

TENTATIVE OUTLINE SYLLABUS FOR M358K USING DE VEAUX ET AL, STATS: DATA AND MODELS, 3rd edition (ISBN13:978-0-321-69255-9 for student edition)

Throughout: Emphasize “Assumptions and Conditions,” “What Can Go Wrong,” “Reality Check,” and “Cautions” sections.

Note:

1. Note: Since the book is so well-written, best use of class time (especially if you don’t have a grader) may be giving reading assignments (with associated assignment of exercises) and using class time mostly for discussion rather than lecturing.
2. Some of the omitted sections might be appropriate to refer students to if they encounter project data that is not as nice as they hoped or wish to do a more challenging project – or may be included if by some miracle you find you have extra time.
3. Suggested days for each group of chapters are based on syllabi that I found on the web for courses using the text at three different universities (Columbia, University of Alberta, and Washington University St. Louis).

Chapters	Days (MWF)	Days (TuTh)	Comments
1-6 (Exploring and Understanding Data)	5 -6	4	See comments on Chapters 14 – 17 below. Starred sections: <i>Cover</i> Time Plots and Smoothing Time Plots (pp. 89 – 90)
7-10 (Exploring Relationships between Variables)	4	2-3	If you are having students design and carry out data collection for projects, you may want to do 11 – 13 after 7, 8, or 9, then come back to the rest of Part II. (Chapters 7 and 8 are referred to on p. 285 of Chapter 12 in explaining parameters vs statistics; Chapters 7 and 9 are referred to on p. 320 in Chapter 13 in discussing lurking and confounding variables.) Starred sections: <i>Omit</i> Kendall’s Trend and Spearman’s Rho (pp. 162 – 163, Ch. 7)
11- 13 (Gathering Data)	3	2	See comments for 7 - 10 above
14 – 17 (Randomness and Probability)	3	2	<i>Remember</i> that M362K (Probability) is a prerequisite, so most of these chapters should be review! Thus proofs of properties referred to in this section

			<p>should <i>not</i> be given – they should have been in M362K. Emphasize the “What can go wrong” sections. You may want to give some homework on probability the first week of class to emphasize that the prerequisite is for real.</p> <p><i>Things that may be new:</i> Personal Probability (p. 340), using parameter terminology (p. 384), notational caution for sums of identically distributed random variables (pp. 389 - 390), Random Variables on the Computer (pp. 398 – 399), 10% condition for “non-independent Bernoulli Trials” (p. 407), binomial random variable on the computer (pp. 419 – 420)</p> <p><i>Cover</i> all of chapters 14 – 16</p> <p>In chapter 17, <i>omit</i> Geometric Model, Poisson Model, and exponential model – students should have seen these in M362K, and they are not used in the remainder of this course.</p>
18 – 22 (From the Data at Hand to the World at Large: sampling distributions, inference for proportions, Type I and II errors, power)	6-8	4-5	Note that this book covers inference for proportions before inference for means. This order is increasingly being used in textbooks. It seems to go more smoothly, as well as more efficiently (by not spending much time on the “large sample z-test for means”).
23 – 26 (Learning about the World: inference for means and counts)	6	4	Be sure to cover pp. 594 – 595. <i>Omit</i> the Sign Test (Ch 23, p. 566), Tukey’s Quick Test (Ch 24, p. 597), A Rank Sum Test (Ch 24, p. 597 and Ch. 25, pp. 621 – 622). If time is short, omit Blocking (Ch 25, p. 621)
27 Inferences for (Simple Linear) Regression	3	2	<i>Omit</i> Logistic Regression (p. 693 – 696) Supplement with F-test for simple regression.

Total days: MWF 30 – 33, TuTh 20 – 22, which should leave enough time (at least 9 MWF classes or 6 TuTh classes) for supplements, catch-up, review, and exams.

Note:

- Fall 2012 dates: W Aug 29 - F Dec 7, with holidays M Sept 3, ThF Nov 22-23, yielding 42 MWF classes, 28 TuTh classes
- Sp 2013 dates: M Jan 14 – F May 3, with holidays M Jan 21, M – F Mar 11 – 15, yielding 44 MWF classes, 30 TuTh classes.