

MATH 265 (MAST 219)
Advanced Calculus II
Fall 2015

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- 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. These grades together are worth a maximum of 10% of the final grade. Solutions to assignments will be posted on *Moodle* after they have been graded.
- Web Resources:** Many excellent animated illustrations to the text of the book are collected at the site 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 calculators approved by the Department (with a sticker attached as proof of approval) are permitted in the class test and final examination. The preferred calculators are the **SHARP EL-531** and the **CASIO FX-300MS**, available at the Concordia Bookstore.
- Tests:** One-hour midterm test covering the first six weeks will be given in week 7 (or later).
- Final Grade:** The higher of the following:
- 90% final exam, 10% assignments, or
 - 30% midterm, 10% assignments, 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: 3, 12, 14 p.1011: 10, 22, 30, 36
2	15.3	Double integrals over general regions	p.1019: 8, 12, 18, 30, 46, 50
3	15.4, 15.5	Double integrals in polar coordinates; Applications of double integrals	p.1026: 6, 8, 18, 26, 31, 36 p.1036: 10
4	15.5, 15.6	Applications of double integrals (continuation); Surface area	p.1036: 12, 14, 18, 30 p.1040: 4, 6, 10
5	15.7, 15.8, 15.9	Triple integrals Triple integrals in cylindrical and spherical coordinates	p.1049: 2, 6, 14, 20 p.1055: 7, 16, 20, 24 p.1061: 8, 22, 35, 39
6	15.10	Change of variables in multiple integrals	no assignment
7	16.1, 16.2	Mid-term exam, Vector fields. Line integrals	p.1071: 8, 13, 24, 26 p.1085: 6, 24, 31 p. 1096: 8, 14, 22, 41
8	16.3, 16.4	Fundamental theorem for line integrals; Green's Theorem	p.1106: 2, 8, 16, 24 p.1113: 5, 10, 18, 19, 23
9	16.5, 16.6	Curl and Divergence; Parametric surfaces	p.1121: 6, 10, 18, 33 p.1132: 6, 17, 20, 26, 30
10	16.6, 16.7	Parametric surfaces (continuation); Surface integrals	p.1132: 2, 4, 14, 24, 42, 48 p.1144: 4, 6, 10, 18
11	16.7, 16.8	Surface integrals (continuation); Stokes' Theorem	p.1144: 21, 22, 24, 26 p.1151: 4, 8, 14, 16
12	16.9	Divergence Theorem	p.1157: 4, 8, 10, 12, 18, 24
13		Review	

- Assignments for each week must be handed in at the beginning of the next week first class. **Late assignments will not be accepted.**
- **There could be changes to the above selection of the assignment problems.** If any changes in the assignment problems, this will be announced in class and posted on *Moodle*.