**Sample Course Outline**

Physical Education Studies

ATAR Year 11

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Sample course outline

Physical Education Studies – ATAR Year 11

Unit 1 and Unit 2

| **Week** | **Key teaching points** | **Assessment** |
| --- | --- | --- |
| 1 | **Developing physical skills and tactics**   * develop a range of sport-specific movement skills and techniques to enhance performance * select, adapt and apply skills and techniques in games and other competitive situations * select and apply tactics to solve sport specific tactical problems * use of space * positioning * decision making   **Note:** The above content areas are ongoing and will be addressed throughout the practical skill development teaching and learning activities.  **Functional anatomy**   * bones  |  |  |  | | --- | --- | --- | | * humerus * radius * ulna * femur * patella | * tibia * fibula * pelvis * sternum * ribs | * carpals * metacarpals * phalanges * tarsals * metatarsals |  * muscles  |  |  |  | | --- | --- | --- | | * biceps * triceps * gastrocnemius * trapezius * deltoid | * quadriceps * hamstrings * tibialis anterior * adductor group * latissimus dorsi | * soleus * abdominal * gluteus maximus * pectorals * hip flexors | |  |
| 2–3 | **Functional anatomy**   * structure and function of the circulatory system * [heart](http://www.biologyreference.com/Bl-Ce/Blood-Vessels.html) * arteries * veins * capillaries * blood * structure and function of the respiratory system * lungs, diaphragm, alveoli (gaseous exchange) * inspiration (inhalation) * diaphragm contracts * thoracic cavity expands * air pressure in the lungs drops * air is drawn into lungs due to pressure difference * expiration (exhalation) * diaphragm relaxes * pleural cavity contracts * air pressure in the lungs increases * air is pushed out of the lungs |  |
| 4–5 | **Functional anatomy**   * characteristics of skeletal muscle tissue and their relationship to the production of movement for physical activity * excitability * contractibility * extendibility * elasticity * relationship between the musculoskeletal system and joint movement in the creation of movement * antagonist pairs * origin and insertion points of muscles * movement types created by muscle action and joint movement * flexion * extension * supination * pronation * circumduction * rotation * dorsi flexion * plantar flexion * adduction * abduction |  |
| 6–7 | * Biomechanics * definition of the following terms: * linear motion * angular motion * general motion * projectile motion * application of projectile motion to sport in relation to: * optimal projection * parabolic trajectory * release of projectiles * angle * velocity * height |  |
| 8 | **Biomechanics**   * application of linear motion to sport in relation to: * speed * velocity * acceleration |  |
| 9 | **Biomechanics**   * definition of the principle of balance and how it applies to sport in relation to: * base of support * height of centre of gravity * line of centre of gravity * mass * static balance * dynamic balance |  |
| 10–11 | **Biomechanics**   * definition of Newton’s First, Second and Third Laws of Motion, and how they apply to sporting contexts * definition of the three classes of levers * axis (fulcrum) * resistance (load) * force (effort) | **Task 1:** topic test - functional anatomy; biomechanics  (8 %) |
| 12–13 | **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 |  |
| 14–15 | * Motor learning and coaching * types of cues used to improve performance * visual * verbal * proprioceptive * information processing model during skill performance * identification of stimuli/input * response identification/decision making * response/output * feedback | **Task 2:** sport 1 performance – developing physical skills and tactics (15%) |
| 16–17 | * Motor learning and coaching * types of feedback * intrinsic (inherent) * extrinsic (augmented) * terminal knowledge of results, knowledge of performance * concurrent * verbal * non-verbal * purpose of feedback * reinforcement * motivation | **Task 3:** Semester 1 written examination (15%) |
| 18 | **Exercise physiology**   * responses to physical activity * heart rate (HR) * stroke volume * blood pressure (BP) * cardiac output * respiratory rate * perspiration * blood redistribution |  |
| 19 | **Exercise physiology**   * long-term cardiovascular and respiratory effects of training * cardiac hypertrophy * heart rate (HR) * stroke volume * blood pressure (BP) * blood volume/haemoglobin * maximum oxygen uptake (VO2 max) * capillarisation * ventilation * oxygen exchange |  |
| 20 | **Exercise physiology**   * utilisation of carbohydrates, fats and proteins as energy sources for physical activity | **Task 4:** biomechanical analysis – biomechanics; exercise physiology; motor learning and coaching  (10%) |
| 21–22 | **Exercise physiology**   * the [energy systems](http://www.brianmac.co.uk/energy.htm) and their response to physical activity * anaerobic * adenosine triphosphate creatine phosphate (ATP-CP) * lactic acid * aerobic |  |
| 23 | **Exercise physiology**   * relationship between energy systems and types of physical activity * the energy system continuum |  |
| 24–25 | **Exercise physiology**   * interrelationship between training methods, principles of training and fitness components * training methods * resistance training – isometric, isotonic, isokinetic * interval training (short and long) * continuous training * circuit training * fartlek * flexibility * plyometrics |  |
| 26–27 | **Exercise physiology**   * principles of training * progressive overload * frequency * intensity * time (duration) * type * specificity * reversibility (detraining) * components of fitness * cardiorespiratory endurance * muscular strength * muscular endurance * flexibility * body composition * agility * balance * coordination * reaction time * speed * power | **Task 5:** topic test – exercise physiology  (12%) |
| 28 | **Sports psychology**   * psychological considerations for improved performance and achieving the ideal performance state (‘the zone’) * motivation * self-confidence * stress management * concentration or attentional control – Nideffer’s model * arousal regulation for optimal performance, including the inverted U hypothesis |  |
| 29 | **Sports psychology**   * influence of age, skill level, and type of activity on motivation, arousal regulation (inverted U hypothesis), concentration in physical activity * goal setting * characteristics of goals (SMARTER) * types of goals * performance * outcome * process |  |
| 30 | Examination revision | **Task 6:** sport 2 performance – developing physical skills and tactics  (15%)  **Task 7:** Semester 2 written examination  (25%) |