Course Outline for EC5101, Microeconomic Theory

The principle objective of this course is to introduce students to some of the canonical results in microeconomic theory, so as to equip them with basic knowledge for further research. It also gives them an introduction to how economic problems could be formulated and analyzed in mathematical models. The course has two parts; the lecturers for parts I and II are John Quah and Chew Soo Hong respectively.

**Assessment:** There will be a mid term and a final exam, weighted at 40-60.

**Part I syllabus.**

*Consumer Theory:* preferences and the existence of utility functions; demand functions and their properties; indirect utility; expenditure functions and Hicksian demand; Slutsky decomposition and law of demand

*Producer Theory:* production sets and production functions; supply correspondences and the law of supply; profit functions; complementary inputs and monotone comparative statics.

*General Equilibrium Theory:* existence of equilibrium, Sonneschein-Debreu-Mantel theorem; uniqueness and stability of equilibria; demand aggregation and the representative consumer; the completeness or otherwise of markets; financial economies and constrained Pareto optimality.

(Readings attached.)

**Part II syllabus**

*Choice under risk, uncertainty, and time:* We discuss choice under risk, uncertainty and time beginning with a full treatment of expected utility theory, its implied properties for risk aversion, and violations of its implications in terms of decision making anomalies. We will also discuss generalizations of the expected utility model, such as those involving betweenness and rank dependence, as well as those in which the decision maker does not behave in a probabilistically sophisticated manner. For temporal decision making, we will discuss a range of phenomena including hope and anxiety, anticipation and dread, besides dynamic consistency in relation to discounting.

*Social preference based on nonstrategic choice in simple games:* We focus on decision making which can impact the well being of others in the absence of strategic considerations. This setting enables the study of a range of moral sentiments including altruism, fairness, reciprocity, trust, and a sense of justice, going beyond the classical model of the economic being.
Social choice: We discuss the classical findings in social choice theory including May’s theorem on majority voting, Black’s median voter theorem, and Arrow’s celebrated impossibility theorem.

(Main text: Mas-Colell, Whiston, Green, Microeconomic Theory)