

Course Outline (Higher Education)

School:	School of Science, Psychology and Sport
Course Title:	APPLIED EXERCISE SCIENCE
Course ID:	EXSCI3174
Credit Points:	15.00
Prerequisite(s):	(Successful completion of two years full time equivalent of exercise and sport science degree (PX5))
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	069901

Description of the Course :

The course is designed for students enrolled in the exercise science program, to extend individual and independent learning skills. Students will undertake a supervised research project or literature review involving research of a publishable standard, which forms the basis of a final report presented at the end of the course. The course will explore current scientific problems in relevant fields of research. As part of the course, students are trained to develop a project or literature review with defined objectives, collate, evaluate, critically interpret experimental data using statistical analysis and communicate their results scientifically.

Grade Scheme: Graded (HD, D, C, etc.)

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

Program Level:

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Introductory	■	■	■	■	■	■
Intermediate	■	■	■	■	■	■
Advanced	■	■	✓	■	■	■

Learning Outcomes:

On successful completion of the course the students are expected to be able to:

Knowledge:

- K1.** Critically appraise and demonstrate an in-depth knowledge of an appropriate topic area within the field of Exercise and Sport Science in the form of a literature review
- K2.** Describe and appraise appropriate methods for data collection and analysis within the field of Exercise and Sport Science
- K3.** Discuss potential ethical issues associated with scientific research

Skills:

- S1.** Demonstrate problem solving skills through devising appropriate methodological approaches to address the research question
- S2.** Collect, collate, analyse and interpret field and/or laboratory data
- S3.** Communicate results in oral and written form.
- S4.** Demonstrate ability to participate in individual or group research projects (as required).
- S5.** Operate with a significant degree of independence, whilst efficient and meaningful dialogue with a project supervisor.

Application of knowledge and skills:

- A1.** Collect and scrutinize scientific research literature and develop an independent interpretation in order to establish the approaches and scope of the research project.
- A2.** Decide on methodological approaches to obtain and collect data in an appropriate manner, and analyse this data to help understand scientific problems.
- A3.** Evaluate and communicate research results in oral and written form, requiring critical analysis, synthesis and organization of knowledge and construction of a rational and lucid scientific argument.
- A4.** Apply problem solving and knowledge of statistical methods to critically analyse data and communicate results using both written and oral approaches.

Course Content:

Topic may include:

- Identifying the research question
- Developing aims and objectives
- Conducting a literature review
- Writing a research proposal
- Qualitative, quantitative or mixed methods design approach
- Applying for ethics
- Collecting and analyzing data
- Reporting findings – written and oral approaches

Values:

- V1.** Experience the excitement of discovery in scientific research.
- V2.** Understand the need for scientific communication in various formats.
- V3.** Recognize the importance of project planning.
- V4.** Appreciate the need for individual and team-based work and its application in the workplace.
- V5.** Adoption of a respectful and courteous manner to colleagues.
- V6.** Understand the importance of being scrupulous in acknowledging the contribution of others to one's work.

Graduate Attributes

The Federation University FedUni graduate attributes (GA) are entrenched in the Higher Education Graduate Attributes Policy (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni programs. Graduate attribute attainment typically follows an incremental development process mapped through program progression. **One or more graduate attributes must be evident in the specified learning outcomes and assessment for each FedUni course, and all attributes must be directly assessed in each program**

Graduate attribute and descriptor		Development and acquisition of GAs in the course			
		Learning Outcomes (KSA)	Code A. Direct B. Indirect N/A Not addressed	Assessment task (AT#)	Code A. Certain B. Likely C. Possible N/A Not likely
GA 1 Thinkers	Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.	K1, K2, K3, A1	A	AT1	A
GA 2 Innovators	Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.	K1, K2, S1, A2, A4	B	AT2, AT3	B
GA 3 Citizens	Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.	K3,	B	AT1, AT3	B
GA 4 Communicators	Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand.	S3, A3	B	AT1, AT2, AT3, AT4	B
GA 5 Leaders	Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.	S1, S2, S3, S4, S5, A4	B	AT1	C

Learning Task and Assessment:

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
S1, S2, S4, S5, A1 - A4	Supervisor's assessment: level of engagement with research project and demonstration of appropriate laboratory/field skills	Continuous assessment throughout the semester	10 - 20%
K1 - K3, S1, S3, S5, A1 - A4	Completion of literature review/project proposal	Research proposal	10 - 20%
K1 - K3, S1 - S6, A1 - A4	Completion of a scientific/technical project report.	Research Report	50 - 60%
K1, K2, S1 - S5, A1 - A4	Presentation of research findings to a scientifically literate audience.	Oral Presentation	20 - 30%

Adopted Reference Style:

APA