

## Syllabus for Math 291, Honors Vector Calculus

This is the syllabus for the first 6 weeks of the course, up through the first exam. The syllabus for the balance of the course will be posted in the fifth week.

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**WEEK 1: Jan. 20,21:** Lectures on the material in Chapter 12 of Rogawaskis text, sections 1-3, and Chapter 1, Section 1 in the on-line text.

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**WEEK 2: Jan. 25,27,28:** Lectures on the material in Chapter 12 of Rogawaskis, sections 4-5 and Chapter 1, rest of Section 1, and Section 2 in the on-line text.

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**WEEK 3: Feb. 1,3,4:** Lectures on the material in Chapter 13 of Rogawaskis text and Chapter 2 in the on-line text.

- Monday, Feb 1: First Workshop Session, first homework due. The first set of homework exercises is due at this time; it consists of the 20 exercises at the end of Chapter 1 of the on-line text. Also, the first challenge problems, to be solved in the second workshop, will be handed out here.

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**WEEK 4: Feb. 8,10,11:** Lectures on the material in Chapter 14, sections 1-2 of Rogawaskis text and Chapter 3 in the on-line text. (Adjusted to take into account of the snow-day on the 10th.)

- Monday, Feb 8: Second homework due. The homework assignment is to solve the exercises at the end of Chapter 2 in the online text.

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**WEEK 5: Feb. 15,17,18:** Lectures on the Sections 3-6 of Chapter 14 of Rogawaskis text and sections 1 and 2 of Chapter 4 in the on-line text.

- Monday, Feb 15: Second Workshop Session and third homework due. The write-ups first challenge problems will be due at this time and the second set of challenge problems will be handed out here.

- Wednesday, Feb 17: The exercises from the end of Chapter 3 in the online text are due in class.

- Thursday, Feb 18: First Maple project due.

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**WEEK 6: Feb. 22,24:** Lectures section 7 of Chapter 14 in Rogawaskis text, and the rest of Chapter 4 in the online text and review of material for the exam.

- Class was cancelled on Feb 25 as an official snow day, starting 6th period.

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**WEEK 7: Mar 1, 3,4:** Lectures on the Section 8 of Chapter 14 in Rogawaskis text (Lagrange multipliers), and the rest of Chapter 4 in the online text.

- Monday, March 1: The first Exam. Originally scheduled for Feb. 25, a snow day. Coverage: the material presented in weeks 1 through 5, but not in week 6.

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**WEEK 8: Mar 8, 10, 11:** Lectures on the Section 8 of Chapter 14 in Rogawaskis text (Lagrange multipliers), and Sections 1 and 2 of Chapter 15 in Rogawaskis text (Integration in 2 variables)

- Monday, Mar 8: Third Workshop Session. Second set of challenge problems due. Also, some in-class challenge problems, and a third set of take home challenge problems to be introduced.
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**SPRING BREAK : Mar 15-19:**

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**WEEK 9: Mar 22, 24, 25:** Lectures on Sections 3 through 5 of Chapter 15 in Rogawaskis text (Integration in several variables)

- Thursday, Mar 25: Introduction to the second Maple project. Due Thursday, Apr. 1.
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**WEEK 10: Mar 29, 31, Apr 1:** Lectures on Sections 1 through 3 of Chapter 16 in Rogawaskis text (Vector fields and line integrals)

- Monday, Mar 29: Fourth Workshop Session. Third set of challenge problems due. Also, some in-class challenge problems, and a fourth set of take home challenge problems to be introduced.
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**WEEK 11: Apr 5, 7, 8:** Lectures on Sections 4 and 5 of Chapter 16 in Rogawaskis text (Parameterized surfaces and surface integrals)

- Thursday, Apr. 8: Introduction to the third Maple project. Due Thursday, Apr. 19.
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**WEEK 12: Apr 12, 14, 15:** Review up through Chapter 16 in Rogawaskis text.

- Monday, 12: Fifth Workshop Session. Fourth set of challenge problems due. Also, some in-class challenge problems, and a fifth set of take home challenge problems to be introduced.
  - Thursday, April 15: The second exam. This will focus on material since the first exam, and up through Chapter 16 in Rogawaskis text.
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**WEEK 13: Apr 19, 20, 21:** Sections 1 and 2 of Chapter 17 in Rogawaskis text.

- Thursday, Apr. 8: Introduction to the fourth Maple project. Due Thursday, Apr. 26.
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**WEEK 14: Apr 26, 28, 29:** Section 3 of Chapter 17 in Rogawaskis text and review.

- Monday, 12: Sixth Workshop Session. Fifth set of challenge problems due. Also, some in-class challenge problems, and a sixth set of take home challenge problems to be introduced.
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**FINAL EXAM: May 7, 4:00 to 7:00 p.m.**