

**MAST 219**  
Multivariable Calculus II  
*Winter 2015*

- Instructor:** Dr. Alina Stancu, Office: LB 921-27 (SGW), Phone: 848-2424, Ext. 5345  
Email: [alina.stancu@concordia.ca](mailto:alina.stancu@concordia.ca)
- Office hours:** Thursdays: 4:00-5:30 pm.
- Prerequisites:** MATH 264/MAST 218.
- Text:** *Multivariable Calculus*, 7th Edition by J. Stewart, (Brooks/Cole, Belmont, CA, USA). ISBN: 978-1-111-56401-8.
- Assignments:** Assignments are *very important* as they indicate the level of difficulty of the problems that students are expected to solve and understand. Therefore, every effort should be made to do and understand them *independently*. The assignments will be corrected and graded. The best of the ten assignments are worth 10% of the final grade. Solutions to the assignments will be posted on *Moodle* after the assignments will be collected.
- Web Resources:** Many excellent animated illustrations to the text of the book are collected at the site [www.stewartcalculus.com](http://www.stewartcalculus.com), see TEC (Tools for Enriching Calculus) for the edition 7E. Regular use of this resource is much recommended.
- Use of Computer Algebra System:** It is optional but much recommended to install and use Maple. The computer tools can be used to verify and illustrate any analytical results you get while doing your assignment problems.
- Calculators:** Electronic communication devices (including cell phones) are not allowed in examination rooms. Only "Faculty Approved Calculators" (**SHARP EL-531** or **CASIO FX-300MS**) are allowed in examination rooms during the midterm test and the final exam.
- Tests:** One-hour midterm test covering the first six weeks will be given in week 7 in class. **There is no make up for a missed test.**
- Final Grade:** The higher of the following:
- 90% final exam, 10% assignments (see below), or
  - 30% midterm, 10% assignments (see below), and 60% final.

**Plagiarism:** Cases of plagiarism (including the assignments, the midterm test and the final exam) will be treated according to the University policy.

Week	Sections	Topics	Assignments
1	15.1, 15.2	Double and iterated integrals; Fubini's Theorem	p.1005: 2, 12, 14 p.1011: 6, 8, 20, 30, 36
2	15.3, 15.4	Double integrals over general regions; Double integrals in polar coordinates	p.1019: 10, 12, 20, 30, 46, 54 p.1026: 6, 10, 12
3	15.4, 15.5	Double integrals in polar coordinates (part 2); Applications of double integrals	p.1026: 18, 24, 32 p.1036: 6, 8, 12, 14, 18, 28
4	15.6, 15.7	Surface area Triple Integrals	p.1040: 2, 4, 6, 10 p.1049: 4, 6, 14, 22
5	15.8, 15.9	Triple integrals in cylindrical and spherical coordinates	p.1055: 6, 8, 16, 18, 22 p.1061: 8, 18, 24, 34, 40
6	15.10	Change of variables in multiple integrals Review CHAPTER 15	p.1071: 6, 8, 12, 16, 24
7	16.1	Mid-term exam (CHAPTER 15); Vector fields.	p.1085: 6, 14, 16, 18, 24, 32
		MIDTERM BREAK	
8	16.2, 16.3	Line integrals; Fundamental theorem for line integrals	p. 1096: 8, 12, 20, 40 p.1106: 2, 6, 16, 24
9	16.4, 16.5	Green's Theorem; Curl and Divergence	p.1113: 2, 10, 18, 19 p.1121: 4, 10, 16, 22, 30
10	16.6	Parametric surfaces	p.1132: 6, 16, 20, 22, 34, 42, 46
11	16.7	Surface integrals	p.1144: 4, 8, 10, 12, 18, 22, 24, 26
12	16.8, 16.9	Stokes' Theorem; Divergence Theorem	p.1151: 4, 10, 14, 16 p.1157: 4, 8, 10, 12, 18, 24
13		Review	No assignment.

- The assignment listed for week 1 contains material taught in week 1 and must be submitted by the end of the class of week 2; the assignment listed for week 2 contains material taught in week 2 and must be submitted by the end of the class of week 3; and so on. **Late assignments will not be accepted.**