



Course Outline

Code: SPX302

Title: Exercise in Musculoskeletal Health

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| School: | Health & Sport Sciences |
| Teaching Session: | Semester 2 |
| Year: | 2020 |
| Course Coordinator: | Daniel Mellifont |
| Course Moderator: | Dr Max Stuelcken |

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

This advanced course provides opportunities for you to develop knowledge and skills that are required for independent and team provision of professional sport and exercise care for people with musculoskeletal issues. You will be directed to explore a client-focused and evidence-based approach. This course includes knowledge you will need when working with clients to achieve their functional and sporting performance goals, and to develop and deliver appropriate exercise programs for individuals and groups with musculoskeletal health concerns.

1.2 Course topics

Introduction to clinical reasoning
Evidence based practice
Client focused care and professional issues
Biopsychosocial and pain considerations
Differences in tissue responses to injury, disuse and exercise
Issues across the lifespan
Kinetic chain control debate and application
Musculoskeletal issues by region of the body
Exploring solutions for exercise adaptation for clients with specific musculoskeletal health concerns
In-depth team care of an individual with musculoskeletal health concerns

2. What level is this course?

300 level Graduate - Independent application of graduate knowledge and skills. Meets AQF and professional requirements. May require pre-requisites and developing level knowledge/skills. Normally taken in the 3rd or 4th 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?

| Specific Learning Outcomes On successful completion of this course you should be able to: | Assessment Tasks You will be assessed on the learning outcome in task/s: | Graduate Qualities or Professional Standards mapping Completing these tasks successfully will contribute to you becoming: |
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| Demonstrate foundational professional knowledge of exercise theory, practices and principles in the context of care of clients with musculoskeletal health concerns. | 2a, 2b, 3a, 3b | Knowledgeable. |
| Demonstrate professional skills (e.g. code of conduct, written documentation, assessment and intervention skills). | 1, 2b,3b | Engaged. |
| Competently apply research of musculoskeletal health and exercise evidence to individuals in your care and in the design and delivery of tailored exercise programs. | 2b, 3a, 3b | 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

SPX221 and (SPX201 or SPX202)

5.3 Co-requisites

Nil

5.4 Anti-requisites

Nil

5.5 Specific assumed prior knowledge and skills (where applicable)

- Resuscitation and first aid competencies
- Gross human anatomy and human physiology (incl. homeostasis and generic healing)
- The acute effects and management of musculoskeletal injury.
- The language of human movement and the roles of individual muscles in function.
- Common parameters for exercise prescription (e.g. acute training variables), types of fitness (e.g. strength, speed and stamina) and adaptations to load (e.g. specificity and progressive adaptations)
- Common musculoskeletal injuries and their basic initial assessment (e.g. systems approach, TOTAPS)
- The use of client assessment processes (i.e. client interview and goal setting), interview tools (e.g. ESSA pre exercise questionnaire), movement screening tools (e.g. SPX300 functional battery) and the precise assessment of movement parameters (e.g. range of motion measures, standardised measures of function and fitness)
- Medical record keeping including items such as SOAP notes and professional correspondence (e.g. SPX300)
- Understanding the imperative of adhering to ESSA’s professional standards including items such as the ESSA Code of Professional Conduct and Ethical Practice and the relevant ESSA Scope of Practice

- An ability to engage with the literature, including discretion with respect to sources (e.g. understanding of what is meant by “primary sources” and “peer reviewed journals”) and ability to use a database for searching (e.g. PubMed).
- The use of at least one recognised referencing style and referencing (incl. avoiding plagiarism)
- Information literacy skills including use of internet search engines, online learning environments (e.g. Blackboard), word processing software (e.g. Word, PowerPoint).
- Access to information technology resources to enable active engagement in online learning (incl. teleconferencing platforms such as Zoom) and assessment (e.g. computer, webcam, microphone, internet connectivity)
- Basic organisational skills including planning, time and document management.
- The capacity to attend and engage in all classes and exam periods unless officially approved otherwise.

[Note – each of these assumed prior knowledge and skills should be covered in the pre-requisite pathway]

6. How am I going to be assessed?

6.1 Grading scale

Limited – Pass (PU), Fail (UF). All assessment tasks are required to be passed for successful completion of the course.

6.2 Details of early feedback on progress

Early feedback on progress is first offered via the regular quizzes, which commence with the Week 2 Quiz (Task 2a; due on the morning prior to the Week 2 lecture). The quizzes relate to “must know” professional knowledge and competencies and as such, all questions must be answered successfully. The difficulty of this challenge is offset by offering unlimited attempts prior to the due date. This provides students with the opportunity to demonstrate assumed prior knowledge, facilitates scaffolding of learning as part of growth across programs and sensitises students to important clinical questions that are explored at greater depth in classes.

6.3 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 | Code of Conduct | Individual | PU/UF | N/A | Continuous | Continuous |
| 2a | Foundation: Quizzes | Individual | PU/UF | ~1hr/week | Lecture Day 8am Weeks 2-6 & 8-13 | Blackboard |
| 2b | Foundation: Essential Skills | Individual | PU/UF | ~1 hr/skill | Various – see Blackboard | In class |
| 3a | Professional Practice: Exam Final | Individual | PU/UF | ~2hrs | Central Exam Period | Central Exam |
| 3b | Professional Practice: Practical Exam | Individual | PU/UF | ~1hr (incl. reading) | | |

Assessment Task 1: Code of Conduct

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| Goal: | This task ensures that you demonstrate professional and ethical conduct required for ESSA (Exercise & Sport Science Australia) and the University's policies covering student conduct. This is a continuous assessment as you are required to demonstrate care, respect and professional behaviour across the entire suite of activities that you will be engaged in while in the professional course of SPX302. |
| Product: | Professional behaviour in accordance with industry and university requirements. |
| Format: | During your entire course experience, you are required to conduct yourself in a professional, respectful and appropriate manner. |
| Criteria: | <ul style="list-style-type: none"> • Behaviour (incl. correspondence) that is in accordance with the ESSA's Code of Professional Conduct and Ethical Practice • Adherence to USC's Student Conduct - Governing Policy |

Assessment Task 2a: Foundation: Quizzes

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| Goal: | <p>To facilitate your development of essential disciplinary knowledge and critical evaluation. You will be assessed on your ability to answer questions that explore the consideration and critical evaluation of musculoskeletal health principles and evidence. This will also provide you with important feedback to make early and more informed decisions about your engagement in the course.</p> <p>Earlier quizzes tend to focus on applying essential pre-requisite and new learning experiences in exercise for musculoskeletal health (e.g. principles of sports medicine and musculoskeletal health, professional practice, applied anatomy, healing and evidence-based practice).</p> <p>Subsequent quizzes involve more challenging questions which provide you with important feedback regarding your progress towards the skilled application of knowledge in the field.</p> |
| Product: | Online quiz (Blackboard) |
| Format: | <p>Individual online quizzes consisting of no more than 50 questions (often True/False, MCQ's, multiple answer and/or fill in the blank) which relate to the coming and/or previous weeks' learning materials and experiences.</p> <p>The quizzes are named by the week they are due. They will be available on Blackboard after the previous week's classes and will fall due on the morning of the lecture (e.g. the Week 2 Quiz will be available by 11:59pm on the day after the last lab in Week 1 and is due at 8 am on the day of the Week 2 lecture)</p> <p>NOTE –</p> <ul style="list-style-type: none"> • Unlimited attempts are allowed prior to the quiz falling due • Applications for assessment extension (AAE) must be based on valid grounds and must be submitted prior to the due date (as per the Application for Assessment Extension (AAE) procedures of the School of Health and Sport Sciences, FoSHEE, USC). • You are encouraged in the strongest possible terms to complete the quiz well ahead of the deadline and/or while logged into a USC computer to minimise the impact of connectivity and compatibility issues (as regularly occurs with unstable personal or off campus Blackboard access). • If you encounter an IT issue that prevents you from successfully completing the quiz before the due date, you must take a screenshot, email USC's IT services and cc your course coordinator |
| Criteria: | <p>You will be assessed on your ability to demonstrate knowledge and understanding of musculoskeletal principles and evidence (incl. professional issues and the effects of exercise, injury and disuse on exercise prescription, tissue responses and function).</p> <p>Each week at least one of your attempts must have ALL questions answered correctly to pass this task</p> |

Assessment Task 2b: Foundation: Skills

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| Goal: | This is an essential component of your graduate professional package that you will develop and evidence in an e-portfolio. It is necessary for you to complete all elements for accreditation and graduation. You will demonstrate your proficiency in undertaking practical skills that have been identified as being essential and critical in the field. |
| Product: | The product will necessarily vary according to the skill in question (e.g. client record versus exercise intervention). These may include products such as completed documents, video vignettes and/or Blackboard ("learning management system") grades record of demonstrating competency in real time tasks. Regardless of the format of the product, evidence of competencies need to be included in your e-portfolio for graduation. |
| Format: | <p>After related learning opportunities in exercise in musculoskeletal health you will be required to demonstrate essential professional skills. These relate to different aspects of clinical practice. For example; record keeping, professional communication, literature searching and evaluation for application in the care of a client/s, demonstration of specific safety checks & instructions, assessment of a client, leading exercise with individuals and groups, relevant professional competency tasks that were unable to be demonstrated in pre-requisite courses due to Covid-19. Hence, the format will vary as necessitated by the nature of the task (e.g. completion of a document for professional communication versus creating a video vignette demonstrating safe and effective assessment and intervention skills). See Blackboard for further information. Specific tasks will change between years in response to changes in the field, accreditation and program design. The examples below are foreseen as most likely to occur each year:</p> <ul style="list-style-type: none"> - Written communication skills will require production of a permanent document with client, author, time and date clearly noted (e.g. image of hard copy or non-modifiable e-document). - For time critical practical skills or skills where industry demands safe and effective capacity without supervision or feedback, you will be required to demonstrate these live (e.g. physical face-to-face or via teleconferencing) with a colleague. - For other practical skills you will create video vignettes that demonstrate your competent practice. <p>Regardless of the format, a tutor will determine your competency, provide feedback as necessary and record your grade for each task in Blackboard. Hence, Blackboard will provide the source of evidence for demonstration of the skills.</p> <p>For most essential skills you will need to work with others, both in and outside of class, to simulate occasions of care. Hence, you must make reasonable efforts to take your turn to role play a client such that one of your peers can demonstrate their competent execution of skills.</p> |
| Criteria: | <p>You will be required to demonstrate safe and effective practice:</p> <p>This includes performance and communicating your rationale (e.g. for assessment, decision making and/or intervention) your program (field) of study.</p> <p>[Note - In the context of competency based training and assessment of practical skills, if you do not demonstrate competent practice on your first attempt you will be given the opportunity to resubmit.]</p> |

Assessment Task 3a: Professional Practice: Exam Final

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| Goal: | To facilitate your development of understanding and analysis of musculoskeletal health knowledge and principles. This includes the application of your learning to specific case scenarios. Hence, this task relates directly to professional competencies. |
| Product: | You will individually complete a paper based exam in the University's Central Examination Period |
| Format: | <p>A two (2) hour exam consisting of multiple choice questions (MCQ's) and short answer questions that explore questions from across the course.</p> <p>Questions vary in complexity from questions requiring recall of musculoskeletal health knowledge and principles to their application in challenging case scenarios.</p> <p>The areas explored across the exam include (but are not limited to):</p> <ul style="list-style-type: none"> • The principles of musculoskeletal health and rehabilitation strategies • Importance of professional issues and clinical reasoning • The effects of exercise, injury and disuse on exercise prescription, tissue responses and function • Understanding of the differences in injury and healing processes with different tissues • Principles of safe and effective exercise prescription • Assessment of a client with an ongoing musculoskeletal issue (e.g. low back pain) • Knowledge and treatment of common musculoskeletal health issues • Special considerations in athletes, clients and patients across the lifespan (including specific populations such as children, older people, females and people with disabilities) • Providing example exercises for specific cases including detailed rationales and acute training variables <p>A formative take home theory exam will be provided to assist your growth in learning and preparation for this end of semester exam. This written examination will be made available on Blackboard for you (midday on the day after the last lab in Week 6) to <i>take home</i>, complete and bring to the Week 7 lecture where we explore both the exam questions and your questions.</p> |
| Criteria: | <p>Questions will be framed to test your ability to describe, explain and apply the discipline knowledge, principles and skills covered across the semester. Most short answer questions require you to provide a clinical example to illustrate your ability to apply your learning to the care of individuals or groups with musculoskeletal health concerns and a variety of functional goals.</p> <p>MCQ's will be allocated one mark per question.</p> <p>The marks for short answer questions vary and will be noted clearly on the exam paper.</p> <p>Total marks must reach 50% (rounded) or greater to pass this task.</p> |

Assessment Task 3b: Professional Practice: Practical Exam

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| Goal: | In this practical evaluation you will explain and apply musculoskeletal theory and professional considerations in the design and delivery of tailored exercise programs |
| Product: | A practical exam |
| Format: | <p>This will occur during the University's Central Examination Period, where you will act as a sports and exercise scientist in providing care to an individual with musculoskeletal health concerns. This task is designed with flexibility to allow for it to be conducted either by telehealth (e.g. zoom meeting) or as a traditional face-to-face exam (the decision regarding the format will be clearly communicated via Blackboard).</p> <p>You will complete one (1) simulated scenario randomly selected, on the spot, from a pool of scenarios. You will have sufficient reading time (~20 minutes TBC) to familiarise yourself with the (simulated) client's case details and plan exercises and communication strategies before guiding your client through a short exercise session (~15 minutes TBC).</p> <p>The client will be role played by a fellow student (i.e. your <i>prac partner</i>) allocated to you no later than the end of week 13. Of course, this means that you will also be required to act as a client for your <i>prac partner's</i> scenario as they take their turn to complete the practical exam.</p> |
| Criteria: | <p>You will be assessed on your:</p> <ul style="list-style-type: none"> • Respectful, ethical and professional conduct (e.g. establishing informed consent, providing a psychologically safe environment for client care, respecting your client's beliefs and wishes) • Safe practice including identification and management of safety concerns • Ability to verbally communicate your understanding of musculoskeletal health theory and clinical reasoning for interventions • Demonstrated effectiveness of exercise for the (simulated) client • Timeliness and optimisation of the productivity of the exercise session in the limited time available <p>The criteria sheet (<i>rubric</i>) will be available on Blackboard and will be discussed in labs.</p> |

7. What are the course activities?**7.1 Directed study hours**

This course is intended to build your skills relevant to sport and exercise science / clinical exercise science.

Attendance at not fewer than 80% of classes is a requirement for this course. An attendance roll will be taken in all classes. Students who are unable to attend 80% of classes must apply for an Application to Assessment Extension (AAE) and provide supporting evidence (e.g. medical certificate).

The directed study hours listed here are a portion of the workload for this course. 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.

This course will be delivered via technology-enabled learning and teaching. All lectures/workshops will remain in this mode for Semester 2 2020. When government guidelines allow, and if practical, students that elected on-campus study via the class selection process will be advised via Blackboard if/when on-campus sessions can resume.

| Location: | Directed study hours for location: |
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| USC Sunshine Coast | Four hours contact per week over 12 weeks; 1 x 2 hr lecture and 1 x 2 hr lab One or more weeks may involve independent learning activities (see Blackboard for more information). |

7.2 Course content

| What key concepts/content will I learn? |
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| Week # / Module # | |
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| 1 | Lecture - Professional Issues and Dilemmas <ul style="list-style-type: none"> • Legal, ethical and reasoning questions Lab – Improving posture <ul style="list-style-type: none"> • Cues and exercises to enhance postural control |
| 2 | Lecture - <i>“Is it Healing?”</i> <ul style="list-style-type: none"> • Varying tissue responses to injury (incl. muscle, bone, tendon, cartilage) Lab – Flexibility Skills <ul style="list-style-type: none"> • [Different interventions for different clients, tissues and contexts] |
| 3 | Lecture - <i>“The skeleton is alive!”</i> <ul style="list-style-type: none"> • Bone adaptation and injury across the lifespan Lab – Preventing harm from falls |
| 4 | Lecture & Lab - <i>“What is wrong with my back?”</i> <ul style="list-style-type: none"> • Lumbopelvic musk conditions and exercise strategies |
| 5 | Lecture & Lab – Neck and thorax <ul style="list-style-type: none"> • Cervical and thoracic musk conditions and exercise strategies |
| 6 | Lecture & Lab – Upper limb with a focus on Shoulder <ul style="list-style-type: none"> • Centreing, adaptability and tailored kinetic chain control (KCC) |
| 7 | Lecture - Mid Semester Theory Exam <ul style="list-style-type: none"> • Exploring the questions and your questions Lab - Core and kinetic control progression |
| 8 | Lecture & Lab – Hip and Groin <ul style="list-style-type: none"> • Musk conditions and exercise strategies |
| 9 | Lecture & Lab – Thigh <ul style="list-style-type: none"> • Musk conditions and exercise strategies |
| 10 | Independent Learning [no classes]- <i>“No threat, no pain?”</i> <ul style="list-style-type: none"> • Biopsychosocial & Pain Considerations for Musk Rehab • Common outcome measures and why you must be able to use and interpret them |
| 11 | Lecture & Lab - <i>“Tight, weak, stiff, painful & unstable”</i> <ul style="list-style-type: none"> • Knee musk conditions and exercise strategies |
| 12 | Lecture & Lab – The leg <ul style="list-style-type: none"> • Musk condition and exercise strategies for the shank, ankle and foot |
| 13 | Lecture & Lab – Athletes with impairment & <i>“What’s New”</i> <ul style="list-style-type: none"> • Specific populations (e.g. seated athletes) • New evidence & practice |

Please note that the course content 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)

Please note that you need to have regular access to the resource(s) listed below as they are required:

| Author | Year | Title | Publisher |
|--------------------------------|------|---|-------------|
| Brukner, P. [and eight others] | 2017 | Clinical Sports Medicine 5 th Edition Volume 1 | McGraw Hill |

8.2 Specific requirements

In this course students will be required to take part in practical sport and exercise science activities, which may include undertaking vigorous exercise, physical contact with other members of the class, require wearing specialist clothing, using sports equipment, partial disrobing, or connection to instruments for scientific measurement. This course has a particular focus on treating all individuals with respect. This is essential in clinical practice (incl. simulations) where there are well recognized risks of harm with disrespectful behavior and power imbalances in the client-professional relationship. Importantly, to ensure a safe environment for all, students may be directed to leave the class and/or course if they demonstrate disrespectful behavior.

Clothing Requirements:

- You will need clothes suitable for clinical assessment and exercise for all classes. You should wear clothes that allow you to move whilst preserving your modesty (e.g. gym clothes or similar). In particular you should prepare by wearing clothing that allows, with your informed consent only, the clinician to observe the body region that is the focus of the week and the lower back whenever core control is relevant.

9. Risk management

This course does include various activities with some risk (e.g. musculoskeletal injury with physical assessment and exercise interventions; side effects such as allergy and skin trauma with sports taping) but overall the risk is low or negligible given that the demands of the learning experiences are less than reasonably expected in general sport and activities of daily living, and because musculoskeletal health care (incl. risk reduction and clinical care) is the focus of this course.

It is your responsibility as a student 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. It is also your responsibility to familiarise yourself with the University's general health and safety principles by reviewing the [online Health Safety and Wellbeing training module 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

Limited Graded Course:

This course will be graded as Pass in a Limited Grade Course (PU) or Fail in a Limited Grade Course (UF) as per clause 4.1.3 and 4.1.4 of the Grades and Grade Point Average (GPA) - Institutional Operating Policy of the USC. In a course eligible to use Limited Grades, all assessment items in that course are marked on a Pass/Fail basis and all assessment tasks are required to be passed for a student to successfully complete the course. Supplementary assessment is not available in courses using Limited Grades.

10.3 Assessment: Submission penalties

You must contact your Course Coordinator and provide the required documentation if you require an extension or alternate assessment.

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

10.5 Wellbeing Services

Student Wellbeing Support Staff are available to assist on a wide range of personal, academic, social and psychological matters to foster positive mental health and wellbeing for your success. Student Wellbeing is comprised of professionally qualified staff in counselling, health and disability Services.

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, mental health issue, learning disorder, injury or illness, or you are a primary carer for someone with a disability, [AccessAbility Services](#) can provide assistance, advocacy and reasonable academic adjustments.

To book an appointment with either service go to [Student Hub](#), email studentwellbeing@usc.edu.au or accessability@usc.edu.au or call 07 5430 1226

10.6 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>

10.7 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