Course: Biomedical Sciences 4330, Biological Basis of Aging
August 11 – 22
MTWR 12:00 - 3:45 pm
EN 108

Faculty: Suzzette F. Chopin, Ph.D.
EN 319; 825-6022
Office Hours: Tuesdays & Thursdays 4:00 – 4:30
suzzette.chopin@.tamucc.edu

Course Description:
This course is an examination of human aging, one phase of normal development. Topics included are: definitions of aging; demographics of human aging; life span and life expectancy; research methodologies and measurements; anatomical and physiological changes associated with aging; age-related diseases; theories of aging; elder abuse; psychological and sociological aspects of aging; and healthy aging.

Supplies:
PowerPoint slides printed from Blackboard
Journal articles: printed from Blackboard
Binder for notes, handouts, articles, etc.; bring your binder to class every day

Course Objectives: At the conclusion of the course, the student will be able to:
1. Define aging;
2. Distinguish between life expectancy and life span;
3. Discuss the factors that have contributed to increased life expectancy;
4. Identify methods used to study aging;
5. Explain the physiological effects of aging in humans;
6. Describe the relationship between aging and disease;
7. Distinguish among, evaluate and synthesize theories of aging;
8. Relate sociological and psychological factors to aging;
9. Identify the signs, symptoms and causes of elder abuse;
10. Understand the perceptions and experiences of older people; and
11. Evaluate current interventions to promote healthy aging.

Course Requirements And Grading Points:
We have only eight days of instruction; our last meeting on Friday, August 22 is the final exam day. We will cover in these eight days what I would normally cover in 16 weeks. I do not leave anything out because it is only eight days of instruction.

You must be committed to doing a semester’s worth of work in eight days. There is no opportunity to make up tests or class work if you are absent.

If you know you will be absent for a class (wedding, vacation, etc.), you should drop the course before classes begin. Biological Basis of Aging is an elective, so you do not have to take this course.

YOU CANNOT AFFORD TO BE ABSENT FOR A CLASS. ONE AFTERNOON OF CLASS IS EQUIVALENT TO ABOUT TWO WEEKS IN THE FALL OR SPRING SEMESTER.

THERE IS NO MECHANISM FOR MAKING UP MISSED ASSIGNMENTS OR TURNING IN WORK THAT IS LATE. IF YOU CANNOT AGREE TO THE TIME AND EFFORT COMMITMENT REQUIRED IN THIS MINIMESTER COURSE, THEN YOU SHOULD DROP THE COURSE.
**GRADED ACTIVITIES:** Work is due on the day/time indicated in the table below and in the agenda table.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Due Date</th>
<th>Points</th>
<th>Total Points</th>
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<tbody>
<tr>
<td><strong>Tests</strong></td>
<td></td>
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<td>330</td>
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<tr>
<td>Test 1</td>
<td>Thursday August 14</td>
<td>110</td>
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<tr>
<td>Test 2</td>
<td>Wednesday August 20</td>
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<td>Test 3</td>
<td>Friday August 22</td>
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<tr>
<td><strong>Papers</strong></td>
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<td>120</td>
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<tr>
<td>Living to 100</td>
<td>*Tuesday August 12</td>
<td>25</td>
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<tr>
<td>Oral History Project</td>
<td>*Wednesday August 13</td>
<td>75</td>
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<tr>
<td>Oral History Conclusions</td>
<td>Thursday August 21</td>
<td>20</td>
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<tr>
<td><strong>Exercises</strong></td>
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<tr>
<td>Exercise 1: Extracting Info</td>
<td>Monday August 11</td>
<td>10</td>
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<tr>
<td>Exercise 2: The Grandmother Effect</td>
<td>Tuesday August 12</td>
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<td>Exercise 3: High Blood Pressure and Resilience to Physical and Cognitive Decline in the Oldest Old: The Leiden 85-Plus Study</td>
<td>Wednesday August 13</td>
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<td>Exercise 4: Determining Prevalence and Correlates of Elder Abuse Using Promotores: Low-Income Immigrant Latinos Report Higher Rates of Abuse and Neglect</td>
<td>Monday August 18</td>
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<td>Exercise 5: Healthy Aging and Dementia: Findings from the Nun Study</td>
<td>Tuesday August 19</td>
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<td><strong>Total</strong></td>
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</table>

*Due at noon; papers submitted after noon lose 5 points/hr of lateness

**The Points Required for Each Letter Grade Are:**

- 500 - 450 = A
- 449 - 400 = B
- 399 - 350 = C
- 349 - 300 = D
- 299 and below = F

**TESTS:**
Each exam may contain questions in the following formats: multiple choice; true/false; matching; fill in the blank; short answer questions; and essay questions. Everything that is discussed in class may on the test. This includes information from lecture, class discussions, handouts, journal articles, presentations, exercises and videos.

**PAPERS:**
1. **Living to 100:** Go to [www.livingto100.com/](http://www.livingto100.com/), the Life Expectancy Calculator. Complete the questionnaire. When you finish, you will be asked to register your email address and create a password to access your results. I have used this site for many years and have never had a problem receiving junk email, so I consider it safe. Once you register, you will receive your life expectancy; print out this page to include with your essay. Then click on Retrieve Feedback to see how many years you can add to your life by changing your behaviors. Print out these one to two pages to use as a reference when doing your homework, but do not submit these pages with your homework.
Your homework is to:
   a. Determine how many more years you could add to your life expectancy by changing your
      behaviors (Simply add up the additional years cited on “Add Years to Your Life” page)
   b. Discuss which behaviors you are willing to change and how many more years you can
      add to your life expectancy by changing these behaviors.
   c. Discuss which behaviors you are not willing to change and why

Use these subheadings in your paper:
My Life Expectancy
   • Cite what Living to 100 estimated for your life expectancy
   • Cite how many more years you could add to your life expectancy by changing all of your
     behaviors
My Behavioral Modifications
   • Briefly discuss which behaviors you are willing to change and how many more years you
     can add to your life expectancy by changing these behaviors (b above)
   • Briefly discuss which behaviors you are not willing to change and why you are not willing to
     modify these behaviors (c above)

Format: Computer generated; 1” margins; double spaced; <12 pt.; at least three full pages, plus the
one-page printout from the website; stapled

2. Oral History Project: The purpose of this project is to give you an understanding of
aging from the perspective of those who have experienced it – older people. We are interested in
finding the similarities and differences among the people interviewed. You will interview two
people who are at least 65 years old; the interviews are to be conducted separately, just you and
the interviewee. You can interview relatives, neighbors, family friends or any combination. It will
probably be more interesting for you to interview relatives.

You will ask each person the same set of questions. Depending on your interviewee’s responses,
you should ask follow up questions. Interviews should be conducted in person, not via email or
phone. You should interview the person privately. You will write down the person’s answers.
While it is convenient to record the answers, many people are very uncomfortable being recorded,
so do not record the interview.

You will ask all your questions in the first session. Be prepared that some people are a little
hesitant at first, so give them time to get comfortable talking about themselves. Then, a day or two
later, visit the person again to see if he/she has something else to add. Generally, after thinking
about the interview, the interviewee has remembered something else to share with you.

We want to preserve anonymity, so do not give the person’s name in your paper. We do need to
know sex, age, race and ethnicity.

Questions:
   1. What was it like when you were 20 years old? What did you do for fun? What was
      happening in the world?
   2. What is the biggest change you see in the world today compared to the world when you
      were 20 years old?
   3. Looking back on your life, what is the best thing that happened to you? Why?
   4. Looking back on you life, what is something you wanted to do, but did not/could not do?
      Why?
   5. What do you think the world will be like in 20 years?
A. The Oral History Paper
Your paper should be in three parts, with the headings and subheadings listed below. You should summarize your interviewee’s responses, do not include verbatim responses in your paper.

I. Interviewee 1
   a. Demographic information: One sentence citing sex, age, race and ethnicity
   b. Responses to questions: Write the question, then discuss the interviewee’s answer.
   c. Your impression/evaluation of the interview

II. Interviewee 2
   a. Demographic information: One sentence citing sex, age, race and ethnicity
   b. Responses to questions: Write the question, then discuss the interviewee’s answer.
   c. Your impression/evaluation of the interview

III. Compare and contrast the two interviews

Format: Computer generated; 1” margins; double spaced; <12 pt.; at least eight pages; stapled

B. Oral History Conclusions
We will have a class discussion on the results of your projects. Each person will briefly present his/her results. You are not expected to deliver a PowerPoint presentation, just tell us about your interviewees. We will compare and contrast the results of class members. At the end of our discussion, you will write a short paper that synthesizes what we learned.

EXERCISES:
You will choose a partner with whom you will do five exercises in class. You will be given the information for the first exercise in class. The other four exercises will be based on journal articles, which are available on Blackboard. You must read and understand the article before coming to class. You do not have time to read the article and answer the questions in class. I suggest that you print out the article, read and annotate it, then bring it to class to help you answer the questions. You are to answer the questions in your own words – do not copy sentences verbatim from the article.

Class Standards:
The student is expected to attend each class. If absent, it is the responsibility of the student to obtain missed information from a classmate. Missed information includes not only missed lecture notes, but also any information regarding possible syllabus changes.

The student has several opportunities to demonstrate competency in the course. Assessment and computation are performed by the instructor according to objective criteria. If a student experiences difficulty in the course, the instructor is available for consultation. However, it is the responsibility of the student to seek help, preferably when the investment made by the student can still be salvaged.

Academic integrity is expected. Cheating is not acceptable behavior and the student is not to give or receive help during testing. All students are expected to conform to University standards of ethics, academic integrity, grammar and spelling; review the 2014-2015 A&M-CC catalog for more information.

Classroom/Professional Behavior
Some general considerations include:
• Arrive on time for class;
• Allow others to speak; do not monopolize the discussion;
• Focus on the discussion; do not do other work during our meetings;
• Evaluate other points of view; and
• Respect others’ opinions.

Cell Phone/Electronic Device Usage: No cell phone conversations use during class. Internet can be used for class work only.

Academic Integrity/Plagiarism
University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a grade of 0 for the work.

Dropping a Class
I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with me before you decide to drop to be sure it is the best thing to do. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. August 18 2014 is the last day to drop a class with an automatic grade of “W” this term.

Classroom/Professional Behavior
Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

GRADE APPEALS
As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage (http://sci.tamucc.edu/students/GradeAppeal.html). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

Disabilities Accommodations
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this
legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall 116.

If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

**Statement of Academic Continuity**

In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

**References:**


Austad, Steven. 1997. *Why We Age.* John Wiley & Sons


Crowley & Lodge. 2007. *Younger next year for women.* Workman Publishing


Healthy Brain Initiative. 2007. CDC


Merck Manual of Geriatrics, 2005


Taylor & Briggs. 2009. *Age-proofing your brain.* Success Resources International

Timiras, Paola. 2007. *Physiological Basis of Aging and Geriatrics.* Informa Health Care


www.bsl.gov

www.cdc.gov

www.caregiver.org/caregiver/jsp/publications.jsp?nodeid=345

www.healthyaging.net

www.livingto100.com

www.mayoclinic.com

www.nia.nih.gov
AGENDA: REFER TO THE EXPANDED, COLOR CODED AGENDA FOR MORE DETAIL

M11  Course Introduction
     Definitions and Measurement of Aging
     Video: Identifying Mild Cognitive Impairment
     Exercise 1: Extracting Information

T12  Due: Living to 100
     Definitions and Measurement
     Class Interviews Old Person
     Exercise 2: The Grandmother Effect

W13  Due: Oral History Paper
     Human Aging
     Video: How Far Have We Come in AD Research
     Exercise 3: High Blood Pressure and Resilience to Physical and Cognitive Decline in the Oldest Old: The Leiden 85-Plus Study

R14  Test 1: Definitions and Measurement
     ★ PowerPoints
     ★ Exercises 1 and 2
     Human Aging
     Video: Inflammation, Immune System and AD

M18  Bel Flores, B.S., R.N., Director of the South Coastal Area Health Education Center.
     Promotores
     Theories of Aging
     Exercise 4: Determining Prevalence and Correlates of Elder Abuse Using
     Promotores: Low-Income Immigrant Latinos Report Higher Rates of Abuse and Neglect

T19  Theories of Aging
     Video: Cognitive Reserve: What The Religious Orders Study Is Revealing About AD
     Elder Abuse
     Exercise 5: Healthy Aging and Dementia: Findings from the Nun Study

W20  Test 2: Human Aging and Theories of Aging
     ★ PowerPoints
     ★ Exercises 3, 4 and 5
     ★ Videos
     Identifying Mild Cognitive Impairment
     How Far Have We Come in AD Research
     Inflammation, Immune System and AD
     Cognitive Reserve: What The Religious Orders Study Is Revealing

About AD
     Elder Abuse
     Healthy Aging

R21  Healthy Aging
     Oral History Conclusions

F22  Test 3: Elder Abuse, Health Aging & Oral Histories
     ★ PowerPoints
Metrics for Grading Papers

I. Living to 100
• Stated life expectancy (1 point)
  Printed out from website
• Calculated life expectancy (1 point)
  How many total years can you add by modifying all behaviors
• Lifestyle Changes (16 points)
  How many more years will you try to add
  Explain behaviors you are willing to change
  Explain why you choose not to change other behaviors
• Length (2 points)
  At least three full pages
• Format (1 point)
  1" margins, double spaced, <12 pt.
• English usage (4 points)

II. Oral History Project
• Interviewee 1 (20 points)
  Demographic information
  Responses to questions
  Your impression/evaluation of interview
• Interviewee 2 (20 points)
  Demographic information
  Responses to questions
  Your impression/evaluation of interview
• Compare and Contrast Interviewees (25 points)
  Similarities discussed
  Differences discussed
  Conclusions
• Length (3 points)
  At least eight full pages
  Included headings and subheadings
• Format (1 point)
  1" margins, double spaced, <12 pt
• English Usage (6 points)

III. Oral History Conclusions
I. Data table (4 points)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Interviewee 1</th>
<th>Interviewee 2</th>
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<tbody>
<tr>
<td>Demographic info: sex, age, race and ethnicity</td>
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<tr>
<td>At 20 y/o: What was it like? Do for fun? Happening in world</td>
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<td>Biggest change today</td>
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<td>What was the best thing</td>
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<td>Wanted to do, but did not</td>
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<td>Prediction of world in 20 yrs</td>
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<tr>
<td>A difference* in interviewees</td>
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<tr>
<td>A similarity* in interviewees</td>
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</tbody>
</table>

*Not sex, age, race or gender

II. Your notes on classmates’ data (4 points):

III. Based on the discussion of the data today, very briefly summarize the general conclusions you can draw related to the statements below and briefly state your interpretation of each conclusion. (12 points)
  1. Best thing in life
  2. Something wanted to do, but did not
  3. Prediction of world in 20 years
<table>
<thead>
<tr>
<th>Time</th>
<th>M 11</th>
<th>T 12</th>
<th>W 13</th>
<th>R 14</th>
<th>M 18</th>
<th>T 19</th>
<th>W 20</th>
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<th>F 22</th>
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<tr>
<td>12:00</td>
<td>Course Intro</td>
<td>Syllabus Due: Living to 100 Paper</td>
<td>Definitions &amp; Measurement</td>
<td>Due: Oral History Paper</td>
<td>Human Aging</td>
<td>Test 1 Definitions &amp; Measurement</td>
<td>Bel Flores, B.S., RN, Director of South Coastal Area Health Education Center Promotores</td>
<td>Theories of Aging</td>
<td>Test 2 Human Aging Theories of Aging</td>
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<td>Definitions &amp; Measurement</td>
<td>Definitions &amp; Measurement</td>
<td>Human Aging</td>
<td>Test 1</td>
<td>Bel Flores</td>
<td>Theories of Aging</td>
<td>Test 2</td>
<td>Healthy Aging</td>
<td>Test 3</td>
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<td>1:00</td>
<td>Definitions &amp; Measurement</td>
<td>Definitions &amp; Measurement</td>
<td>Human Aging</td>
<td>Test 1</td>
<td>Bel Flores</td>
<td>Theories of Aging</td>
<td>Test 2</td>
<td>Healthy Aging</td>
<td>Test 3</td>
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<td>1:30</td>
<td>Definitions &amp; Measurement</td>
<td>Definitions &amp; Measurement</td>
<td>Human Aging</td>
<td>Human Aging</td>
<td>Theories of Aging</td>
<td>Video: Cognitive Reserve: What The Religious Orders Study is Revealing about AD (20 m)</td>
<td>Elder Abuse</td>
<td>What did we learn from the oral histories?</td>
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<td>2:00</td>
<td>Break</td>
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<td>Human Aging</td>
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<td>2:15</td>
<td>Definitions &amp; Measurement</td>
<td>Video: Identifying Mild Cognitive Impairment (19 m)</td>
<td>Definitions &amp; Measurement</td>
<td>Class Interview: Old Person Definition &amp; Measurement</td>
<td>Videos: How Far Have We Come in AD Research (13) Human Aging</td>
<td>Human Aging</td>
<td>Theories of Aging</td>
<td>Video: Inflammation, immune system and AD (28 m)</td>
<td>Elder Abuse</td>
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<td>3:00-3:45</td>
<td>Exercise 1: Extracting Information</td>
<td>Exercise 2: The Grandmother Effect</td>
<td>Exercise 3: High Blood Pressure and Resilience to Physical and Cognitive Decline in the Oldest Old: The Leiden 85-Plus Study</td>
<td>Video: Inflammation, immune system and AD (28 m)</td>
<td>Exercise 4: Determining Prevalence and Correlates of Elder Abuse Using Promotores: Low-Income Immigrant Latinos Report Higher Rates of Abuse and Neglect</td>
<td>Exercise 5: Healthy Aging and Dementia Findings from the Nun Study</td>
<td>Healthy Aging</td>
<td>Write up your conclusions about the oral history projects</td>
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