

# MTH 337

**Day 15** Tuesday, March 4, 2008

**Topic lists for each class day for website assignment**

## **Age-structured population models: HW 5 wrap-up**

- normalized population profiles
- steady-state
- growth and decay

## **Fitting models to data, part I: interpolation / extrapolation**

- steadiness of drummers
- changing birth rates
- stock market
- linear extrapolation from 2 data
- polynomial interpolation
  - existence/uniqueness theorem
  - Lagrange form of interpolating
  - efficiency: other forms better

## **Exercise and examples**

- new Maple functions
  - nops
  - min, max
  - op
  - map
- write code to evaluate interpolating polynomial via Lagrange form
- test code
  - random data
  - near-linear data
- interpolating sampled functions
  - sin
  - Runge