

# MAT 1322 A – Calculus II

## Winter 2017

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**Professor:** Paul-Eugène Parent

**Course content:** Improper integrals. Applications of the integral. Separable differential equations. Euler's method for differential equations. Sequences, series. Taylor's formula and series. Functions of two and three variables. Partial derivatives, the chain rule, directional derivatives, tangent planes, and normal lines.

**Prerequisite:** MAT1320. The courses MAT1322, MAT1303, MAT1332, MAT1325 cannot be combined for credits.

**Lectures:** Monday 10:00-11:30, MNT 202. Wednesday 8:30-10:00, MNT 202.

**DGDs:** Friday 8:30 – 10:00, LPR 285; 10:00 – 11:30, TBT 070; 11:30 – 13:00 MNT 207; 13:00 – 14:30, MRT 252; 14:30-16:00 SMD 227.

**Office hours:** Wednesday 12:00 to 14:00.

**Main reference:** James Stewart, « Calculus Early Transcendentals », 8th edition, Cengage Learning, ISBN 978-1-285-74155-0.

**Evaluation:** There are two 80 minutes' midterm tests, written during the lecture period:

- Test 1: Wednesday, February 8th, Covers sections 6.1 - 9.4
- Test 2: Wednesday, March 15th, Covers sections 11.1 - 11.10

There will also be a final exam written in April during the final exams period. If you have less than 40% on the final, then you get an automatic F as your final mark. Otherwise your final mark will be computed as:

- Final exam: 50%      Midterms: 20% each

- Maple TA homework 10%

- If a midterm is missed for a valid reason, its percentage weight will be transferred to the final exam provided you notify your professor by e-mail **before** the test is written and submit a proper justification (e.g. certificate from UO Health Services) when you return to class.

- Only **Faculty-approved calculators** are allowed on tests and during the final exam. These are basic scientific calculators: non-programmable, non-graphing, no differentiation or integration capability. The use of a calculator with any of these banned capabilities is considered academic fraud. **Don't forget to set your calculator to radians!**
  - Students may not enter after or leave before 20 minutes have passed from the beginning of a test.
  - Students must present their student cards if asked.
  - Any attempt at copying is treated as a case of academic fraud, as is the facilitation of copying by others. Students must take reasonable care to prevent others from copying their work.
  - Any questions concerning marks or the marking must be submitted to the professor within two weeks after the test.
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## Maple TA

Electronic Assignments will be completed using a web-based software called Maple TA.

- Your username is your student number. Make sure to add your [\\*\\*\\*@uOttawa.ca](mailto:***@uOttawa.ca) e-mail address to your profile. Only then will your results be transferred to Blackboard.
- To get your password or to answer any other questions you might have about Maple TA, please go to

[http://aix1.uottawa.ca/~bdionne/teaching/MapleTA\\_en.html](http://aix1.uottawa.ca/~bdionne/teaching/MapleTA_en.html)

and follow the instructions.

- Log on to the Maple TA website at  
<http://place32.placementtester.com:8080/uottawa/login/login.do>
  - The first assignment is "How does Maple TA work?". Please log in and complete this assignment to familiarize yourself with the system.
  - Please note that server access will be slower during peak times (such as a few hours before the deadline) -- **plan and avoid frustration.**
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## Drop-in Center

In addition to your weekly DGD, the Lectures, and the Professor's Office Hours, you can get help at the Mathematics Help Centre:

[http://www.mathstat.uottawa.ca/ugrad/help\\_center\\_en.html](http://www.mathstat.uottawa.ca/ugrad/help_center_en.html).

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### Important dates

- January 9<sup>th</sup>: first lecture.
  - January 24<sup>th</sup>: last day to change student status.
  - January 31<sup>st</sup>: Last day to withdraw from a course and receive financial credit, less administrative fees.
  - February 19<sup>th</sup> to 25<sup>th</sup>: reading week.
  - March 24<sup>th</sup>: **Last day to withdraw from a course.**
  - April 7<sup>th</sup>: end of lectures.
  - April 14<sup>th</sup> to 17<sup>th</sup>: Easter break.
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### Course Outline

Week	Sections in the book	Suggested exercises
1	7.8, 6.1, 6.2	p. 534 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 49, 51, 53, 57, 59. p. 434 # 1, 3, 7, 9, 11, 13, 15, 17, 19, 21, 23. p. 446 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 47, 49, 51, 55.
2	6.2, 6.3, 6.4, 6.5	p. 453 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 45, 47. p. 458 # 5, 9, 11, 13, 15, 17, 19, 21, 23. p. 463 # 1, 3, 5, 7, 15, 17, 19.
3	8.1, 8.3, 9.1, 9.2	p. 548 # 7, 9, 11, 13, 15, 17. p. 565 # 1, 3, 5, 7, 9, 11, 13, 17, 25, 27, 29, 31, 33. p. 590 # 1, 3, 5, 9, 15.
4	9.2, 9.3, 9.4	p. 597 # 1, 3, 5, 7, 19, 21, 23. p. 605 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 37, 39, 41, 45. p. 617 # 1, 3, 5, 7, 9.
5	11.1, 11.2	p. 704 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 55.

		p. 715 # 1, 3, 5, 7, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 57, 59, 61, 63, 67, 69.
<b>6</b>	11.2, 11.3, 11.4	p. 725 # 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 29. p. 731 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 37.
<b>7</b>	11.5, 11.6, 11.7	p. 736 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 23, 25, 27, 29. p. 742 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 35, 37. p. 746 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37.
<b>8</b>	11.8, 11.9, 11.10	p. 751 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31. p. 757 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 25, 27, 29, 31, 33, 37, 39. p. 771 # 1, 3, 5, 7, 9, 15, 17, 19, 25, 27, 29, 31, 33, 35, 37, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69.
<b>9</b>	12.6, 14.1	p. 839 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 41.
<b>10</b>	14.1, 14.2, 14.3	p. 899 # 1, 5, 7, 9, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 32, 39, 41, 43, 45, 47, 49, 51, 53, 59, 61, 63, 65, 67. p. 910 # 5, 7, 9, 11, 13, 15, 29, 31, 33, 35, 37. p. 923 # 3, 5, 7, 9, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 47, 49, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 83, 87, 93.
<b>11</b>	14.4, 14.5	p. 934 # 1, 3, 5, 11, 13, 15, 17, 19, 21, 31. p. 943 # 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 39, 41, 45, 47, 53.

<b>12</b>	14.6	p. 956 # 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 29, 31, 33, 41, 67.
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