

## References

For all topics, session notes provide sufficient information to complete all assignments. Subject areas for which additional material has been requested are provided below (for all other areas, general textbooks should contain adequate material if additional information is sought, but please feel welcome to contact Jon if you experience difficulties).

### Gene (Mendel's Laws)

information theory: Gatlin, L. L. 1972. *Information Theory and the Living System*. Columbia University Press, New York.

### Cell (ultrastructure and organization)

transgressing dimensions conceptually:

Abbott, E. A. 1884. *Flatland: A Romance of Many Dimensions*. Oxford University Press.

### Individual (growth and scaling principles)

allometry:

Gould, S.J. 1974. The origin and function of 'bizarre' structures: antler size and skull size in the 'Irish elk', *Megaloceros giganteus*. *Evolution* 28:191–220.

Schmidt-Nielsen, K. 1984. *Scaling: Why is Animal Size So Important?* Cambridge University Press, Cambridge.

### Population (growth characteristics and dynamics)

logistic equation (continuous)

<http://mathworld.wolfram.com/LogisticEquation.html>

logistic equation (discrete)

the *Mathematica* notebook that was provided in session 18

### Ecosystem (environmental) - fractals, iteration, complex numbers

chaos theory

Gleick, J. 1988. *Chaos: Making a New Science*. Viking Penguin, New York.

fractals

Mandelbrot, B. 1977. *The Fractal Geometry of Nature*. W. H. Freeman and Co. San Francisco.