

PUB708

# Quantitative Research Methods

**School:** School of Health - Public Health

2026 | Session 6

Online

ONLINE

You can do this course without coming onto campus, unless your program has specified a mandatory onsite requirement.

*Please go to [unisc.edu.au](https://unisc.edu.au) 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

In this course you will develop knowledge, skills and critical thinking in reading, interpreting and conducting quantitative research in the health sciences. The following components of the research process will be addressed: asking research questions, planning quantitative studies, summarising data numerically and graphically, analysis using confidence intervals and hypothesis testing, and reporting the results for an academic audience.

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

| ACTIVITY                                                                                                         | HOURS | BEGINNING WEEK | FREQUENCY |
|------------------------------------------------------------------------------------------------------------------|-------|----------------|-----------|
| ONLINE                                                                                                           |       |                |           |
| <b>Online</b> – 5 hours of structured online learning materials plus optional 1-hour online consultation session | 6hrs  | Week 1         | 8 times   |

### 1.3. Course Topics

Introduction to quantitative research

Understanding the format of a quantitative journal article

Gathering and preparing analytical data sets

Introductory use of statistical software (SPSS or Jamovi)

Descriptive statistics (mean, median, standard deviation, interquartile range, bar charts, pie charts, histograms, scatterplots etc)

Confidence intervals and hypothesis testing (proportions, one or two means, chi-squared tests)

Inferential techniques for categorical variables, non-parametric statistics and logistic regression

Analysis of variance

Correlation and regression

Multiple regression basics

## 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 MAPPING                                             | PROFESSIONAL STANDARD MAPPING *                        |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------|
| On successful completion of this course, you should be able to...                                                          | Completing these tasks successfully will contribute to you becoming... | International Union for Health Promotion and Education |
| 1 Develop and plan quantitative studies to answer simple quantitative research questions                                   | Empowered                                                              | B.8, 9.1, 9.4                                          |
| 2 Select and produce the appropriate graphical, numerical and statistical analyses (using computer software)               | Knowledgeable                                                          | 6.2, 6.3, 9.1                                          |
| 3 Select, apply and interpret the results of the appropriate statistical technique to analyse quantitative data            | Empowered                                                              | 6.2, 6.3, 9.1                                          |
| 4 Communicate and comprehend the language of research and statistics (including using graphical and numerical information) | Knowledgeable<br>Empowered                                             | 4.1                                                    |
| 5 Demonstrate professional integrity in planning, interpreting and reporting the results of scientific studies             | Ethical                                                                | 6.2, 9.1, 9.4                                          |

\* Competencies by Professional Body

| CODE                                                   | COMPETENCY                                                                                                                                      |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| INTERNATIONAL UNION FOR HEALTH PROMOTION AND EDUCATION |                                                                                                                                                 |
| B.8                                                    | The evidence base and research methods, including qualitative and quantitative methods, required to inform and evaluate health promotion action |
| 4.1                                                    | Use effective communication skills including written, verbal, nonverbal, and listening skills                                                   |
| 6.2                                                    | Use a variety of assessment methods including quantitative and qualitative research methods                                                     |
| 6.3                                                    | Collect, review and appraise relevant data, information and literature to inform health promotion action                                        |
| 9.1                                                    | Identify and use appropriate health promotion evaluation tools and research methods                                                             |
| 9.4                                                    | Use research and evidence-based strategies to inform practice                                                                                   |

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

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

#### 5.1. Pre-requisites

Students must be enrolled in SC420, SC423 or any PGRD Program

#### 5.2. Co-requisites

Not applicable

#### 5.3. Anti-requisites

SCI110 or SCI201 or CPH261

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

Basic mathematical and statistical skills are assumed.

#### 5.5. Microcredential Information

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

Formative feedback will be provided through weekly practice quizzes.

#### 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? |
|---------------|----------|--------------------|---------------------|-------------|----------------------------------------|-----------------------|---------------------------|
| All           | 1        | Quiz/zes           | Individual          | 40%         | Refer to instructions provided online. | Week 4                | Online Submission         |
| All           | 2        | Written Piece      | Individual          | 60%         | 2000 words                             | Week 8                | Online Submission         |

#### All - Assessment Task 1: Artefact Technical and Scientific (Quiz)

|                       |                                                                                                                |                                                                                                |                           |
|-----------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------|
| GOAL:                 | To demonstrate your skills and knowledge in reading and interpretation of quantitative research.               |                                                                                                |                           |
| PRODUCT:              | Quiz/zes                                                                                                       |                                                                                                |                           |
| AUTHORSHIP STATEMENT: |                                                                                                                |                                                                                                |                           |
| FORMAT:               | A mix of short answer and multiple-choice questions in week 4.<br><br>Further details will be provided online. |                                                                                                |                           |
| CRITERIA:             | No.                                                                                                            |                                                                                                | Learning Outcome assessed |
|                       | 1                                                                                                              | Accuracy in interpreting quantitative research, including appropriate integration of evidence. | 3 4                       |
|                       | 2                                                                                                              | Accuracy and appropriateness of terminology, including appropriate integration of evidence.    | 4                         |
|                       |                                                                                                                |                                                                                                |                           |
| GENERIC SKILLS:       | Problem solving, Information literacy                                                                          |                                                                                                |                           |

## All - Assessment Task 2: Research report

|                              |                                                                                                       |                                                                                                                                  |                                  |
|------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| <b>GOAL:</b>                 | To demonstrate your knowledge and skills in planning, conducting and reporting quantitative research. |                                                                                                                                  |                                  |
| <b>PRODUCT:</b>              | Written Piece                                                                                         |                                                                                                                                  |                                  |
| <b>AUTHORSHIP STATEMENT:</b> |                                                                                                       |                                                                                                                                  |                                  |
| <b>FORMAT:</b>               | Quantitative research report.<br><br>More details will be made available online.                      |                                                                                                                                  |                                  |
| <b>CRITERIA:</b>             | <b>No.</b>                                                                                            |                                                                                                                                  | <b>Learning Outcome assessed</b> |
|                              | 1                                                                                                     | Quality and accuracy of planning, conducting and reporting quantitative research, including appropriate integration of evidence. | 1 4 5                            |
|                              | 2                                                                                                     | Appropriateness and accuracy of descriptive and inferential statistics, including appropriate integration of evidence.           | 2                                |
|                              | 3                                                                                                     | Quality of scholarly communication, including appropriate integration of evidence.                                               | 4                                |
| <b>GENERIC SKILLS:</b>       | Communication, Organisation, Applying technologies, Information literacy                              |                                                                                                                                  |                                  |

### 6.4. Assessment to competency mapping

| PROGRAMME DELIVERY MODE                                          | ASSESSMENT TYPE | TITLE                                    | COMPETENCY | TEACHING METHODS            |
|------------------------------------------------------------------|-----------------|------------------------------------------|------------|-----------------------------|
| THE COMPHP CORE COMPETENCIES FRAMEWORK FOR HEALTH PROMOTION 2011 |                 |                                          |            |                             |
| All delivery modes                                               | Quiz/zes        | Artefact Technical and Scientific (Quiz) | 9.3        | Taught, Practiced, Assessed |
|                                                                  |                 |                                          | B.8        | Taught, Practiced, Assessed |
|                                                                  | Written Piece   | Research report                          | B.8        | Taught, Practiced, Assessed |
|                                                                  |                 |                                          | B.9        | Taught, Practiced, Assessed |

## 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. 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 Canvas site– Please log in as soon as possible.

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

There are no required/recommended resources for this course.

## 8.2. Specific requirements

You need access to IBM SPSS or Jamovi. If you are familiar with another suitable statistics package, you can contact the Course Coordinator who may approve for you to work with another statistics package; however, under these circumstances no support is likely to be available from USC.

USC supports SPSS on campus computing labs however licensing arrangements do not allow SPSS to be loaded on to student computers. However, it can be accessed online through USC Anywhere. You may wish to explore purchasing an SPSS license from the USC Co-op bookshop, or from other vendors (for example, [www.onthehub.com](http://www.onthehub.com)). (At the time of writing, a six-month licence from onthehub for IBM SPSS Statistics Base GradPack version 31 is about \$35.)

Jamovi is an opensource program that can be downloaded for free.

## 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 Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

### 10.2. Assessment: Additional Requirements

#### **Eligibility for Supplementary Assessment**

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

- (a) The final mark is in the percentage range 47% to 49.4%; and
- (b) The course is graded using the Standard Grading scale

### 10.3. Assessment: Submission penalties

Late submissions may be penalised up to and including the following maximum percentage of the assessment task's identified value, with weekdays and weekends included in the calculation of days late:

- (a) One day: deduct 5%;
- (b) Two days: deduct 10%;
- (c) Three days: deduct 20%;
- (d) Four days: deduct 40%;
- (e) Five days: deduct 60%;
- (f) Six days: deduct 80%;
- (g) Seven days: A result of zero is awarded for the assessment task.

The following penalties will apply for a late submission for an online examination:

Less than 15 minutes: No penalty

From 15 minutes to 30 minutes: 20% penalty

More than 30 minutes: 100% penalty

#### 10.4. 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
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit <https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

#### 10.5. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The [Student Charter](#) sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

#### 10.6. General Enquiries

For course-specific questions, contact your teaching staff or Course Coordinator.

For other enquiries or to access support, please contact Student Central:

- [UniSC Student Central](#)
- [UniSC Adelaide Student Central](#)