**Catalog Description:**
Introduction to quantitative and qualitative analysis of several mathematical models for biological systems.

**Purpose:**
This course provides students with experience and knowledge in mathematical analysis of differential equations models, as well as with numerical tools for simulating those models.

**Prerequisite:**
C- or better in Math 2255, 2415, 5520H; or credit for 255, 415.xx, or 521H.

**Text:**
Lecture Notes

**Topics List:**
3. Modeling specific diseases (e.g. HIV, cancer).
4. Competition models.
5. Dynamics of neurons.
6. Bifurcation theory.
7. Enzyme kinetics.
8. Cells proliferation and death.