Math/EEB581 Basic Reference List – Fall 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.

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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.

Clark, J. S. 2007. Models for Ecological Data: An Introduction. Princeton Univ. Press, Princeton, NJ.

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

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

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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.

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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.

Logan, J. D. and W. R. Wolesensky. 2009. Mathematical Methods in Biology. Wiley, Hoboken, NJ.

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)

Otto, S.P. and T. Day. 2007. A Biologist's Guide to Mathematical Modeling in Ecology and Evolution. Princeton Univ. Press, Princeton, NJ.

Pielou, E. C. 1977. Mathematical Ecology. Wiley. New York.

Renshaw, E. 1991. Modelling Biological Populations in Space and Time. Cambridge University Press.

Schwartz, R. 2008. Biological Modeling and Simulation: A survey of practical models, algorithms, and numerical methods. MIT Press, Cambridge, MA.

Taubes, C. H. 2001. Modeling Differential Equations in Biology. Prentice Hall. Upper Saddle River, NJ.

Van den Berg, H. 2011. Mathematical Models of Biological Systems. Oxford Univ. Press, Oxford, UK.