triple integrals, vector fields and line integrals.

**Calculators:** A graphing calculator is recommended and you may use it for homework and *some* quizzes and exams. Note that a majority of problems will not require using calculators and you should not rely on it too much.

**WileyPLUS Online Homework System:** We will be using WileyPLUS online homework system in this course. To sign up for the WileyPLUS system, you will need a WileyPLUS registration code. *If you buy a copy of our textbook at the URI Bookstore, a registration code for WileyPLUS will be included with the book at no additional cost.*

If you buy a copy of our textbook somewhere else and it does not include WileyPLUS code, you will need to purchase a WileyPLUS code separately from the WileyPLUS site. A code purchased separately gives you access to an electronic version of the textbook, so it is an option to consider. The WileyPLUS website contains instructions, tutorials, technical support etc.

Once you have a code, you can register for our section of MTH 243 by going to the following URL specific to our section:

<http://edugen.wileyplus.com/edugen/class/cls499825/>

**General Advice:** In higher level math classes, the *concepts* are as important as the *computations*. To master the concepts, you will have to read and reread the text carefully. Effort is expected outside of class to keep up with the material. A general rule of thumb is to work at least two to three hours on the course outside the classroom for each hour of class. You are encouraged to form study groups. Talking about mathematics, and critiquing each other's solutions is a very effective way to learn the subject.

**Attendance:** Regular, on-time attendance is expected! Attendance will be taken regularly. Should you miss class, your first step should be to get notes from a reliable fellow student.

**Grading, Exams, and Quizzes:** The course grade will be based on **quizzes**, **WileyPLUS online homework**, two **in-class exams**, and a **final exam**, weighted as follows:

<b>Quizzes</b>	20%	
<b>WileyPlus Homework</b>	10%	
<b>Exams (2)</b>	40%	(20% each)
<b>Final Exam</b>	30%	<b>(Thursday, May 12, 3pm - 6pm — IT MIGHT CHANGE)</b>

**Quizzes** will be either in-class, typically on Thursdays, or will be take-home. The lowest quiz score will be dropped, and so **no make-up quizzes** will be given for any reason. In-class quizzes will be announced at least two class periods in advance.

A *tentative* schedule for the **in-class exams** is:

**Exam 1:** March 1 (Tuesday)

**Exam 2:** *Mid April – the exact time will be announced in class*

Makeup exams will be permitted *only* in those cases when a student documents a genuine medical or personal emergency.

Letter grades for the course will be determined by considering your overall weighted percentage according to the following scale:

<b>A:</b> 93.00% and above		<b>A-:</b> 90.00% – 92.99%
<b>B+:</b> 87.00% - 89.99%	<b>B:</b> 83.00% – 86.99%	<b>B-:</b> 80.00% – 82.99%
<b>C+:</b> 77.00% – 79.99%	<b>C:</b> 73.00% – 76.99%	<b>C-:</b> 70.00% – 72.99%
<b>D+:</b> 67.00% – 69.99%	<b>D:</b> 60.00% – 66.99%	
<b>F:</b> 59.99% and below		

**Suggested Problems:** Regularly assigned, but not collected. Do problems promptly so that you establish a baseline for your understanding of the material. By default, *all solutions must include reasoning expressed in complete sentences*. Note that there will be some overlap between these problems and the ones assigned through WileyPLUS. Suggested problems, together with the material presented during lectures, will be the main sources for problems on quizzes and exams.

**Video Lectures/Notes:** In case our class is canceled due to inclement weather or other various reasons, I will post a link on SAKAI to a video lecture that you will be responsible for watching. Occasionally, I might post videos of solutions to some homework problems, together with explanations, that would be useful to everyone in class.

**Accommodations:** Any student with a documented disability (e.g., physical, learning, vision, hearing, etc.) who needs to arrange reasonable accommodations should contact me as soon as possible. At the beginning of the semester students should contact Disability Services for Students Office at 330 Memorial Union, (401) 874-2098, <http://www.uri.edu/disability/dss/>.

**Academic Integrity:** You are responsible for making yourself aware of and understanding the policies and procedures in the University Manual that pertain to Academic Honesty. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. Further information can be found in the UNIVERSITY MANUAL sections on Plagiarism and Cheating at

<http://web.uri.edu/manual/chapter-8/chapter-8-2/>

If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Conduct. You should consult with me if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test. Violations of the academic honesty policies can result in failing grades for the assignment and the course. Additional penalties can be imposed by the University.