Models for Binomial Outcomes
Student Classroom Presentations

As stated in the syllabus, "I may ask you to present a small part of the material (or at least try your best to do so)." I've decided to do that with some of the material from Long and Freese on binary outcomes that has not been covered in my Stats II class.

Each student and a partner (at least those taking the course for credit) should sign up for one topic; I will take anything that is left over. You will give a presentation in class on your topic. It can be as short or as long as it takes! But I'm guessing perhaps 10-20 minutes with questions and discussion. Handouts, writing on the board, PowerPoint slides, in-class Stata demonstrations or whatever are all welcome.

Long and Freese often assume that you are already familiar with the material; hence it will be necessary to consult other sources for you to fully explain things. Besides Long and Freese (ch. 3 & 4, and, possibly, the Appendices) you will want to consult Long (1997) and/or Long and Chen (2001) and/or possibly other sources. You don't need to go through all the math that they do but the substantive rational should be clear. The amount of reading involved isn't that great – probably 10 pages or less in most cases – but it will probably take some effort to fully understand it. Replicating their examples and doing additional ones of your own will probably help.

When talking about specific commands, don't just show the syntax; explain the rationale behind it. You can use real or hypothetical data, including the same data that Long uses.

You should be ready to present on approximately Sept. 10 or 12. But, I would suggest getting most it ready in the next week in case you have questions or problems.

Topic*	Presenter
LF 4.1.1; L 3.2. Explain the "latent variable model" as an alternative rationale for logistic regression. What is meant by "thresholds?" Why is the variance of y* arbitrary?	Tueller
LF 4.4; L 4.2. Explain how residuals and outliers can be used to assess the fit of the model and problematic cases. Explain the Pearson Residual, the Pearson Standardized Residual, Cook's Statistic, and any other residual statistics you think are important. Explain what is meant by high-leverage points and influential points. Discuss graphical or other means that can be used for analyzing residuals. My Soc 63993 handout on outliers may give you some additional or alternative ideas (e.g. I like the `extremes` command.)	Perera, Yang
LF 4.5, 3.5; L 4.3. Discuss the `fitstat` command and the measures it produces. You don't have to go over every one – many of these we will have already done in class – and I will cover the Pseudo R^2 measures myself – but be sure to explain the AIC and BIC measures. Show how and why `fitstat` can be used to compare models, even when the models are not nested.	Armet, ?
LF 4.6.1 – 4.6.5; L 3.7.1-3.7.2. Show how predicted values can aid in interpretation. Discuss how the `predict`, `prvalue`, `prtab`, and `prgen` commands can be used.	Camarata, Skiles
LF 4.6.6; L 3.7.4-3.7.5. Discuss how an examination of changes in predicted probabilities can aid interpretation. Discuss the `prchange`, `mfx` and `prvalue` commands. Explain what is meant by marginal change and discrete change.	Wang, ?
LF 4.7; L 3.7.3, 3.8 Discuss interpretation using odds ratios. Discuss the use of the `listcoef` command and standardized variables.	Gregg, Tavares

* LF stands for Long and Freese 2006, L stands for Long 1997. I've indicated which sections of these books appear to be most relevant for the topic but others may be useful too. For specific commands (e.g. `fitstat`, `prvalue`, `listcoef`) you'll also want to read the substantive and technical discussions of the command in LF ch. 3 and, possibly, Appendix A.