

LTCC Basic Applied Course

- Course title: **Bio-Mathematics**
- Course description:
 - A brief review of the subject
 - Global dynamics of Lotka-Volterra Systems
 - Lotka-Volterra population models: competition/predator-prey/cooperative; Picard theory for odes; Omega limit sets; Existence and uniqueness of steady states; P and M matrices; Logarithmic norms; Lyapunov theory; Global Lotka-Volterra dynamics.
- Recommended reading:
 - Joseph Hofbauer, Karl Sigmund, *Evolutionary Games and Population Dynamics*, CUP 1998
 - Morris Hirsch, Stephen Smale, Robert Devaney, *Differential Equations, Dynamical Systems and an Introduction to Chaos* (Pure and Applied Mathematics (Academic Press), 60.) Hardcover.
- Lecturer's details: Steve Baigent, UCL