



Module Definition Form (MDF)

Module code: MOD011109	Version: 1 Date Amended: 02/Jun/2025
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1. Module Title
The Science of Ageing

2a. Module Leader
Andi Seago

2b. School
Faculty of Health, Education and Social Care at ARU Peterborough

2c. Faculty
ARU Peterborough

3a. Level
6

3b. Module Type
Standard (fine graded)

4a. Credits
30

4b. Study Hours
300

5. Restrictions			
Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:	None		

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

The science of aging, or gerontology, is a multidisciplinary field that studies the biological, psychological, and social aspects of aging, including the processes that lead to decreased function and increased disease risk.

In this module you will learn how ageing affects human physiology and psycho-sociology. You will develop your knowledge from first year anatomy and physiology and second year applied physiology and behavioural science to investigate the effects ageing has on human performance, be it exercise or simply activities of daily living.

The module will provide you with the underpinning knowledge of the ageing process and discusses the findings of current research to deliver both knowledge and context to the process of ageing. This will also support other modules such as clinical exercise prescription

6b. Outline Content

The science of the normal ageing process and how a variety of diseases and disorders differ from it.

Typical content includes:

Research in ageing including:

- Importance and principles of ageing research
- How ageing and lifespan is measured
- Ethics of ageing research

Understanding ageing including:

- Current theories and evolution of ageing
- Epidemiology of ageing
- Healthy ageing
- Future of ageing

Biology of ageing including:

- The genetics of ageing
- Oxidative stress
- DNA repair and damage
- Epigenetics
- Protein homeostasis
- Age-related molecular diseases
- Overview of processes and pathways controlling ageing
- Signalling pathways that control ageing

6c. Key Texts/Literature

The reading list to support this module is available at: <https://readinglists.aru.ac.uk/>

6d. Specialist Learning Resources

Free e-learning course for students to support their taught knowledge Frailty elearning course | British Geriatrics Society

7. Learning Outcomes (threshold standards)

No.	Type	On successful completion of this module the student will be expected to be able to:
1	Knowledge and Understanding	Demonstrate knowledge of and evaluate the major processes underlying the ageing process.
2	Knowledge and Understanding	Analyse information from different sources to understand diverse aspects of ageing.
3	Knowledge and Understanding	Evaluate how ageing fits with the changing demographic and its impact .
4	Intellectual, practical, affective and transferrable skills	Demonstrate a comprehensive ability to select and evaluate how and why to use assessment tools to gather data on ageing.
5	Intellectual, practical, affective and transferrable skills	Demonstrate practical and data handling skills associated with analysing lifespan and age-related decline data sets.
6	Intellectual, practical, affective and transferrable skills	Critically evaluate and discuss experimental data pertaining to ageing and age-related diseases

8a. Module Occurrence to which this MDF Refers

Year	Occurrence	Period	Location	Mode of Delivery
2025/6	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence

Learning Activities	Hours	Learning Outcomes	Details of Duration, frequency and other comments
Lectures	36	1-6	Lecture based sessions 3 hours for 12 weeks
Other teacher managed learning	36	1-6	Labs and formative sessions 3 hours for 12 weeks
Student managed learning	228	1-6	Asynchronous canvas activities, guided reading
TOTAL:	300		

9. Assessment for the above Module Occurrence					
Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
010	Coursework	1-3	50 (%)	Fine Grade	30 (%)
Essay (2500 words)					
Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
011	Practical	4-6	50 (%)	Fine Grade	30 (%)
Data analysis and report (2500 words equivalent)					

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:

- (a) achieve the qualifying mark for each element of fine graded assessment as specified above
- (b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]