

Mathematics 3700H – Metric geometry and topology

TRENT UNIVERSITY, Fall 2014

Readings & Schedule

The schedule below is firm, barring unforeseen events and necessities, for due dates and such, but it is a polite fiction so far as progress through the content of the course is concerned – no lesson plan survives contact with students! – and our actual pace will be adjusted as necessary. All references are to the text:

Metric Spaces: Iteration and Application, by Victor Bryant.

Cambridge University Press, 1985, ISBN 0-521-31897-1.

We will cover Chapters 1–4 of the text. (For those interested in analysis, the remaining chapter, Chapter 5, provides an alternative take on some of the material in MATH 3790H.) Be warned that the text is concise and quite dense, so you should read it closely. Please note also that the text takes an uncommon approach to the subject, centred on sequences, especially those generated by some iterative process. From time to time the instructor will indicate how the more common variants of the definitions and methods are, and these may be developed here and there on the assignments.

Week 0. (*4–5 September, 2014.*) Classes begin on Thursday, 4 September. Please read Sections 1.1 and 1.2 of the text.

Week 1. (*8–12 September, 2014.*) Please read Sections 1.3 and 2.1 of the text.

- Assignment #1 due on Friday, 12 September, 2014.

Week 2. (*15–19 September, 2014.*) Please read Section 2.2 of the text.

Week 3. (*22–26 September, 2014.*) Please read Section 2.3 of the text.

- Assignment #2 due on Friday, 26 September, 2014.

Week 4. (*29 September – 3 October, 2014.*) Please read Sections 3.1 and 3.2 of the text.

Week 5. (*6–10 October, 2014.*) Please read Sections 3.3 and 3.4 of the text.

- Assignment #3 due on Friday, 10 October, 2014.

Week 6. (*13–17 October, 2014.*) Please read Section 3.5 of the text.

Week R. *Reading Week!* (*20–24 October, 2014.*) Enjoy reading something else – or work on your project!

Week 7. (*27–31 October, 2014.*) Please read Section 4.1 of the text.

- Assignment #4 due on Friday, 31 October, 2014.

Week 8. (*3–7 November, 2014.*) Please read Sections 4.2 and 4.3 of the text.

- The last date to drop Fall term half-courses without academic penalty is Tuesday, 4 November, 2014.

Week 9. (*10–14 November, 2014.*) Please read Section 4.4 of the text.

- Assignment #5 due on Friday, 14 November, 2014.

Week 10. (*17–21 November, 2014.*) Please read Section 4.5 of the text.

- The take-home final examination will be distributed on Tuesday, 18 November, 2014.

Week 11. (*24–28 November, 2014.*) Please read Sections 4.6 and 4. 7 of the text.

- Assignment #6 due on Friday, 28 November, 2014.

Week 12. (*1–3 December, 2014.*) Clean-up and catch-up ...

- The last day of classes is on Wednesday, 3 December, 2014.

Mid-term test and Fall half-course final examination period. (*5–20 December, 2014.*)

- The take-home final examination will be due on Wednesday, 17 December, 2014.

Last modified 2014.08.18.