



TEXAS A&M UNIVERSITY
SAN ANTONIO

**College of Education and Human Development
Department of Counseling, Health & Kinesiology
EDKN 5337-001 Aging and Physical Activity
Spring 2024**

Instructor: T. Brock Symons, Ph.D.

Class time & Location: Monday 5:30 to 7:15 in STEC 131

E-mail & Phone: tsymons@tamusa.edu and 210 – 742 – 2587

Office Hours: Tuesday and Thursday from 3:00 to 5:00 p.m. or by appointment by email.

I will be holding face-to-face / virtual office hour via WebEx. I will post a WebEx meeting link to Blackboard and during this time you will be able to meet with me virtually. I understand that this may not be possible for everyone; so, you can always email me at tsymons@tamusa.edu if you have any questions.

I am available from 9:30 a.m. – 5:30 p.m. Central Standard Time (EST) Monday – Friday to contact via telephone and/or e-mail using your Texas A&M University – San Antonio e-mail. If these times are not convenient for you, please let me know and I will be happy to accommodate your schedule if possible. I provide you with these times to make it easier to communicate with me, not to limit our contact and want you to know that, should you need to contact me outside these periods, you should not hesitate to do so.

In the event a third party needs to contact me, please direct them to my contact information listed under "E-mail & Phone" information above. No third party should use your login credentials to gain access to the classroom in Blackboard (Bb).

I will respond to your inquiry within 24 hours of receipt except on weekends and holidays, it will then be the next business day. If I do not respond in that period, know that I probably did not receive your message.

Office Location: STEM 142K

WELCOME to the Texas A&M University – San Antonio, Department of Counseling, Health and Kinesiology's Aging and Physical Activity (EDKN 5337 – 001) course. This course is designed as a lecture class. You will learn aging theories and examine the physiological and physical impacts of regular exercise on

older adults via a comprehensive, interdisciplinary examination of the physical aging process and its influences on movement, physical activity, and exercise in this 16-week course.

The course contains readings, lectures, assignments, and tests designed to help you obtain the core concepts of how physical activity benefits older adults so that as educators, healthcare practitioners, and exercise scientists you will be able to keep abreast of the latest science as consumers and/or researchers.

Required Textbooks: Bouchard, Danielle R. (2021). Exercise and Physical Activity for Older Adults. Human Kinetics, Inc: Champaign, IL. ISBN: 9781492572909 (paperback)

<https://www.bkstr.com/texasamsanantoniostore/home>

Recommended Textbooks: NA

Course Description: This course is concerned with the process of aging as it affects physical activity. This course is designed to familiarize the students with the effects of aging on the different physiological, sociological, and psychological functions in humans.

Course Objective: To provide an understanding of aging theories and examine the physiological and physical impacts of regular exercise on older adults via a comprehensive, interdisciplinary examination of the physical aging process and its influences on movement, physical activity, and exercise.

Student Learner Outcomes: Upon completion of this course, each student will be able to:

1. Describe the changes in physical development and the decline in older adults.
2. Differentiate between the quantity and quality of life across the lifespan.
3. Describe the changes in cardiovascular and pulmonary function with aging.
4. Describe the changes in muscular strength and power in older adults.
5. Understand the importance of balance and posture in older adults.
6. Describe the changes in motor control, coordination, and skill with aging.
7. Identify and discuss issues in the health-related quality of life of older adults.
8. Describe issues surrounding the health, exercise, and cognitive function in older adults.
9. Describe physical performance and achievement in older adults and in physically elite older adults.
10. Demonstrate knowledge of research methodology in order to effectively analyze aging and physical activity research.
11. Critically review an aging and physical activity topic as an oral Microsoft PowerPoint presentation and in written Microsoft Word format.
12. Demonstrate the ability to effectively participate in in-class discussions and synthesize that information into their written critical review of literature.

Graduate Class Policies

A student has the right to expect competent, well-organized instruction for the full number of clock hours allotted for a course; to sufficient written assignments, graded fairly and with reasonable promptness to show the student's academic standing in the course at least before mid-semester; to have ample opportunity to confer

with the instructor at published office hours and to review graded written work; to freedom from ridicule, discrimination, harassment or accusations in the presence of other students or faculty members; and to an avenue for appealing to higher academic authority in case of alleged unfairness by an instructor.

Student Rights and Responsibilities

As members of the University community, all enrolled students assume full responsibility for adhering to the university's values and goals. Students are held responsible for staying abreast of their rights as students and for being cognizant on what is deemed proper conduct as outlined in the Student Handbook. The Student Handbook is available through the Student Rights and Responsibilities webpage:

<http://www.tamusa.edu/uploadFile/folders/fcestrad/Pdf/Pdf-635767864704349879-10.100.150.124.pdf>

Cheating and Plagiarism

Students are expected to do their own course work. Simple cases of first offense cheating or plagiarism by an individual student may be handled by the instructor after consultation with the department chair. For more serious cases, such as those involving repeated offenses, conspiracy with other students or the theft and selling of examination questions, a report should be made by the instructor via the department chair and college dean to the provost and vice president for Academic Affairs for disciplinary action. Expulsion from the University is a normal penalty for such offenses.

Plagiarism is a serious violation of academic integrity, and students who engage in plagiarism are subject to disciplinary action. The type of disciplinary action will depend on the severity of the plagiarism but may ultimately lead to the student's expulsion from the program and/or revocation of a student's degree, if the student has already graduated. Please review the Student Handbook for a complete description of the process.

Class Attendance

A vital part of every student's education is regular attendance of class meetings. Any absences tend to lower the quality of a student's work in a course, and frequent or persistent absences may preclude a passing grade or cause a student to be dropped from one or more courses upon the request of a faculty member to the Provost and Vice President for Academic Affairs.

- The instructor's policy for this course includes:
 - Your presence is expected in class daily except for emergencies. Students assume responsibility for any material missed in class. It is your responsibility to make up for the missed work.
 - **You will have 1 unexcused absence without penalty.**
 - **You will receive an F after 2 unexcused absences.**
 - Requests to be absent from class for official University business (athletics, field trips, student government, etc.) shall be made prior to the anticipated absence. Arrangements for missed work will be made at that time.
 - If you miss an exam, quiz, or do not show up on the day of a presentation or when an assignment is due without prior arrangement with the instructor, no make-up will be allowed unless there is a *documented* emergency.
 - If there is an emergency (hospital, funeral, etc.) please contact me at your earliest convenience.

Absences for Religious Holidays

The university will allow students who are absent from classes for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence if, not later than the fifteenth day after the first day of the semester, that student has notified the instructor of each

class to be missed. The instructor may appropriately respond if a student fails to complete the assignment or examination within a reasonable time after the absence.

Research on Human Subjects

Any research that involves human subjects must be approved by the Institutional Review Board for the Protection of Human Subjects at A&M-San Antonio prior to any data collection. Specific forms, instructions, and additional information are provided online:

<http://www.tamusa.edu/graduatestudiesandresearch/irb/irbforms.html>.

Americans with Disabilities Act

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 disability. Disability Support Services (DSS) provides services, auxiliary aids and accommodations for students at Texas A&M University-San Antonio (A&M-SA) who have self-identified, registered and provided DSS with documentation supporting their disability. Students may access additional information on the Disability Support Services webpage: <http://www.tamusa.edu/studentengagementsuccess/dss/AccessDSS/index.html>

Incompletes

The spirit of the “Incomplete” is to give a student an opportunity to complete a course after the end of the semester. An Incomplete will only be considered under specific circumstances: 1. 70% of the class has been completed and student is passing with a “C” or better 2. The circumstance for which the “I” is requested is supported with documentation 3. Student has been attending class on a regular basis Incompletes are not to be used to remedy excessive absences. Unforeseen circumstances precipitating the request for an “I”, should occur near the end of the semester. Students who are experiencing difficulties at the beginning or midway through the course should contact their professor immediately to discuss options. When a professor agrees to grant an “I”, a contract between the student and professor that outlines a specific timeline for completion of the course will be generated. Topics such as highest possible grade will also be outlined. If the contract is not fulfilled, the professor will submit a change of grade form with earned letter grade. All “I”s will automatically revert to an “F” after one year.

Dropping a Course

Each student is responsible for knowing the drop date for any given semester. Professors are not responsible, under any circumstances, for “dropping” a student from a course. Please be aware that if you do not formally drop a course and fail to fulfill the academic requirements, the professor will submit the earned grade.

Title IX

Message for pregnant and parenting students: Title IX of the Education Amendments of 1972 (“Title IX”), 20 U.S.C. §1681 et seq., protects students in all of the academic, educational, extracurricular, athletic, and other programs or activities of universities. This includes prohibiting discrimination against pregnant and parenting students. A student who is pregnant or parenting is entitled to special services. Texas A&M University-San Antonio is committed to implementing all provisions of Title IX. For availing of special services available to students whose curricular and co-curricular work is impacted by pregnancy and parenting related issues, contact

Dr. Jo Anna Benavides-Franke, Associate Vice President for Student Engagement and Success or visit <http://www.tamusa.tamus.edu/studentengagementsuccess/index.html>

Policy on Instructional Modifications

Students with Disabilities: 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 reasonable accommodation for their disability. If you believe you have a disability that may require accommodation, please contact Disability Support Services (DSS) for the coordination of services. DSS is located at the Main Campus on the 2nd floor of the Central Academic Building in room 210 and at the Brooks City-Base Campus in room 149. The phone number for DSS is (210) 784-1335 and email is dsupport@tamusa.tamus.edu.

Grading Policy

Your final grade will be presented as a standard percentage point. Your final grade will be determined by dividing the total points you earned by the total points offered in this course. ***I will not respond to individual requests for calculation of grade.*** It is your responsibility to keep a record of the grade points you have earned in the exams, assignments, and in-class quizzes. All grades will be posted to Blackboard.

Your final grade will be determined as a percentage of the following points:

Participation	100
Assignments	120
Quizzes (10 points per exam)	120
Research Paper	100
Research Presentation	100
Total	540

Grading Scale (No Curve!)

90 or higher = A, 80 – 89.9 = B, 70 – 79.9 = C, 65 – 69.9 = D, Below 65 = F

A grade of “C” or better must be earned in this course to satisfy Kinesiology requirements. Majors who do not earn a grade of “C” or better will be required to repeat the course. I will round up your grade under the following condition, if you earn an ##.9, then I will round your grade up to the next letter grade. Therefore, if you get an 89.9, I will then round your grade up to 90.0 and you will earn an A. If you earn an 89.8, then your final grade will be a B.

No changes to your final grade will occur once class has ended unless I have made a mistake. You are given the opportunity to follow your grade throughout the semester; thus, you should not be surprised with the grade you earn. There are no exceptions (eligibility, financial aid, etc.)

Course Requirements

Assignments. There will be *12 assignments and the assignments will be worth 15 points each.* Assignments will

consist of short answer questions. Assignments will cover material from preceding lectures, *semester total 180 points*.

Quizzes. Module quizzes will be given to assess your knowledge following the completion of a module. You will be required to complete *12 module quizzes*. Each module quiz will be worth *5 points* and will be given on Blackboard. Quizzes will cover material from the particular module, *semester total of 120 points*.

Research Paper and Presentation. The purpose of the paper is to explore a relevant topic related to health and kinesiology. This would be an excellent time to investigate the potential role and/or application of exercise within your own particular field of study. *All topics must be selected and approved by the professor within the two weeks of the semester. Duplicate topics will not be allowed, and topic approval will be granted in the order of request.* I will base my evaluation of the paper on the adequate coverage of the chosen topic (previous and current research) and the overall quality of the scholarly communication (quality, creativity and originality).

Paper. All submitted writing should be typed and double-spaced. A legible 12 pt. serif font (e.g., Times Roman or Arial) should be used and margins should be one (1) inch on all sides. When citing others' work (including text and images from printed and online resources) you should appropriately and fully reference all work using the reference style employed by the Journal of Applied Physiology. Writing should be clear and concise. Correct spelling, punctuation and grammar are expected. All aspiring graduate students should strive toward constant improvement of writing skills.

The paper should be organized as a literature review article. The paper should follow a professional journal format and the paper should summarize the current body of knowledge of the chosen topic. This will include an introduction, body paragraphs, a conclusion, and a reference list. Tables, diagrams, and other visual content may be included and should be appropriately labeled and referenced, as necessary.

A minimum of 10 current references are required. That is, references dated within the last five years. In addition to the current references, relevant older references may be included. While textbooks may be included as references, at least 80% of the references must be from peer-reviewed journals. All references must be appropriately cited within the paper and fully referenced in the "Reference List".

The paper should be eight to 10 pages double-spaced including the reference list, figures, tables and text. An electronic copy should be submitted to Blackboard, as well as a printed version.

The professor reserves the right to lower the grade for any submitted material that fails to adhere to any of these guidelines.

Formal Presentation. Each student is expected to give a 30-minute oral presentation of their topic. Presentations will summarize the topic of the review paper. We will assume a professional format in these presentations. The 30-minute timeframe will be strictly enforced, and each presentation will have an additional five minutes for questions and comments. (*Specific details will be given in class*)

All class work is due on the date and time assigned; work received later than the due date will be penalized one letter grade per day, after which 4 days will result in a zero (F).

- *I do not offer extra credit.*
- *I do not offer independent studies if an acceptable grade is not earned.*

Technology Requirements: Quizzes will be submitted / completed on Blackboard (Bb) according to the directions provided.

I will be holding virtual office hours via WebEx. I will post a WebEx meeting link to Blackboard, and we will be able to meet virtually.

Continuing and regular use of your TAMUSA e-mail is expected. You must be able to use Internet search tools, access Bb, download and print documents and upload assignments.

To access Blackboard, go to <https://tamusa.blackboard.com/>.

A fast and reliable internet connection is important when taking quizzes, exams, and submitting assignments on Blackboard. If you do not have a fast and reliable connection, one option is to go to a public library's computer lab (often they have free wireless broadband for your laptop).

I understand that a fast and reliable internet connection is not always available to you; so, please let me know if you are having any technical difficulties and we can work an alternative arrangement. There will always be a way for complete exams and quizzes and handing in your assignments.

Library Support for COEHD Programs & Courses

The [A&M-SA Library](#) provides access to thousands of research and learning materials for COEHD students, faculty, and staff. These resources are mainly provided in electronic format and are accessible 24/7/365 with Jaguar log-in credentials. They include, but are not limited to, scholarly academic journals, professional publications, newspapers, ebooks, streaming video, and curated web resources. Additionally, there is a smaller physical collection, study space, and computer access available in CAB 202. Two unique physical collections housed in CAB 202 are the curriculum materials (sample textbooks, teachers' guides, activity guides, manipulatives, models, classroom reading collections, educational games, etc.) and the children's literature collection. These materials are available for checkout and can be used by students in lesson planning and in their clinical school placements.

[Education Librarian Kimberly Grotewold](#) is available to assist with finding, accessing, evaluating, and effectively using relevant library resources and other information. She has developed subject, topic, and course-specific research guides which are linked into Blackboard (under Campus Resources in the left menu) and are accessible through the [Library's website](#) under the Research Guides link. If you have questions, concerns, or need help, please contact her through email at kimberly.grotewold@tamusa.edu; via phone: (210) 784-1519; or request an appointment using her [online scheduling calendar](#).

Counseling Resources:

As a college student, there may be times when personal stress interferes with your academic performance and/or negatively impacts your daily functioning. If you or someone you know is experiencing life stressors, emotional difficulties, or mental health concerns at Texas A&M University – San Antonio, please contact the Office of Student Counseling & Wellness Services (SC&WS) located in Modular C, Room 166 (Rear entrance) or call [210-784-1331](tel:210-784-1331) between the hours of 8:00AM and 5:00PM. All mental health services provided by SC&WS are free, confidential (as the law allows), and are not part of a student's academic or university record.

SC&WS provides brief individual, couples, and group therapy, crisis intervention, consultation, case management, and prevention services. For more information, please visit www.tamusa.edu/studentcounseling

In order to reduce the spread of COVID-19, the Student Counseling & Wellness Services (SC&WS) office will primarily offer services via phone and/or Webex. Any students interested in scheduling an appointment should call (210) 784-1331 Monday through Friday, 8:00AM – 5:00PM. After hours, please contact UPD at 911 or text “HOME” to 741-741 24/7/365 to connect with a trained crisis counselor. The National Suicide Prevention hotline also offers a 24/7/365 hotline at 1-800-273-8255.

Schedule of Course Activities

Module	Topic	Date	Reading	Objectives	Deliverable
1	Aging, Physical Health, and Physical Activity	1.22	Ch. 1	1.1 Describe the terms and concepts related to aging, physical activity, and exercise. 1.2 Report how physical activity plays a key role in general living. 1.3 Describe the common health concerns affecting older adults	<i>Module 1 Assignment</i>
2	Aging Theories	1.29	Ch. 2	2.1 Describe history, controversies, and current status of biological aging theories and their implications for medical research. 2.2 Explain why modern aging theories are dependent on modifications to Darwin's natural selection theory. 2.3 Describe how different aging theories lead to very different concepts regarding the nature of aging and age-related diseases, the effects of exercise and other stress on aging, and the degree to which aging can be modified.	<i>Module 2 Assignment</i>
3	Body Composition and Age-Related Changes	2.5	Ch. 4	3.1 Define body composition and overview various measurement techniques. 3.2 Discuss the applicability of methods of measurements specifically for older adults. 3.3 Outline typical age-related changes in fat mass and fat-free mass (including bode mass) and their consequences. 3.4 Discuss the roles of physical activity in age-related body composition changes.	<i>Module 3 Assignment</i>
4	Musculoskeletal Changes	2.12	Ch. 5	4.1 Review the structure of the muscle and the types of muscle contraction. 4.2 Describe the observed changes of muscle strength and power associated with aging. 4.3 Briefly explain the neurological and muscular mechanisms responsible for muscle strength and power observed with aging. 4.4 Report the benefits of exercise in gaining muscle strength and power among older adults.	<i>Module 4 Assignment</i>

5	Cardiovascular Changes	2.19	Ch. 6	<p>5.1 Describe structural changes within the cardiovascular system associated with aging.</p> <p>5.2 Understand potential cardiovascular limitations to exercise among older adults.</p> <p>5.3 Discuss how long-term exercise training can influence the cardiovascular system of older adults.</p> <p>5.4 Discuss how short-term exercise training can influence the cardiovascular system of older adults.</p>	<i>Module 5 Assignment</i>
6	Pulmonary Changes	2.26	Ch. 7	<p>6.1 Identify age-associated changes to the structure of the pulmonary system.</p> <p>6.2 Describe how the pulmonary responses to exercise are altered in older adults.</p> <p>6.3 Understand that aging presents challenges to the pulmonary system.</p> <p>6.4 Highlight how the associated changes to the pulmonary system with aging affect an older adult's ability to perform physical activity.</p>	<i>Module 6 Assignment</i>
7	Endocrine System Changes	3.4	Ch. 8	<p>7.1 Provide an overview of the basic endocrinology of aging.</p> <p>7.2 Address specific hormonal changes that occur with the aging-related conditions menopause, andropause, adrenopause, and somatopause.</p> <p>7.3 Discuss the physiological consequences of menopause, andropause, adrenopause, and somatopause.</p> <p>7.4 Address how exercise training mitigates some of the negative consequences associated with menopause, adrenopause, and somatopause.</p> <p>7.5 Provide an overview of how endocrine hormonal responses to exercise and physical activity are affected by the aging process.</p>	<i>Module 7 Assignment</i>
8	Balance, Locomotion, and Falls	3.18	Ch. 9	<p>8.1 Describe how age-associated changes in the sensory, motor, and cognitive systems influence balance and gait among older adults.</p> <p>8.2 Identify the dimensions of balance and how they are measured in laboratory and clinical settings.</p>	<i>Module 8 Assignment</i>

				8.3 Describe different assessments tools and tests used to measure balance and gait in older adults. 8.5 Define appropriate exercise protocols to improve balance and gait among older adults.	
9	Motor Control	3.25	Ch. 10	9.1 Describe age-related changes in motor learning and neural plasticity. 9.2 Describe age-related changes in fine and gross motor skills. 9.3 Examine the role of exercise in mitigating declines in motor function. 9.4 Discuss exercise-induced changes in neural plasticity.	<i>Module 9 Assignment</i>
10	Physical Function	4.1	Ch. 11	10.1 Define the terms' physical function and frailty. 10.2 Explore the main mechanisms by which physical function declines with age. 10.3 Describe how physical function and frailty are measured. 10.4 Determine the consequences of low physical function.	<i>Module 10 Assignment</i>
11	Measurements of Exercise Specific to Older Adults	4.8	Ch. 12	11.1 Summarize the expected changes that occur with aging and the impact of those changes on exercise assessments. 11.2 Identify the pertinent cardiovascular, strength, flexibility, balance, and gait exercise indexes for older adults. 11.3 Review the clinical indications and contraindications for exercise assessment. 11.4 Provide the most relevant and current assessment methods available for older adults.	<i>Module 11 Assignment</i>
12	Barriers and Solutions to Exercise Adherence	4.15	Ch. 13	12.1 Examine physical activity barriers and facilitators as they pertain to older adults. 12.2 Describe factors of physical activity adherence among older adults based on the social ecological framework. 12.3 Select appropriate tools for identifying physical activity adherence factors among older adults. 12.4 Describe appropriate interventions to address identified barriers.	<i>Module 12 Assignment</i>

13	Physical Activity and Exercise Recommendations for Functional Health	4.22	Ch. 14	<p>13.1 Review current physical activity guidelines that contribute to optimizing functional health among older adults in good health.</p> <p>13.2 Review current physical activity guidelines that contribute to optimizing functional health among older adults living with common chronic conditions.</p> <p>13.3 Propose strategies to implement physical activity guidelines that contribute to optimizing functional health among older adults.</p>
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Presentations

4.29

Paper Due
