



# Biomechanics of Human Movement

COURSE LEVEL Undergraduate

YEAR 2021

## COURSE INFORMATION

**AREA/CATALOGUE**

HLTH 2025

**COURSE ID**

154200

**TIMETABLE/S**

Second Semester

(Study Period 5)

**COURSE LEVEL**

Undergraduate

**UNIT VALUE**

4.5

**OFFERED EXTERNALLY**

No

**UNIVERSITY-WIDE ELECTIVE****COURSE**

No

**COURSE OWNER**

UniSA Allied Health &amp; Human Performance

## Course aim

Apply mechanical principles to the analysis of human movement.

## Course content

Linear and angular kinematics: reference planes and axis of rotation; linear, rectilinear and curvilinear motion; angular motion; basic techniques for kinematic analysis; equations of constant acceleration and projectile motion; interpretation of kinematic data. Linear and angular kinetics: Newton's laws of motion and gravitation; centre of mass of a body; free-body diagrams; moment arms and levers; momentum and impulse; work, energy and power, stability and balance; interpretation of kinetic data. Human movement in a fluid medium: buoyancy, drag, lift and propulsion. Upper and lower body musculoskeletal tissue mechanics: stress, strain, modulus and



viscoelasticity; response of tissues to mechanical overload in injury and conditioning; degradation of tissue mechanics.

## Textbook(s)

Nil

## Prerequisite(s)

Nil

## Corequisite(s)

Nil

## Teaching method

INTERNAL, CITY EAST	
Component	Lecture
Duration	2 x 1 hour x 13 weeks
Component	Workshop
Duration	2 hours x 12 weeks

*Note: These components may or may not be scheduled in every study period. Please refer to the timetable for further details.*

## Assessment

INTERNAL, CITY EAST	
Task	Quiz
Length	-
Weighting	40%
Duration	Continuous



Task	Report
Length	2000 words
Weighting	40%
Duration	-
Task	Practical Assessment
Length	-
Weighting	20%
Duration	10 minutes

## Fees

EFTSL\*: 0.125

### Commonwealth Supported program (Band 4A)

To determine the fee for this course as part of a Commonwealth Supported program, go to:

[How to determine your Commonwealth Supported course fee. \(Opens new window\)](#)

### Fee-paying program for domestic and international students

International students and students undertaking this course as part of a postgraduate fee paying program must refer to the relevant program home page to determine the cost for undertaking this course.

### Non-award enrolment

Non-award tuition fees are set by the university. To determine the cost of this course, go to:

[How to determine the relevant non award tuition fee. \(Opens new window\)](#)

Not all courses are available on all of the above bases, and students must check to ensure that they are permitted to enrol in a particular course.

*\* Equivalent Full Time Study Load. Please note: all EFTSL values are published and calculated at ten decimal places. Values are displayed to three decimal places for ease of interpretation.*

## Course Coordinators





**Dr Robert Crowther** >

UniSA Allied Health & Human  
Performance



# Contact us

## Australian students

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## International students

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For further information please visit [unisa.edu.au/study](https://unisa.edu.au/study)

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