**Biology of Aging**

**Course Number: 86896**

**Lecturer:** Daniel Kaganovich and colleagues

**Department:** Cell and Developmental Biology

**Format:** Lecture

**Credits:** 2

**Course Duration**: second semester

**Course Objectives**

The goal of this course is to give students an overview of the major concepts in aging research. We will cover basic models of aging, and the molecular mechanisms that have been identified to regulate the aging process. We will then explore the aging-related disorders and the aging-rejuvenation tradeoff.

**About the Course**

The course will cover key concepts in the molecular mechanisms of aging.

**Requirements**

Class participation: 30%

Mid-semester assignments: (take home exam) 20%

Final assignment: (take home exam) 50%

Passing Grade in Course: 60

**Bibliography** Will be posted on Moodel.

**Required reading** Will be posted on Moodel.

**Further reading material (optional)**

Life 9th edition (VA: W. H. Freeman and Co. Gordonsville, 2011).

[Robert M. Sapolsky](http://www.amazon.com/Robert-M.-Sapolsky/e/B000APOCFE/ref=dp_byline_cont_book_1), Why Zebras Don’t Get Ulcers (New York: Henry Holt, 2004).

**Contents:**

**Semester II**

Lesson 1 (2/22): Introduction: Aging and its relevance to modern health and society

Lesson 2 (2/29): Aging and Proteostasis

Lesson 3: (3/7) Aging in Single Cell Organisms

Lesson 4: (3/14) Aging in C. elegans – Insulin signaling

Lesson 5: (3/21) Aging-related diseases

Lesson 6: (3/28) Progeria – early onset aging

Lesson 7: (5/4) Aging and Stem Cells

Lesson 8: (5/11) The Aging Brain

Lesson 9: (5/16) Aging and the Germline

Lesson 10: (5/23) Aging and Memory

Lesson 11: (5/30) Conclusion