SAMPLE COURSE OUTLINE

PHYSICAL EDUCATION STUDIES
ATAR YEAR 11
Sample course outline
Physical Education Studies – ATAR Year 11
Unit 1 and Unit 2

<table>
<thead>
<tr>
<th>Week</th>
<th>Key teaching points</th>
<th>Assessment</th>
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| 1–2  | **Developing physical skills and tactics**  
- develop a range of sport-specific movement skills and techniques to enhance performance  
- select and adapt skills and techniques in games and other competitive situations  
- select and apply tactics to solve sport specific tactical problems  
  - gain and maintain possession and control  
  - start and restart play  
  - create, use and define space  
  - respond to opposition formations and patterns of play  
**Note:** The above content areas are ongoing and will be addressed throughout the practical skill development teaching and learning activities.  
**Functional anatomy**  
- use of musculoskeletal structures in the production of movement  
  - bones  
    - humerus  
    - radius  
    - ulna  
    - femur  
    - patella  
  - muscles  
    - biceps  
    - triceps  
    - gastrocnemius  
    - trapezius  
    - deltoid  
- tibia  
- fibula  
- pelvis  
- sternum  
- ribs  
- carpals  
- metacarpals  
- phalanges  
- tarsals  
- metatarsals  
- biceps  
- triceps  
- gastrocnemius  
- trapezius  
- deltoid  
- quadriceps  
- hamstrings  
- tibialis anterior  
- adductor group  
- latissimus dorsi  
- soleus  
- abdominal  
- gluteus maximus  
- pectorals  |
| 3    | **Functional anatomy**  
- structure and function of the circulatory system  
  - heart  
  - arteries  
  - veins  
  - capillaries  
  - blood  
- structure and function of the respiratory system  
  - lungs, diaphragm, alveoli  
  - mechanics of breathing  |
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<tr>
<td>4–5</td>
<td><strong>Functional anatomy</strong>&lt;br&gt;• characteristics of skeletal muscle tissue and their relationship to the production of movement for physical activity&lt;br&gt;  ▪ fibre types (slow and fast twitch)&lt;br&gt;  ▪ excitability&lt;br&gt;  ▪ contractibility&lt;br&gt;  ▪ extendibility&lt;br&gt;  ▪ elasticity&lt;br&gt;• relationship between the musculoskeletal system and joint movement in the creation of movement&lt;br&gt;  ▪ antagonist pairs&lt;br&gt;  ▪ origin and insertion points of muscles&lt;br&gt;• movement types created by muscle action and joint movement&lt;br&gt;  ▪ flexion&lt;br&gt;  ▪ circumduction&lt;br&gt;  ▪ extension&lt;br&gt;  ▪ supination&lt;br&gt;  ▪ rotation&lt;br&gt;  ▪ dorsi flexion&lt;br&gt;  ▪ pronation&lt;br&gt;  ▪ abduction&lt;br&gt;  ▪ plantar flexion&lt;br&gt;  ▪ adduction</td>
<td><strong>Task 1: topic test</strong>&lt;br&gt;(7.5%)</td>
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<td>6–7</td>
<td><strong>Biomechanics</strong>&lt;br&gt;• definition of linear motion and how it applies to a selected sport in relation to speed, velocity, acceleration, instantaneous measure/mean measure&lt;br&gt;• definition of projectile motion and how it applies to a selected sport in relation to the principle of optimal projection, parabolic trajectory, release of projectiles – angle, velocity and height</td>
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<td>8–9</td>
<td><strong>Biomechanics</strong>&lt;br&gt;• definition of angular motion and how it applies to a selected sport in relation to angular velocity&lt;br&gt;• definition of general motion and how it applies to a selected sport</td>
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<td>10–11</td>
<td><strong>Biomechanics</strong>&lt;br&gt;• definition of the principle of balance and how it applies to a selected sport in relation to:&lt;br&gt;  ▪ the centre/line of gravity, width of base of support, height of centre of gravity&lt;br&gt;  ▪ static balance&lt;br&gt;  ▪ dynamic balance</td>
<td><strong>Task 2: skill performance</strong>&lt;br&gt;(5%)</td>
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<td>12–13</td>
<td><strong>Biomechanics</strong>&lt;br&gt;• definition of Newton’s First, Second and Third Laws of Motion, and how they apply to sporting contexts&lt;br&gt;• the coordination of linear motion&lt;br&gt;  ▪ sequential versus simultaneous movement – accuracy and power&lt;br&gt;  ▪ summation of velocity</td>
<td><strong>Task 3: biomechanical analysis</strong>&lt;br&gt;(7.5%)</td>
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| 14   | **Motor learning and coaching**  
• classification of motor skills  
  ▪ gross  
  ▪ fine  
  ▪ open  
  ▪ closed  
  ▪ discrete  
  ▪ serial  
  ▪ continuous  
• Fitts and Posner phases of motor learning and how they can be used to develop/improve specific physical skills |  |
| 15   | **Motor learning and coaching**  
• types of cues used to improve performance  
  ▪ visual  
  ▪ verbal  
  ▪ proprioceptive  
• phases of information processing during skill performance  
  ▪ identification of stimuli/input  
  ▪ response identification/decision making  
  ▪ response/output  
  ▪ feedback |  |
| 16   | **Motor learning and coaching**  
• types of feedback  
  ▪ intrinsic (inherent)  
  ▪ extrinsic (augmented) – terminal, concurrent, verbal, non-verbal  
• purpose of feedback  
  ▪ reinforcement  
  ▪ motivation | Task 4: Semester 1 written examination (15%) (in exam week) |
| 17   | **Motor learning and coaching**  
• relationship between skill learning processes and individual differences related to age, skill and fitness level, injury, level of competition, and type of activity |  |
| 18   | **Exercise physiology**  
• immediate responses to physical activity  
  ▪ heart rate (HR)  
  ▪ stroke volume  
  ▪ blood pressure (BP)  
  ▪ cardiac output  
  ▪ tidal volume  
  ▪ respiratory rate  
  ▪ maximum oxygen uptake (VO₂ max)  
  ▪ gas exchange  
  ▪ arteriovenous oxygen difference  
  ▪ blood redistribution |  |
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| 19   | **Exercise physiology**  
  • long-term adaptations to training  
  ▪ cardiac output  
  ▪ heart rate (HR)  
  ▪ blood pressure (BP)  
  ▪ blood volume/haemoglobin  
  ▪ stroke volume  
  ▪ capillarisation  
  ▪ ventilation  
  ▪ oxygen exchange  
  ▪ muscle hypertrophy  
  ▪ increased flexibility  
  ▪ increased aerobic and anaerobic capacity |  |
| 20   | Exercise physiology  
  • utilisation of carbohydrates, fats and proteins as energy sources for physical activity, and their role in the onset of fatigue | Task 5: skill performance (10%) |
| 21   | **Exercise physiology**  
  • response of energy systems to physical activity  
  ▪ anaerobic – adenosine triphosphate-creatine phosphate (ATP-CP)  
  ▪ lactic acid  
  ▪ aerobic |  |
| 22   | **Exercise physiology**  
  • relationship between energy systems and types of physical activity  
  ▪ the energy system continuum | Task 6: physiology lab (7.5%) |
| 23   | **Exercise physiology**  
  • definition of training types  
  ▪ resistance training – isometric, isotonic, isokinetic  
  ▪ interval training  
  ▪ continuous training  
  ▪ circuit training  
  ▪ fartlek  
  ▪ flexibility  
  ▪ plyometrics |  |
| 24   | **Exercise physiology**  
  • principles of training  
  ▪ specificity in relation to the nature of activity, positions and roles  
  ▪ intensity  
  ▪ duration  
  ▪ frequency  
  ▪ progressive overload  
  ▪ reversibility  
  • components of fitness  
  ▪ cardiorespiratory endurance  
  ▪ muscular strength  
  ▪ muscular endurance  
  ▪ flexibility  
  ▪ body composition  
  ▪ agility  
  ▪ balance  
  ▪ coordination  
  ▪ reaction time  
  ▪ speed  
  ▪ power |  |
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| 25   | **Exercise physiology**  
• interrelationship between training types, principles of training and fitness components | Task 7: topic test  
(7.5%) |
| 26–27| **Sports psychology**  
• mental skills required for improving performance and achieving the ideal performance state ('the zone')  
  ▪ intrinsic motivation  
  ▪ self-confidence  
  ▪ stress management  
  ▪ concentration or attentional control – Nideffer’s model  
  ▪ arousal regulation related to individual performance  
  ▪ inverted U hypothesis | |
| 28–29| **Sports psychology**  
• mental skills and strategies used to manage stress, motivation, concentration and arousal levels  
  ▪ self-talk  
  ▪ self-imagery  
  ▪ relaxation  
• influence of age, skill level, and type of activity on mental skills in relation to motivation, arousal regulation (inverted U hypothesis), concentration  
• evaluation and reassessment of personal goals according to changing situations  
  ▪ age  
  ▪ skill level  
  ▪ type of activity | Task 8: competitive performance  
(15%) |
| 30   | Examination revision | Task 9: Semester 2 written examination  
(25%) |