

**ACMA 465**  
**Mathematics of Demography**

**Fall 2011**  
**Evening Course**

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*Students requiring accommodations as a result of disability, must contact the Centre for Students with Disabilities 778-782-3112 or csdo@sfu.ca*

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**Instructor: Kyle Wu**

**Prerequisite:**

ACMA 320. Cannot repeat for credit if taken as STAT 490 or ACMA 490 previously.

## 5. STABLE POPULATION THEORY.

- Definitions.
- The Sharpe-Lotka theorem.
- The characteristic equation (or renewal equation).
- The growth rate.
- Applications.
- Quasi-stable populations.

## 6. POPULATION PROJECTIONS.

- Inter-censal and immediate post-censal estimates.
  - o Linear interpolation; Polynomial interpolation; Geometric modeling.
- The logistic curve.
- The component method.

## 7. USES OF CENSUS DATA.

- Examples.
- Funding Social Security.

### **Grading Scheme:**

Assignments & Term Project: 30%

2 Midterms: 35% each

*The grading is subject to change*

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*Students should be aware that they have certain rights to confidentiality concerning the return of course papers and the posting of marks. Please pay careful attention to the options discussed in class at the beginning of the semester. Students are reminded that Academic Honesty is a cornerstone of the acquisition of knowledge. Scholarly integrity is required of all members of the University. Please consult the General Guidelines of the calendar for more details.*

Revised July 28, 2011