



## Course Outline

**Code: SPX201**

### **Title: Functional Anatomy**

<b>School:</b>	Health & Sport Sciences
<b>Teaching Session:</b>	Semester 1
<b>Year:</b>	2019
<b>Course Coordinator:</b>	Max Stuelcken Tel: (07) 5459 4629 Email: mstuelck@usc.edu.au
<b>Course Moderator:</b>	Rebecca Mellifont

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**

Functional Anatomy uses the basic structural knowledge provided in Human Anatomy to develop an understanding of the functional significance of the structures of the musculoskeletal system, within a movement setting (covering mechanical properties and functional characteristics). In addition to normal function, mechanisms of and adaptations to, common injuries, disease and rehabilitation is discussed. Although this course covers areas of dysfunction and the biological effects of rehabilitation, it is NOT a course in clinical anatomy, or musculoskeletal rehabilitation.

##### **1.2 Course topics**

Mechanical properties of human tissue  
Functional anatomy of the upper extremity (shoulder, elbow, and wrist)  
Functional anatomy of the trunk, pelvis, and hip  
Functional Anatomy of the lower extremity (knee, ankle, and foot)  
Posture / balance and introductory gait

#### **2. What level is this course?**

200 level Developing - Applying broad and/or deep knowledge and skills to new contexts. May require pre-requisites and introductory level knowledge/skills. Normally undertaken in the 2nd or 3rd year of an undergraduate program

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

12 units

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

<b>Specific Learning Outcomes</b> On successful completion of this course you should be able to:	<b>Assessment Tasks</b> You will be assessed on the learning outcome in task/s:	<b>Graduate Qualities or Professional Standards mapping</b> Completing these tasks successfully will contribute to you becoming:
Describe human movement using the appropriate terms and concepts to allow effective communication with colleagues and fellow practitioners	1. Quizzes 2. Applied functional anatomy workbook 3. Exam	Knowledgeable.
Identify the basic mechanical properties of the structures of the musculo-skeletal system	1. Quizzes 3. Exam	Knowledgeable.
Explain relationships between structures of the musculo-skeletal system during human movement	1. Quizzes 3. Exam	Knowledgeable.
Follow a structured process to determine the role of muscles in different movement tasks	2. Applied functional anatomy workbook 3. Exam	Empowered.
Determine some of the functional changes that occur in the musculo-skeletal system due to injury, illness, or impairment	2. Applied functional anatomy workbook 3. Exam	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 Enrolment restrictions

Nil

##### 5.2 Pre-requisites

LFS122 Human Anatomy

##### 5.3 Co-requisites

Nil

##### 5.4 Anti-requisites

Nil

##### 5.5 Specific assumed prior knowledge and skills (where applicable)

N/A

## 6. How am I going to be assessed?

### 6.1 Grading scale

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

### 6.2 Assessment tasks

Task No.	Assessment Tasks	Individual or Group	Weighting %	What is the duration / length?	When should I submit?	Where should I submit it?
1	Quizzes	Individual	3 x 10% for a total of 30%	30 minutes each	Weeks 3, 6, 9, & 12	Tutorial class
2	Applied functional anatomy workbook	Individual	25%	Completed over the course of the semester	During tutorial classes and online	Tutorial class
3	Exam	Individual	45%	2 hours	Central examination period	Central examination period
			100%			

#### Assessment Task 1: Quizzes

<b>Goal:</b>	These quizzes will enable you to demonstrate your ability to identify the basic biomechanical properties of the structures of the musculo-skeletal system, describe human movement, and explain relationships between structures of the musculo-skeletal system during human movement
<b>Product:</b>	Quiz
<b>Format:</b>	Each quiz will require a written response to a combination of multiple choice and short answer questions. Immediately following the completion of the quiz, the questions will be reviewed and discussed. There will be <u>four quizzes throughout the semester</u> . The content will be sourced from material presented in lecture and tutorial classes for each of the designated study blocks (mechanical properties, upper extremity, trunk and pelvis, and lower extremity). Each quiz will be undertaken during the first thirty minutes of the tutorial class in the week following the completion of each study block. Each quiz will be worth 10% and your best <u>three</u> marks across the four quizzes will contribute towards your final mark for the course.
<b>Criteria:</b>	You will be assessed on your ability to: <ol style="list-style-type: none"> <li>1. Use correct terms and concepts</li> <li>2. Identify the basic mechanical properties of structures such as bone, cartilage, muscle, tendon, and ligaments</li> <li>3. Explain relationships between structures of the musculo-skeletal system during human movement</li> <li>4. Determine the role of muscles in different movement tasks</li> <li>5. Convey information clearly and succinctly</li> </ol>
<b>Generic skill assessed</b>	<b>Skill assessment level</b>
Communication	Developing
Problem solving	Developing

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**Assessment Task 2: Applied functional anatomy workbook**

<b>Goal:</b>	This task has been designed to enable you to develop your functional anatomy communication skills and apply functional anatomy knowledge to different scenarios. This workbook also enables you to demonstrate your competency of key professional skills and practices.	
<b>Product:</b>	Completed workbook	
<b>Format:</b>	The workbook will be able to be purchased from MAPS. The workbook contains tasks and questions that will require you to demonstrate practical skills (range of motion measurements), present evidence for the selection of appropriate exercises for muscles, discuss the effect of injury, illness and impairment on movement and function, and answer questions related to material on each body region. Most of these tasks and questions can be completed within the two-hour tutorial classes. However, some tasks and questions will need to be completed online outside of the scheduled class times. It will often be beneficial to prepare for some of the tasks prior to coming to class. You must complete your own workbook. However, certain tasks will require you to work collaboratively with your peers. <b>Each item within your workbook must be signed off by your tutor.</b>	
<b>Criteria:</b>	You will be assessed on your ability to: <ul style="list-style-type: none"> <li>• Demonstrate competency at performing range of motion measurements</li> <li>• Use a structured approach to reasoning when identifying exercises for muscles</li> <li>• Communicate effectively using correct terms and concepts</li> <li>• Convey information clearly and succinctly</li> </ul>	
<b>Generic skill assessed</b>	<b>Skill assessment level</b>	
Communication	Developing	
Problem solving	Developing	

**Assessment Task 3: Exam**

<b>Goal:</b>	To provide you with an opportunity to demonstrate your knowledge, understanding, and ability to apply information obtained throughout the theory and practical components of the course	
<b>Product:</b>	Written examination held during the central examination period	
<b>Format:</b>	The structure will consist of multiple choice and short answer questions. The duration of the examination is 2 hours (plus reading time).	
<b>Criteria:</b>	You will be assessed on your ability to: <ol style="list-style-type: none"> <li>1. Describe human movement using the correct terms and concepts</li> <li>2. Identify the basic mechanical properties of structures such as bone, cartilage, muscle, tendon, and ligaments</li> <li>3. Explain relationships between structures of the musculo-skeletal system during human movement</li> <li>4. Follow a structured process to determine the role of muscles in different movement tasks</li> <li>5. Convey information clearly and succinctly</li> </ol>	
<b>Generic skill assessed</b>	<b>Skill assessment level</b>	
Communication	Developing	
Problem solving	Developing	

## 7. What are the course activities?

### 7.1 Directed study hours

Four hours contact per week over the 13 weeks of semester, which is broken down as follows:

1 x 2 hr lecture (in most weeks the first 45 minutes will be an interactive workshop and then there will be a one hour traditional lecture)

1 x 2 hr laboratory

The workload in this course is based on an average commitment of 10-12 hours per week to achieve a satisfactory level of performance.

### 7.2 Teaching semester/session(s) offered

Sippy Downs: Semester 1

### 7.3 Course content

Teaching Week / Module	What key concepts/content will I learn?	What activities will I engage in to learn the concepts/content?	
		Directed Study Activities	Independent Study Activities
Week 1	Introduction / Review of key terminology Mechanical properties 1 Review of key terminology Review of surface landmarks and key concepts	Lecture hour 1 Lecture hour 2 Tutorial hour 1 Tutorial hour 2	See Blackboard
Week 2	Mechanical properties Mechanical properties 2 Tasks & questions on mechanical properties Tasks & questions on mechanical properties	Workshop hour 1 Lecture hour 2 Tutorial hour 1 Tutorial hour 2	See Blackboard
Week 3	Shoulder complex Functional Anatomy of the shoulder Block 1 Quiz and Feedback Tasks & questions on the shoulder complex	Workshop hour 1 Lecture hour 2 Tutorial hour 1 Tutorial hour 2	See blackboard
Week 4	Shoulder and elbow Functional Anatomy of the elbow Tasks & questions on the shoulder complex Tasks & questions on the shoulder and elbow	Workshop hour 1 Lecture hour 2 Tutorial hour 1 Tutorial hour 2	See Blackboard
Week 5	Elbow and wrist Functional Anatomy of the wrist Tasks & questions on the elbow / wrist / hand Tasks & questions on the wrist / hand	Workshop hour 1 Lecture hour 2 Tutorial hour 1 Tutorial hour 2	See Blackboard
Week 6	Spine and trunk Functional Anatomy of the spine / trunk Block 2 Quiz and Feedback Tasks & questions on the spine / trunk	Workshop hour 1 Lecture hour 2 Tutorial hour 1 Tutorial hour 2	See Blackboard
Week 7	Spine/trunk and pelvis hip Functional Anatomy of the pelvis and hip Tasks & questions on the spine / trunk Tasks & questions on the pelvis/hip	Workshop hour 1 Lecture hour 2 Tutorial hour 1 Tutorial hour 2	See Blackboard
Week 8	Online material - posture Tasks & questions on the pelvis / hip Tasks & questions on the pelvis / hip	Public holiday Student directed	See Blackboard

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Week 9	Functional Anatomy of the knee Functional Anatomy of the knee Block 3 Quiz and Feedback Tasks & questions on the knee	Lecture hour 1 Lecture hour 2 Tutorial hour 1 Tutorial hour 2	See Blackboard
Week 10	Online material - knee Tasks & questions on the knee and ankle / foot	Public holiday  Student directed	See Blackboard
Week 11	Functional Anatomy of the knee/ ankle / foot Functional Anatomy of the ankle / foot Tasks & questions on the ankle / foot Tasks & questions on the ankle / foot	Lecture hour 1 Lecture hour 2 Tutorial hour 1 Tutorial hour 2	See Blackboard
Week 12	Introduction to walking gait Introduction to walking gait Block 4 Quiz and Feedback Tasks & questions on walking gait	Lecture hour 1 Lecture hour 2 Tutorial hour 1 Tutorial hour 2	See Blackboard
Week 13	Review Review Applied workbook (catch-up) Applied workbook (catch-up)	Lecture hour 1 Lecture hour 2 Tutorial hour 1 Tutorial hour 2	See Blackboard

Please note that the course activities may be subject to variation.

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

Please note that 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)

There are two very useful text books for this course. They present similar content but in a different way. Students should use the text book that presents the information in a way that is best suited for their learning style. I would recommend that students have a look through copies of both text books from the library before making a decision on which (if any) they would like to purchase.

Author	Year	Title	Publisher
Oatis, C.A.	2017	Kinesiology: The mechanics and pathomechanics of human movement. (3 <sup>rd</sup> edition)	Wolters Kluwer/Lippincott, Williams & Wilkins
Neumann, D.A.	2017	Kinesiology of the musculoskeletal system: Foundations for rehabilitation. (3 <sup>rd</sup> edition)	Mosby/Elsevier

### 8.3 Specific requirements

It will be beneficial to have a USB memory stick / flash drive (at least 4GB) for this and future courses so you can compile the relevant lecture notes, podcasts, and additional learning materials. These can be purchased relatively cheaply (less than \$15 from most major outlets).

## 9. Risk management

Risk assessments have been performed for all laboratory classes and a low level of health and safety risk exists. Some risk concerns may relate to the requirement for a small amount of physical activity (e.g. jumping), a small amount of physical contact (e.g. palpation of anatomical landmarks), the use of equipment, instruments, and tools; as well as manual handling items within the laboratory. It is your responsibility to research and understand the 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. It is important that you follow the instructions of the teaching staff, adhere to laboratory rules, and behave professionally and respectfully towards your peers.

## 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:

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

In the first instance, you should contact your tutor, then the Course Coordinator. Additional assistance is provided to all students through Academic Skills Advisers. To book an appointment or find a drop-in session go to [Student Hub](#).

Contact Student Central for further assistance: +61 7 5430 2890 or [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au)

#### 10.5 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>

#### 10.6 General Enquiries

In person:

- **USC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **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

**Tel:** +61 7 5430 2890

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