

Biological, Biomedical and Social Aspects of Aging

Rutgers **16:761:610** Spring 2016

RWJMS **V12A** Research Tower, 675 Hoes lane West, Bush Campus Piscataway

Tuesday & Thursday 1:00-2:30 PM

Overall goal of the course: This is an advanced lecture/discussion format course (32 hours over 14 weeks) that covers aging and aging related disease from a 360 degrees angle. Topics range from the history and the economics of aging to theories of aging to neurodegenerative diseases. The course is also aimed at filling a gap, since there is no course dedicated to aging in the curriculum, despite the relevance of this process to human societies. The course is divided into 5 blocks and included are discussions of the impact of aging on modern societies, physiology of senescence, molecular mechanisms of aging, the aging brain and neurodegeneration. A total of 21 formal lectures (+ an introduction) will be given by faculty members, and a total of 5 journal articles covering the five major topics of the course will be assigned to participating students for critique and discussion. There will be a mid-term examination and a final examination. The exams can cover material presented in both formal lectures and discussion papers. Each exam will count for 35% of the total grade. The averaged scores from the 4 summary critiques will constitute 20% and class participation will count the remaining 10% of the final grade.

Date	Lecture	Instructor
Jan 19	Introduction	Sesti
1. Jan 21	Economics of aging	Rubin
2. Jan 26	Sociology of aging	Carr
3. Jan 28	History of aging	Schoen
4. Feb 2	Philosophy of aging	Temkin
5. Feb 4	Journal club	Sesti
6. Feb 9	Metabolism of aging 1: caloric restriction	Comoletti
7. Feb 11	Metabolism of aging 2: insulin IGF-1-like pathway	Runnels
8. Feb 16	Metabolism of aging 3: electron transport chain	Kahn
9. Feb 18	Journal club	Sesti
10. Feb 23	Telomere shortening	Shao
11. Feb 25	Free radical theory	Rossi-George
12. March 1	DNA damage	Xia
13. March 3	Reproductive cell-cycle	Schindler
14. March 8	Stem cells theory of aging	Zhang
15. March 10	Mid Term Exam	
16. March 12	Spring Break	
17. March 22	Chemical changes	Auerbach
18. March 24	Genetic changes	Driscoll
19. March 29	Neurophysiological changes	Rossi-George
20. March 31	Structural changes	Shumyatsky
21. April 5	Journal club	Sesti
22. April 7	Psychology of aging	Kusnecov

23. April 12	Alzheimer	Chen
24. April 14	Parkinson	Dobkin
25. April 19	Huntington	Rasin
26. April 21	MS and ALS	Dreyfus
27. April 26	Journal club	Sesti
28. May 3	Final Exam	

Course coordinator:

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Participants

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