

# Course Outline (Higher Education)

<b>School:</b>	School of Science, Psychology and Sports
<b>Course Title:</b>	DELIVERY AND PROGRAM DESIGN FOR ENDURANCE QUALITIES
<b>Course ID:</b>	SCOND6004
<b>Credit Points:</b>	15.00
<b>Prerequisite(s):</b>	Nil
<b>Co-requisite(s):</b>	Nil
<b>Exclusion(s):</b>	Nil
<b>ASCED:</b>	069903

## Description of the Course :

This course will prepare students to design training programs to develop endurance qualities for athletes in accordance with the demands of their sport. Students will learn to determine the energy system contributions, aerobic power, anaerobic threshold and other demands to optimise training adaptations. The physiological mechanisms underpinning endurance performance will be used to provide evidence for program design. The application of various endurance training methods such as long slow distance, interval training and fartlek will be investigated. Students will learn the effect of various endurance training tasks on the development of other physical qualities, and how to program to minimise any potential interference effects. Students will understand and conduct field tests of endurance and will be able to interpret a VO2 max test with a comprehensive report indicating training recommendations.

**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:

#### Knowledge:

- K1.** Recognise physiological mechanisms that underpin endurance performance.
- K2.** Analyse the role of various training methods to develop endurance qualities and the physiological adaptations.
- K3.** Evaluate the role of altitude training and heat acclimatisation.
- K4.** Determine the different endurance demands between various individual and team sports.
- K5.** Examine the different field tests of endurance qualities and their applicability.
- K6.** Distinguish between repeated sprint ability, intermittent endurance performance and continuous endurance capabilities.
- K7.** Compare the metabolic and neuromuscular responses to differing structures of high intensity interval training.
- K8.** Determine the impact of endurance training strategies on the development of strength qualities.

#### Skills:

- S1.** Formulate training programs to maximise positive adaptations and prevent over-reaching and over-training.
- S2.** Conduct selected tests for the purposes of athlete profiling and monitoring training programs.
- S3.** Analyse the demands of individual and team sports to determine the role of endurance development to sports performance.
- S4.** Design small-sided games to develop endurance qualities in team sport athletes.
- S5.** Devise strategies to implement interval training and testing in a team and individual setting.
- S6.** Determine specific training intensities from test results (e.g. Maximal Aerobic Speed test).
- S7.** Assess and monitor training intensity.

#### Application of knowledge and skills:

- A1.** Apply principles of training to design safe and effective endurance programs.
- A2.** Evaluate a VO<sub>2</sub> max test to determine recommended training for an athletes needs.
- A3.** Create specific training plans to enhance performance for athletes in various sports and in various positions in team sports.
- A4.** Design interval training based on the expected physiological response.

#### Course Content:

- Factors and mechanisms contributing to endurance performance
- Energy system contributions in endurance performance
- Methods of endurance training and adaptations
- Designing endurance training for team sports
- Concurrent endurance and strength training

- Altitude and heat acclimatisation and endurance performance
- Overreaching and overtraining
- Conducting field tests of endurance qualities
- Assessment of maximum aerobic power, anaerobic threshold and running economy
- The role of laboratory and field tests of endurance and implications for training

**Values:**

- V1.** Appreciate the different approaches applied to individual and team sport athletes
- V2.** Appreciate the attention to detail required to conduct valid and reliable tests

**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,K4,K5	A	AT1, AT2, AT3, AT4	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.	K6,K7,S3,S4,S5,S6, S7,A3,A4	A	AT1, AT2, AT3, AT4	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.	A1	B	AT1, AT3	C
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.	S2	A	AT1, AT2	A

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		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 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.	K8, A2	B	AT1, AT2, AT3	C

**Learning Task and Assessment:**

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1, K2, K4, K5, K6, K7, K8, S1, S2, S3, S4, A1	Students will engage and participate in practical sessions, group work and discussions addressing their comprehension and competency of the content.	Class participation	S/U
K2, K3, K6, K8, S1, S4, S6, S7, A1, A3, A4	Students will be required to design a training plan to develop endurance qualities in relation to a specific scenario.	Assignment case study	30-50%
S2, A2	Students will interpret the results of an endurance test and present training recommendations in report format.	Laboratory report	20-40%
K1, K2, K3, K4, K5, K6, K7, S1, S3, S4, S6, A1	Understanding, interpretation and written communication of material presented in all classes and on-line.	Written exam short answer and multiple choice	20-40%

**Adopted Reference Style:**

Other (Journal of strength and Conditioning Research )