



## COURSE OUTLINE

# MHN705 Healthy Brain Ageing

**Course Coordinator:** Christina Driver (cdriver@usc.edu.au) **School:** Thompson Institute

2021 | Semester 2

Online

ONLINE

You can do this course without coming onto campus.

*Please go to the USC website for up to date information on the teaching sessions and campuses where this course is usually offered.*

## 1. What is this course about?

### 1.1. Description

Healthy ageing is accompanied by neurological changes that impact cognition and behaviour. The prevailing view is that there is a spectrum of declining cognitive function, with normal ageing at one end and diseases such as Mild Cognitive Impairment (MCI) and then Dementia at the sever end. In this course you will address the pathology and neurobiological changes in these diseases specific to older people, as well as how current intervention approaches based on modifiable lifestyle risk factors in ageing populations are being utilised to help prevent the onset and progression of MCI and dementia.

### 1.2. How will this course be delivered?

| ACTIVITY  | HOURS | BEGINNING WEEK | FREQUENCY |
|---|-------|----------------|-----------|
| <b>ONLINE 1</b>   |       |                |           |
| <b>Online</b> – This course will take approximately 12.5 hours per week and may include a combination of: webinar, peer to peer collaboration, asynchronous online materials, and synchronous lecturer and peer zoom meetings | 2hrs  | Week 1         | 13 times  |

### 1.3. Course Topics

|           |  |
|-----------|--|
| Module 1  | Overview of healthy brain ageing                         |
| Module 2  | Age-related cognitive decline: Normal ageing to dementia |
| Module 3  | The neurobiology of the ageing brain                     |
| Module 4  | Risk factors for dementia                                |
| Module 5  | The history of interventions & treatments for dementia   |
| Module 6  | Physical activity and healthy ageing                     |
| Module 7  | Nutrition and healthy ageing                             |
| Module 8  | Sleep-wake cycle and healthy ageing                      |
| Module 9  | Social connectedness and healthy ageing                  |
| Module 10 | Mindfulness and healthy ageing                           |
| Module 11 | Multidisciplinary lifestyle-based intervention programs  |
| Module 12 | Boosting cognitive reserve                               |
| Module 13 | Rethinking the ageing brain                              |

### 2. What level is this course?

700 Level (Specialised)

Demonstrating a specialised body of knowledge and set of skills for professional practice or further learning. Advanced application of knowledge and skills in unfamiliar contexts.

### 3. What is the unit value of this course?

12 units

### 4. How does this course contribute to my learning?

| COURSE LEARNING OUTCOMES   | GRADUATE QUALITIES   |
|--|--|
| On successful completion of this course, you should be able to...  | Completing these tasks successfully will contribute to you becoming... |
| 1 Explain current processes in brain ageing in relation to physiological and neurobiological evidence, using most relevant academic literature.                                | Knowledgeable  |
| 2 Evaluate and justify traditional and recent evidence-based approaches to improve brain health outcomes in a healthy ageing population including from an ethical perspective. | Ethical  |
| 3 Model a multidisciplinary approach to healthy brain ageing and present to targeted specialist practitioners.   | Empowered  |
| 4 Apply advanced communication skills to targeted audiences, incorporating appropriate skills relevant to presentation genre.  | Empowered  |

### 5. Am I eligible to enrol in this course?

Refer to the [USC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

#### 5.1. Pre-requisites

Enrolled in Program AR602 OR SC546

#### 5.2. Co-requisites

Not applicable

5.3. Anti-requisites

Not applicable

5.4. Specific assumed prior knowledge and skills (where applicable)

Not applicable

6. How am I going to be assessed?

6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

6.2. Details of early feedback on progress

Weeks 3 and 4 will include learning activities and opportunities to discuss and review your artefact draft, with feedback provided by your tutor. Drop-in sessions will be available for extended discussion and review of the assessment tasks requirements and scope.

6.3. Assessment tasks

| DELIVERY MODE | TASK NO. | ASSESSMENT PRODUCT     | INDIVIDUAL OR GROUP | WEIGHTING % | WHAT IS THE DURATION / LENGTH?        | WHEN SHOULD I SUBMIT? | WHERE SHOULD I SUBMIT IT?                          |
|---------------|----------|------------------------|---------------------|-------------|---------------------------------------|-----------------------|--|
| Online        | 1        | Artefact - Creative    | Individual          | 20%         | To fit on A3 size poster              | Week 5                | Online Assignment Submission with plagiarism check |
| Online        | 2        | Written Piece          | Individual          | 40%         | 3000 words                            | Week 10               | Online Assignment Submission with plagiarism check |
| Online        | 3        | Oral and Written Piece | Individual          | 40%         | 20 Mins presentation<br>20 slides max | Exam Period           | Online Assignment Submission with plagiarism check |

Online - Assessment Task 1: Infographic style digital poster

|                  |   |   |
|------------------|---|---|
| <b>GOAL:</b>     | This assessment has been designed to demonstrate your understanding of current approaches to healthy brain ageing in relation to physiological and neurobiological evidence.<br>You will develop an infographic style poster which will highlight the key, current evidence explaining healthy brain ageing and age-related disease processes. The poster will provide evidence of traditional treatment approaches to age-related disease and their limitations. You will present a case for advocating current approaches to improving brain ageing outcomes. |   |
| <b>PRODUCT:</b>  | Artefact - Creative   |   |
| <b>FORMAT:</b>   | PowerPoint or other electronic design platform<br>A3 size (digital)   |   |
| <b>CRITERIA:</b> | <b>No.</b>  | <b>Learning Outcome assessed</b>  |
|                  | 1   | Selection and use of most relevant literature in relation to physiological and neurobiological evidence. <span style="float: right;">1</span> |
|                  | 2   | Explanation of current processes in brain aging. <span style="float: right;">1</span>   |
|                  | 3   | Evaluation and justification of evidence-based recent approaches brain ageing. <span style="float: right;">2</span>                           |
|                  | 4   | Application of skills relevant for digital poster format. <span style="float: right;">4</span>  |

### Online - Assessment Task 2: Mock journal article commentary

| <b>GOAL:</b>     | <p>This assessment piece has been designed to justify traditional biomedical and recent multidisciplinary evidence-based approaches to improve brain health outcomes in a healthy ageing population. In doing so, you will be required to be sensitive to the ethical practices in these treatment approaches in an older population.</p> <p>You will be asked to write a mock commentary, assuming the position of two different authors and therefore perspectives, to justify the evidence-base for approaches from both a biomedical and multidisciplinary basis.</p>  |                           |  |                           |   |  |   |   |  |   |   |  |   |   |                                       |   |   |   |   |
|------------------|--|---------------------------|--|---------------------------|---|--|---|---|--|---|---|--|---|---|---------------------------------------|---|---|---|---|
| <b>PRODUCT:</b>  | Written Piece  |                           |  |                           |   |  |   |   |  |   |   |  |   |   |                                       |   |   |   |   |
| <b>FORMAT:</b>   | Written article presented as per 'Mock commentary'<br><br>3000 words<br><br>Individual work<br><br>Author Guidelines will be provided in your task folder  |                           |  |                           |   |  |   |   |  |   |   |  |   |   |                                       |   |   |   |   |
| <b>CRITERIA:</b> | <table border="1"><thead><tr><th>No.</th><th></th><th>Learning Outcome assessed</th></tr></thead><tbody><tr><td>1</td><td>Explanation of physiological and neurobiological factors affecting brain ageing.</td><td>1</td></tr><tr><td>2</td><td>Evaluation of traditional biomedical and recent multidisciplinary evidence-based approaches to healthy brain ageing.</td><td>2</td></tr><tr><td>3</td><td>Justification of evidence-based approaches demonstrating ethical perspective</td><td>2</td></tr><tr><td>4</td><td>Communication of a balanced argument.</td><td>4</td></tr><tr><td>5</td><td>Application of scholarly writing skills appropriate to article style and guideline.</td><td>4</td></tr></tbody></table> | No.                       |  | Learning Outcome assessed | 1 | Explanation of physiological and neurobiological factors affecting brain ageing. | 1 | 2 | Evaluation of traditional biomedical and recent multidisciplinary evidence-based approaches to healthy brain ageing. | 2 | 3 | Justification of evidence-based approaches demonstrating ethical perspective | 2 | 4 | Communication of a balanced argument. | 4 | 5 | Application of scholarly writing skills appropriate to article style and guideline. | 4 |
| No.              |  | Learning Outcome assessed |  |                           |   |  |   |   |  |   |   |  |   |   |                                       |   |   |   |   |
| 1                | Explanation of physiological and neurobiological factors affecting brain ageing.   | 1                         |  |                           |   |  |   |   |  |   |   |  |   |   |                                       |   |   |   |   |
| 2                | Evaluation of traditional biomedical and recent multidisciplinary evidence-based approaches to healthy brain ageing.   | 2                         |  |                           |   |  |   |   |  |   |   |  |   |   |                                       |   |   |   |   |
| 3                | Justification of evidence-based approaches demonstrating ethical perspective   | 2                         |  |                           |   |  |   |   |  |   |   |  |   |   |                                       |   |   |   |   |
| 4                | Communication of a balanced argument.  | 4                         |  |                           |   |  |   |   |  |   |   |  |   |   |                                       |   |   |   |   |
| 5                | Application of scholarly writing skills appropriate to article style and guideline.  | 4                         |  |                           |   |  |   |   |  |   |   |  |   |   |                                       |   |   |   |   |

### Online - Assessment Task 3: Education session presentation

| <b>GOAL:</b>     | <p>In this assessment piece you will communicate your knowledge and its application to a specialist audience.</p> <p>You will be asked to prepare a 20-minute presentation on a multidisciplinary program you have designed for an ageing population to improve their brain health. Your target audience will be health practitioners who are involved in the care of the elderly population. Included in your presentation will be your justification for your program approach, pitched at the level appropriate to your audience.</p> |                           |  |                           |   |                                     |   |   |   |     |   |   |   |
|------------------|--|---------------------------|--|---------------------------|---|-------------------------------------|---|---|---|-----|---|---|---|
| <b>PRODUCT:</b>  | Oral and Written Piece   |                           |  |                           |   |                                     |   |   |   |     |   |   |   |
| <b>FORMAT:</b>   | Audio-visual presentation<br><br>20 minutes maximum (plus max 20 slides)<br><br>Individual work<br><br>Examples will be provided in your task folder   |                           |  |                           |   |                                     |   |   |   |     |   |   |   |
| <b>CRITERIA:</b> | <table border="1"><thead><tr><th>No.</th><th></th><th>Learning Outcome assessed</th></tr></thead><tbody><tr><td>1</td><td>Model a multidisciplinary approach.</td><td>3</td></tr><tr><td>2</td><td>Evaluation and justification of multidisciplinary program approach.</td><td>2 3</td></tr><tr><td>3</td><td>Application of communication skills appropriate to the purpose, target audience, and context.</td><td>4</td></tr></tbody></table>  | No.                       |  | Learning Outcome assessed | 1 | Model a multidisciplinary approach. | 3 | 2 | Evaluation and justification of multidisciplinary program approach. | 2 3 | 3 | Application of communication skills appropriate to the purpose, target audience, and context. | 4 |
| No.              |  | Learning Outcome assessed |  |                           |   |                                     |   |   |   |     |   |   |   |
| 1                | Model a multidisciplinary approach.  | 3                         |  |                           |   |                                     |   |   |   |     |   |   |   |
| 2                | Evaluation and justification of multidisciplinary program approach.  | 2 3                       |  |                           |   |                                     |   |   |   |     |   |   |   |
| 3                | Application of communication skills appropriate to the purpose, target audience, and context.  | 4                         |  |                           |   |                                     |   |   |   |     |   |   |   |

## 7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Directed study hours may vary by location. Student workload is calculated at 12.5 learning hours per one unit.

## 8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Blackboard site– Please log in as soon as possible.

### 8.1. Prescribed text(s) or course reader

Please note that you need to have regular access to the resource(s) listed below. Resources may be required or recommended.

| REQUIRED? | AUTHOR | YEAR | TITLE   | PUBLISHER |
|-----------|--------|------|---|-----------|
| Required  | n/a    | 0    | No prescribed text. Key readings will be provided each week through the library course readings | n/a       |

### 8.2. Specific requirements

All work submitted for assessment is to be word processed and submitted electronically. It is expected that

students will have ready access to a computer with common productivity software and reliable Internet access. Students will be able to participate in video conferencing, and therefore it is recommended to have computer capabilities to join these sessions (e.g. webcam, microphone).

## 9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the [online induction training for students](#), and following the instructions of the University staff.

## 10. What administrative information is relevant to this course?

### 10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Blackboard, are electronically checked through SafeAssign. This software allows for text comparisons to be made between your submitted assessment item and all other work that SafeAssign has access to.

### 10.2. Assessment: Additional Requirements

Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

The final mark is in the percentage range 47% to 49.4%

The course is graded using the Standard Grading scale

You have not failed an assessment task in the course due to academic misconduct

### 10.3. Assessment: Submission penalties

Late submission of assessment tasks will be penalised at the following maximum rate:

5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.

10% (of the assessment task's identified value) for the third day

20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.

A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task.

Weekdays and weekends are included in the calculation of days late.

To request an extension, you must contact your Course Coordinator and supply the required documentation to negotiate an outcome.

### 10.4. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the [Learning Advisers](#) web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au).

### 10.5. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to [Student Hub](#), email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au) or call 07 5430 1226.

### 10.6. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, [AccessAbility Services](#) can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to [Student Hub](#), email [AccessAbility@usc.edu.au](mailto:AccessAbility@usc.edu.au) or call 07 5430 2890.

### 10.7. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Administration of Central Examinations
- Deferred Examinations
- Student Academic Misconduct
- Students with a Disability

Visit the USC website: <http://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

### 10.8. General Enquiries

#### In person:

- **USC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **USC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **USC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **USC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **USC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **USC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

**Tel:** +61 7 5430 2890

**Email:** [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au)