Below is a list of general topics to help guide your studying for Exam #1. While it is impossible to make an exhaustive list that includes every possible detail about every possible question, I suspect that focusing your efforts on these general topics will greatly serve to your benefit.

LINEAR REGRESSION

1. Know how to state the meaning of regression coefficients in plain language.
2. Know when regression coefficients have a real-world interpretation.
3. Know which assumptions are required when using linear regression to conduct inference.
4. Know how to form prediction intervals.
5. Know the assumptions required when using linear regression to form prediction intervals.
6. Know how to assess the degree to which assumption violations compromise a model's ability to answer the question it is designed to address (remember that minor violations are not always a reason to consider the model completely useless).
7. Be able to use diagnostic plots to evaluate evidence of assumption violations.
8. Know the different purposes and consequences of adjustment in linear regression models.

DISCRETE-OUTCOME REGRESSION

1. Know how to state the meaning of regression coefficients in plain language – particularly after they have undergone transformations, as they often do when doing regression with discrete outcomes.
2. Know the circumstances under which you can estimate subgroup-specific risk/odds of an outcome.
3. Know the circumstances under which you can estimate risk ratios.
4. Know the circumstances under which the odds ratio serves an approximation to the risk ratio.
5. Know the different purposes and consequences of adjustment in various discrete outcome regression models.

OTHER GENERAL IDEAS (APPLICABLE TO LINEAR AND DISCRETE-OUTCOME REGRESSION)

1. Know purposes for and consequences of log-transforming a continuous, positive-valued outcome.
2. Know purposes for and consequences of log-transforming a continuous, positive-valued predictor.
3. Know the relationships between certain very simple models and back-of-the-envelope calculations.
4. Know how to handle predictors that are (1) binary, (2) continuous, and (3) categorical in nature.
5. Know purposes for and consequences of centering a continuous outcome.
6. Know how to interpret coefficients from models that include two-way interaction terms.
7. Know how to interpret coefficients from models that include three-way interaction terms.
8. Know how to coerce a model into giving you subgroup-specific effects or associations.
9. Be able to translate hypothesis tests expressed in terms of model parameters in plain language.
10. Know the various purposes of joint/omnibus/simultaneous testing.
11. Be able to use model output to compare subgroups differing in a predictor by more than one unit.
12. Be able to express the three-five sentence write-up of a model's results in the "usual way" for this class.

STATA COMMANDS OF INTEREST	STATA-SPECIFIC NOTATION AND OPTIONS
regress	i.
logit	c.
logistic	##
testparm	#
test	robust
lincom	nolog
glm	eform
mlogit	rrr
ologit	or
poisson	irr