Semester course: STAT 7410 -- 3 CREDIT HOURS

1. Transcript Abbrevation: (maximum 18 characters)

Theory Linear MdlS

2. Long course title

Theory of Linear Models

3. Course description: (maximum of 250 characters)

4. Prerequisites / Co-requisites (use quarter and semester codes):

Stat 6860 AND (Stat 6802 (Stat 622)) AND (Stat 6910 (Stat 641) OR Stat 6950 (Stat 645)), OR permission of instructor

5. Exclusions (use quarter and semester codes):

Stat 742

6. A list of topics that make up the course: (One per line, max of 15 topics -- if you course description is a list of topics, I can just use that list)

1  The general linear model (full rank and non-full rank)
2  Least squares estimation and estimability
3  Generalized least squares
4  Gauss-Markov theorem
5  Distribution theory and likelihood ratio test
6  Expected mean squares, power and sample size
7  Simultaneous confidence intervals
8  Effect of incorrect error assumptions
9  Random effects models and mixed models
10  Nested models and split-plots
11  Generalized linear models
12  Analysis of covariance
13  Linear models for block designs
7. Does your class have a component that is not just a lecture (YES/NO):

NO

8. If your course is not a straight conversion and adds or removes material, write a brief rationale for the change (one sentence – max 250 characters).

This conversion includes additional material on the generalized linear model and extra material on the mixed model.

Title updated to better reflect level of course.