HSC Core 2: Factors Affecting Performance

THE FLIPPED SYLLABUS

There is something a little different with this syllabus. You will notice that the *Students Learn About* and *Students Learn To* are swapped. The *Learn To* column is generally where the HSC questions come from… so this flipped syllabus is designed to have you look at the syllabus in a constructive way. It is simple but effective.

STEP ONE: Read the *learn to* (potential question)
STEP TWO: Read the *learn about* (information you need to know and include in your answer)
STEP THREE: blank column is where you write your study notes (keeping in mind the potential question and information you must include in order to answer it successfully)

NB: Look at the glossary of key terms used in the *Learn To* section. The higher the order of thinking is – the more info you will need

1. How does training affect performance?

Students learn to:	Students Learn About	Notes
• analyse each energy system by exploring: – source of fuel – efficiency of ATP production – duration that the system can operate – cause of fatigue – by-products of energy production – process and rate of recovery	• energy systems – alactacid system (ATP/PC) – lactic acid system – aerobic system	

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Don't forget that this is a study document.
Keep your notes short, sharp and to the point. Create acronyms if you can.

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• assess the relevance of the types of training and training methods for a variety of sports by asking questions such as: – which types of training are best suited to different sports? – which training method(s) would be most appropriate? Why? – how would this training affect performance?	• types of training and training methods – aerobic, eg continuous, Fartlek, aerobic interval, circuit – anaerobic, eg anaerobic interval – flexibility, eg static, ballistic, PNF, dynamic – strength training, eg free/fixed weights, elastic, hydraulic	

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• analyse how the principles of training can be applied to both aerobic and resistance training	• principles of training – progressive overload – specificity – reversibility – variety – training thresholds – warm up and cool down	

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• examine the relationship between the principles of training, physiological adaptations and improved performance	• physiological adaptations in response to training – resting heart rate – stroke volume and cardiac output – oxygen uptake and lung capacity – haemoglobin level – muscle hypertrophy – effect on fast/slow twitch muscle fibres	

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2. How can psychology affect performance?

Students learn to:	Students learn about:	Notes
• evaluate performance scenarios to determine the appropriate forms of motivation, eg golf versus boxing	• motivation – positive and negative – intrinsic and extrinsic	

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• explain the difference between anxiety and arousal in terms of the effects on performance	• anxiety and arousal – trait and state anxiety – sources of stress – optimum arousal	

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• research case studies of athletes from different sports and ascertain the nature of their motivation and the psychological strategies they employ	• psychological strategies to enhance motivation and manage anxiety – concentration/attention skills (focusing) – mental rehearsal/visualisation/imagery – relaxation techniques – goal-setting.	

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3. How can nutrition and recovery strategies affect performance?

Students learn to:	Students Learn about	Notes
• compare the dietary requirements of athletes in different sports considering pre-, during and post-performance needs	• nutritional considerations – pre-performance, including carbohydrate loading – during performance – post-performance	

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• critically analyse the evidence for and against supplementation for improved performance	• supplementation – vitamins/minerals – protein – caffeine – creatine products	

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• research recovery strategies to discern their main features and proposed benefits to performance.	• recovery strategies – physiological strategies, eg cool down, hydration – neural strategies, eg hydrotherapy, massage – tissue damage strategies, eg cryotherapy – psychological strategies, eg relaxation.	

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4. How does the acquisition of skill affect performance?

Students learn to:	Students learn about:	Notes
• examine the stages of skill acquisition by participating in the learning of a new skill, eg juggling, throwing with the non-dominant arm	• stages of skill acquisition – cognitive – associative – autonomous	

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• describe how the characteristics of the learner can influence skill acquisition and the performance of skills	• characteristics of the learner, eg personality, heredity, confidence, prior experience, ability	

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• design a suitable plan for teaching beginners to acquire a skill through to mastery. The plan should reflect: – appropriate practice methods for the learners – the integration of relevant performance elements – an awareness of how instruction may vary according to characteristics of the learner – how feedback will be used as learners progress through the stages of skill acquisition	• the learning environment – nature of the skill (open, closed, gross, fine, discrete, serial, continuous, self-paced, externally paced) – the performance elements (decision-making, strategic and tactical development) – practice method (massed, distributed, whole, part) – feedback (internal, external, concurrent, delayed, knowledge of results, knowledge of performance)	

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• develop and evaluate objective and subjective performance measures to appraise performance	• assessment of skill and performance – characteristics of skilled performers, eg kinaesthetic sense, anticipation, consistency, technique – objective and subjective performance measures – validity and reliability of tests – personal versus prescribed judging criteria	

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Extra notes