

ADVANCED MICRO THEORY

Spring 09

V31 0365 Sec. 1

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The course will focus on discrete-time dynamic programming and its applications. The textbook is:

Stokey, Nancy L., and Robert E. Lucas, Jr., with Edward C. Prescott. *Recursive Methods in Economic Dynamics*. Cambridge, MA: Harvard University Press, 1989.

The emphasis will be on analysis, and not numerical methods. The central mathematical result is the Contraction Mapping Theorem theorem. Applications will include:

The theory of search	McCall <i>J. Business</i> '65
Investment theory	Lucas & Prescott <i>Econometrica</i> '71
Customer bases	Phelps & Winter '70
Asset pricing	Lucas <i>Econometrica</i> '78, Harrison&Kreps <i>QJE</i> '78
Growth theory	Romer <i>JPE</i> '86

The required reading for the applied topics will be confined to the textbook and to notes that I shall provide. The articles above are meant to provide students with an idea of what the applications are; they will not be required reading. We may add other applications depending on the directions taken in class discussion.