

Math/EEB582 Basic Reference List – Spring 2016

The below texts are general ones that you may find of most interest relative to the content of this course.

Allen, L. J. S. 2003. *An Introduction to Stochastic Processes with Applications to Biology*. Pearson. Upper Saddle River, NJ.

Allen, L. J. S. 2007. *An Introduction to Mathematical Biology*. Pearson. Upper Saddle River, NJ.

Allman, E. S. and J. Rhodes. 2004. *Mathematical Models in Biology: An Introduction*. Cambridge Univ. Press. Cambridge.

Brauer, F. and C. Castillo-Chavez. 2001. *Mathematical Models in Population Biology and Epidemiology*. Springer. New York.

Caswell, H. 2001. *Matrix Population Models*. 2nd Edition. Sinauer. Sunderland, MA.

Clark, Colin W. 1976. *Mathematical Bioeconomics: The Optimal Management of Renewable Resources*. Wiley. New York.

Cushing, J. M. 1998. *An Introduction to Structured Population Dynamics*. SIAM, Philadelphia, PA.

Denny, M and S. Gaines. 2000. *Chance in Biology: Using Probability to Explore Nature*. Princeton Univ. Press. Princeton, NJ.

Edelstein-Keshet, L. 1988. *Mathematical Models in Biology*. Random House, New York. (Reissued by SIAM 2005)

Ellner, S. P. and J. Guckenheimer. 2006. *Dynamic Models in Biology*. Princeton Univ. Press. Princeton.

de Vries, G., T. Hillen, M. Lewis, J. Muller, and B. Schonfisch. 2006. *A Course in Mathematical Biology: Quantitative Modeling with Mathematical and Computational Methods*. SIAM. Philadelphia, PA

Gotelli, Nicholas J. 1995. *A primer of ecology*. Sinauer Associates, Sunderland, MA. Second Edition 1998.

Haefner, J. W. 1996. *Modeling Biological Systems: Principles and Applications*. Chapman and Hall, NY. (Reissued by Springer 2005)

Hallam, T. G. and S. A. Levin (eds.). 1986. *Mathematical Ecology: an Introduction*. Springer-Verlag. Berlin.

- Hastings, A. 1997. Population Biology: Concepts and Models. Springer-Verlag, NY.
- Hastings, A. and L. J. Gross (Eds.). 2012. Encyclopedia of Theoretical Ecology. Univ of California Press, Los Angeles, California.
- Hofbauer, J. and K. Sigmund. 1988. The Theory of Evolution and Dynamical Systems. Cambridge University Press, Cambridge.
- Jones, D. S. and B. D. Sleeman. 2003. Differential Equations and Mathematical Biology. Chapman and Hall. Boca Raton, FL.
- Levin, S. A., Hallam, T. G. and L. J. Gross (eds.). 1989. Applied Mathematical Ecology. Springer-Verlag. Berlin.
- Mangel, M. 2006. The Theoretical Biologist's Toolbox: Quantitative Methods for Ecology and Evolutionary Biology. Cambridge Univ. Press. Cambridge.
- Maynard Smith, J. 1968. Mathematical Ideas in Biology. Cambridge Univ. Press, Cambridge.
- Maynard Smith, J. 1974. Models in Ecology. Cambridge University Press, Cambridge.
- Murray, J. D. 1989. Mathematical Biology. Springer-Verlag. New York.
- Okubo, Akira (1980) Diffusion and ecological problems: mathematical models. Springer-Verlag. Berlin. (Reissued with additions 2004)
- Pielou, E. C. 1977. Mathematical Ecology. Wiley. New York.
- Renshaw, E. 1991. Modelling Biological Populations in Space and Time. Cambridge University Press.
- Taubes, C. H. 2001. Modeling Differential Equations in Biology. Prentice Hall. Upper Saddle River, NJ.