

GMS 6485 | Population-Based Research on Aging

Course Syllabus

Instructor Information

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Office Hours: By appointment via Zoom

Preferred Method of Communication: Email

Office Location

On Zoom. Link available on the course website, or upon request.

Course Details

Course Format: Online

Credit Hours: 3 (Students are expected to engage in approximately 9 hours of coursework per week for this 3-credit course)

Course Description

Aging is reshaping healthcare systems, economies and communities across the world. As populations live longer, understanding aging through a population health lens has never been more essential. This course invites you to explore how large-scale research, epidemiology, global aging research and large-scale data help us understand the healthspan, resilience, health equity, well-being and lived experiences of aging societies across diverse communities.

This course provides a structured and comprehensive introduction to population health frameworks, the epidemiology of aging and the ecological models of health. Core concepts include social determinants of health, longevity disparities, multimorbidity, disability trajectories and successful aging models. Building on this foundation, the course examines how large datasets and public health methods are used to measure physical function, cognitive health, quality of life, performance and disability that are central to understanding health trajectories.

As the course progresses, you will apply these concepts to real-world global aging challenges, including health inequities, aging in place, healthcare access and the growing demographic shift toward older populations worldwide. The course concludes with an integrative discussion of successful aging and the factors that shape resilience and well-being across the lifespan.

Throughout the course, you will become familiar with research designs and methods for population health. You will develop competency in evaluating population level data, understanding the assessment of health and disability conditions specific to older adults and communicating findings through both written and oral formats. By the end of the semester, you will be prepared to critically assess population-based interventions and research initiatives aimed at improving healthy aging outcomes and advancing equity in aging societies.

Required Materials

There are no items required or recommended for this course.

Learning Resources

Learning resources in this course may include the following:

1. Articles will be provided through the course website and are coordinated with lecture materials to support key concepts and serve as primary course readings
2. Recorded lectures, presentations, or other multimedia content may be provided to reinforce course topics and enhance understanding.
3. Weekly discussions may be available to address questions related to lectures and course materials. Discussion prompts are designed to encourage critical thinking and engagement with course concepts.

Course Goals

This course is designed to equip students with a comprehensive understanding of population health and epidemiology as they apply to aging societies and global longevity trends. Students will: (1) build a strong conceptual foundation in population health and epidemiology as they relate to aging; (2) examine how ecological models and functional measures inform research on aging outcomes; (3) strengthen their ability to interpret, critique, and apply population based research findings; (4) develop skills for evaluating interventions and policies that influence healthy aging; and (5) communicate effectively about population health issues using both written and oral formats to inform research, policy and clinical decision-making.

Expectations and Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- Apply population health frameworks to global aging trends and interpret how these frameworks are used to monitor and understand health conditions of older adults
- Demonstrate familiarity with research designs and methods commonly used in population-based studies

- Critically evaluate assessments of health and disability conditions specific to aging populations
- Analyze health disparities and aging equity
- Apply population health concepts to current aging related issues and initiatives across the globe

Course Outline and Assignments

The course is divided into 15 modules. Each module consists of specific reading assignments, videos, and other internet resources. For each module students will: (1) review the learning objectives and corresponding lecture notes; (2) read and complete the assignments as given; (3) participate in weekly discussion boards as assigned. Examples of course assignments include:

Reading Assignments:

- Each module includes carefully selected readings from textbooks, peer-reviewed articles, and other online resources that provide in-depth information about the module topic.
- Students are expected to read (and/or view) all assigned materials before completing the activities for that module. These readings will form the foundation for assignments and discussions.

Writing Assignments:

- Short essays or case studies: Students will respond to questions or real-world scenarios, demonstrating their ability to apply course concepts to practical situations.
- In certain modules, students may be asked to create a “lecture” or narrated power point presentation that addresses a certain question or problem.

Discussion Boards:

- Students are required to participate in online discussion forums. Each forum will feature a discussion prompt based on the module's topic.
- Participation involves posting thoughtful responses to the prompt, referencing course materials, and engaging in meaningful dialogue with peers.
- Peer Interaction: Students should reply to at least two peers' posts, offering constructive feedback or asking questions to deepen the conversation.
- Discussion board posts should demonstrate critical thinking and an understanding of the module's content, encouraging collaborative learning.

Quizzes and Short Answer

- Some modules' assignments are in quiz and short answer format

Projects:

Projects will require students to apply the knowledge gained from preceding modules to a comprehensive analysis. Each project is a bit different; however, the idea is to create content so that the student may use the intermediate projects to help construct the larger final project.

Methods of Evaluation

Each student's final grade for the course will be calculated as follows:

- Module Projects: 50%
- Discussions: 25%
- Final project: 25%

Total: 100%

Grading Scale

Letter grade and percentage

Letter	Percentage Value
A	93-100%
A-	90-92%
B+	87 -89%
B	83-86%
B-	80-82%
C+	77-79%
C	73-76%
C-	70-72%
D+	67-69%
D	63-66%
D-	59-62%
E	59% and below

A grade of incomplete (I) may be given if a student fails to complete the course as scheduled for unforeseen circumstances beyond the student's control.

Late Work Policy

All assignments/projects must be submitted via the deadline provided on the course website. Unless you have an approved excused absence, a 10% deduction will be applied for each week an assignment is late.

Course Schedule

Schedule	Module
Week 1	Fundamentals of Population Health Introduces core concepts, frameworks, and terminology used to study health at the population level, with emphasis on their relevance to aging societies.
Week 2	The Basics of Epidemiology Covers foundational epidemiological principles and terminology.
Week 3	Ecological Models of Health Explores multilevel models that explain how individual, social, environmental, and policy factors shape health outcomes and healthy aging equity across the lifespan.
Week 4	Measures of Physical Function, Performance, and Disability Examines key tools and assessments used to evaluate mobility, functional status, and disability in older adults.
Week 5	COVID-19 and the Health of Older Populations Analyzes the disproportionate impact of COVID-19 on older adults and the population-level data that inform public health responses. Presents aging lessons learned due to COVID-19.
Week 6	Frailty Focuses on conceptual models, measurement approaches, and epidemiological patterns of frailty in aging populations.
Week 7	Disability-Adjusted Life Years (DALYs) Introduces global burden of disease metrics, with emphasis on how DALYs quantify the impact of aging-related conditions.
Week 8	Hospitalization Investigates hospitalization trends among older adults, including risk factors, outcomes, and implications for population health.
Week 9	Obesity and Aging Explores the epidemiology of obesity in later life, including physiological changes, health consequences, and population-level patterns.
Week 10	Nutritional Epidemiology Examine dietary assessment methods, nutritional risk factors, and their relationship to aging and chronic disease.
Week 11	Physical Activity and Aging Reviews evidence on physical activity patterns, measurement approaches, and the role of movement in healthy aging.
Week 12	Cognitive Function and Neurodegeneration Covers population-based research on cognitive aging, dementia, and neurodegenerative conditions.
Week 13	Falls Analyzes the epidemiology of falls, including risk factors, prevention strategies, and population-level trends.
Week 14	Chronic Pain: Explores the prevalence, risk factors, and consequences of chronic pain among older adults, along with measurement challenges.
Week 15	Final Project: Successful Aging, a synthesis of course concepts

University Policies and Resources

Information about grading policies, support for students with disabilities, course evaluations, the Honor Code, and other course policies and campus resources can be found on the [Syllabus Policies page](#).

Attendance Policy

Requirements for class attendance and make-up work for this course are consistent with UF policies and can be found on the [Attendance Policies page](#).

Academic Integrity

UF students are bound by The Honor Pledge which states “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. [See the UF Conduct Code website for more information](#). If you have any questions or concerns, please consult with the instructor or TAs in this class.

Accessibility and Accommodations

Students requesting accommodations for disabilities must first register with the Disability Resource Center (DRC). The DRC will provide documentation to the student, who must then provide this documentation to the instructor when requesting accommodation.

Accommodations are not retroactive. Therefore, students should contact the DRC as early as possible in the semester to ensure timely support. For more information, please visit the [UF Disability Resource Center website](#).

Technology Requirements

To successfully participate in this course, students are expected to have regular access to a reliable internet connection and a computer capable of accessing the University of Florida’s learning management system (Canvas).

Students should be able to:

- Access course materials, including readings, recorded lectures, and multimedia content
- Submit assignments through Canvas

- Participate in online discussions and course activities

Students are responsible for ensuring their technology meets the minimum requirements for Canvas. For technical assistance, please contact the UF Computing Help Desk at 352-392-4357 or visit the [UF Computing Help Desk website](#).

Copyright Information

Please review the policy for the use of copyrighted materials on the [UF Smathers Library Copyright Guide](#).

Technology in the Classroom

For this graduate level course, GMS6485 Population-Based Research on Aging, it is imperative that all work submitted is your own. The use of AI tools, including but not limited to, generative language models, code generation tools, and automated essay writer, is strictly prohibited for all assignments. Any work found to have been produced with the aid of such AI tools will result in a zero for that assignment. This policy is in place to ensure the integrity of your learning experience and to respect the academic standards of this course. If you have any questions about this policy or need assistance with your work, please do not hesitate to reach out to your instructor.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online. Students can complete evaluations in three ways:

1. The email they receive from GatorEvals
2. Their Canvas course menu under GatorEvals
3. The central Portal at <https://my-ufl.bluera.com>

Guidance on how to provide constructive feedback is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

Student Support Services

As a student in a distant learning course or program, you have access to the same student support services that on campus students have. For course content questions contact your instructor. For related to your course please contact the UF computing Help Desk at 352-392-4357. For Help Desk hours visit the [UF Computing Help Desk website](#).