Advanced Econometrics I
January-February Outline

Date	Lecture

Jan 19 (Wed)   "13 ways of looking at a random variable"
Readings: MT. 1-2; BD. 1 and Appendix
Topics: R.v.'s dfs, qfs, densities, moments, mgfs, cumulants, cfs,
tail behavior, conditional probability, independence, correlation.

Jan 24 (Mon)   "One too many inequalities"
Readings: BD. Appendix; W. 2.8-9; Pollard Appendix B
Topics: Inequalities by Markov, Chebyshev, Cauchy, Jensen,
Hoeffding and Bernstein.

Jan 26 (Wed)   "Convergence á la mode and the story of O"
Readings: MT. 3-4; DM.4; S.1.1-7
Topics: $\rightarrow$, $\rightarrow a.s.$, $\rightarrow q^{\text{th}}$, $\rightsquigarrow$, O_p, o_p Slutsky, and the δ-method.

Jan 31 (Mon)   "LLN's and CLT's"
Readings: S.1.8-9, W.9
Topics: LLN's and CLT's

Feb 2 (Wed)   "Generating random numbers and introduction to density estimation"
Readings: Handout on Splus; BD 9.6
Topics: Random numbers, histograms, kernel density estimation.

Feb 7 (Mon)   "By Shape of Likelihood The News Was Told"
Readings: DM. 8; BD. 3.3, BD. 4; MT. 5
Topics: Likelihood, sufficiency and information.

Feb 9 (Wed)   "Happy Families Are All the Same"
Readings: BD. 2.3; L. 1.4
Topics: Exponential family models and other examples

Feb 14 (Mon)   "MLE Asymptotics Under Standard Conditions"

Feb 16 (Wed)   "MLE Asymptotics Under Nonstandard Conditions"
Readings: MT. 6; L. 6; Huber (1967)
Topics: Consistency, Efficiency

Key to references (see Bibliography for details)

MT	-	McCabe and Tremayne
DM	-	Davidson and MacKinnon
BD	-	Bickel and Doksum
S	-	Serfling
P	-	Pollard
W	-	Whittle