Catalog Description:
Models in life sciences using multivariable calculus, linear algebra, dynamical systems, and ordinary differential equations.

Prerequisite:
C- or better in: 1156, 1151, 1161.xx or 1181H; or credit for 152.xx.

Exclusions:
Not open to students with credit for 1152 or with credit for any higher numbered math class.

Purpose of Course:
To provide students with a solid foundation in one-variable calculus, to introduce multi-variable tools in a biological setting, to model and analyze phenomena in the life sciences.

Text:
Calculus for Biology and Medicine, 3rd Edition, by Claudia Neuhauser, Pearson, ISBN 9780321644688

Topics List:

7.3	Rational Functions and Partial Fractions
7.5	Numerical Integration
7.6	Taylor Approximation
8.1	Solving Differential Equations
8.2	Equilibria and Their Stability
9.1-9.2	Linear Systems and Matrices
9.3	Linear Maps, Eigenvectors, an Eigenvalues
10.3	Multivariable functions & Partial Derivatives
10.4	Tangent Planes, Differentiability, and Linearization
11.1-11.2	Linear Systems: Theory and Applications
11.3-11.4	Nonlinear Autonomous Systems: Theory and Applications
Also:	Small-group Projects