

## DIPLOMA IN SPORT AND EXERCISE MEDICINE EXAMINATION

### SYLLABUS JULY 2009

The Diploma Exam in Sport and Exercise Medicine (SEM) is designed to assess knowledge, skills, competence and professional attitudes required of a doctor who wishes to practice as a sport and exercise medicine practitioner in the United Kingdom. Possession of this Diploma is an essential but insufficient criterion for obtaining the CCT in SEM.

The exam is based on the curriculum for Sport and Exercise Medicine and sport and exercise medicine specialist trainees and candidates are highly advised to become familiar with this curriculum (available at the web site address [jchmt.org.uk](http://jchmt.org.uk)). This syllabus is formatted to mirror the curriculum.

Competencies for different stages of training have been defined and this document should be read in conjunction with the Competencies Framework.

<http://www.fsem.co.uk/DesktopModules/Documents/DocumentsView.aspx?tabID=0&ItemID=114471&MIId=5288&wversion=Staging>

The diploma consists of three assessment formats: Two written papers: Paper 1 (Single Best Answers (SBAs) 1 best answer out of 4 and Paper 2 Extended Matching Items ((EMIs), a 12 station objective structured exam consisting of structured vivas, objective structured clinical examinations (OSCE) and objective structured assessment of technical skills (OSATS). The written aspect makes up the first part of the exam and candidates cannot progress to the second part which consists of the structured viva, OSCE and OSATS, unless they have successfully passed the first part.

The exam is a synoptic exam that covers all areas of the curriculum in SEM. These areas of the curriculum where work-placed based assessment is used as continuous assessment throughout the training are less likely to feature in the written parts of the examination but may be assessed in the structured viva, OSCE and OSATS.

The exam is decoupled from training and can be taken by medical practitioners who have been registered for a minimum of 3 years. It is unlikely that candidates will be successful unless they are experienced in the field of SEM. Candidates who are in SEM specialty training are required to pass this examination by the **end of year four**.

The Following is a blueprint for the Diploma Examination in Sport and Exercise Medicine together with an indication of where the relevant areas would be examined. SBA = Single Best Answer Paper, EMI = Extended Matching Item paper, VIVA = Examined by Oral Examination, OSCE = Objective Structured Clinical Examination OSATS = Objective Structured Assessment of Technical Skills

## **MODULE 1. Scientific Knowledge**

### **Exercise Physiology (SBA/VIVA)**

All candidates must understand and be able to apply knowledge of exercise physiology with regard to SEM clinical practice.

- Cellular metabolism and biochemical pathways of energy production.
- Human energy transfer systems during exercise.
- Energy systems in exercise.
- Measurement/energy costs with exercise.
- Cardiovascular response and adaptations to exercise.
- Respiratory response and adaptations to exercise.
- Neuromuscular response to exercise.
- Evaluating exercise metabolism/neuromuscular activity.
- Hormones and endocrine system in exercise.
- Principles of training.
- Strength and conditioning.
- Monitoring of exercise capacity/training/over-training.
- Fitness assessment.
- Environment in exercise.
- Ergogenic aids.
- Genetics and exercise.
- Nerve/Neuronal Physiology
- Muscle physiology
- Healing and repair
- Principles of immunology

All candidates must be able to request and interpret these investigations – calculating energy utilisation, estimating maximum oxygen consumption, lung function testing, electrocardiography and exercise stress testing.

### **Clinical Anatomy (SBA/EMI/Viva)**

All candidates must have a working knowledge of clinically relevant regional anatomy and be aware of normal variations regarding the relevance for injury risk, injury prevention and injury management.

- Upper limb.
- Lower limb.
- Groin and pelvis.
- Head and neck.
- Thorax.
- Abdomen.
- Cervical spine.
- Thoracic and lumbar spine.

All candidates must be able to relate this anatomical knowledge to appropriate history taking, examination, investigation and the appropriate request for and interpretation of medical imaging.

### **Nutrition and Exercise (SBA/VIVA)**

All candidates must understand the importance of nutrition to exercise. This requires understanding of basic science and the ability to translate this into clinical practice.

- Micro and macro nutrients.
- Hydration.
- Substrate utilisation during exercise.
- Diet and exercise in extreme environments.
- Body composition including accurate calculation of body composition. All candidates must be able to advise on dietary requirements for different exercise conditions/training regimes and appropriate supplement use.
- Diet and health.
- Obesity, exercise and weight control.
- Nutrition for exercise and competition.
- Diet, glycogen stores and endurance.
- High fat diets and exercise.
- Protein and anabolic diets.
- Supplements.
- Alcohol and exercise performance.
- Disorder eating, bone health and female athlete triad.
- Understanding of diets for illness e.g. diabetes, coeliac disease.

## **MODULE 2. Population Health**

### **Primary Care (VIVA)**

All candidates must be able to take a history and be able to perform a basic examination of all systems. They must be able to formulate differential diagnoses and appropriate treatment options for common conditions seen within general practice. They must be able to understand the importance of the limitations within primary care and know when to refer to secondary care services.

All candidates must be able to take a history, perform an adequate examination and institute an appropriate management plan for all common musculoskeletal injuries.

All candidates must be aware of the indications and contra-indications for exercise in both the healthy population and those with medical conditions and they must be able to prescribe exercise appropriately.

All candidates must be aware of the challenges facing deprived communities and ethnic minorities.

All candidates must have a working knowledge of the effects of medications on exercise tolerance.

All candidates must be aware of the services available within both the community and secondary care and to be able to involve other health care professionals in patient management when appropriate. They must be able to make appropriate referrals in a timely and efficient manner in accordance with local protocols and guidelines.

### **Exercise in Primary and Secondary Disease Prevention (VIVA)**

All candidates must be aware of the benefits of exercise for a wide range of conditions with particular emphasis on cardiac disease, respiratory disease, osteoporosis, arthritis, hypertension, diabetes and mental health.

All candidates must understand and be able to apply knowledge regarding physiology of exercise for the benefits of health.

All candidates must understand and apply knowledge of clinical epidemiology and evidence based medicine relevant to SEM. This includes-

- Epidemiology of relevant diseases e.g. CHD, diabetes, stroke.
- Theoretical basis of health promotion.
- Evidence of benefits of physical activity/health research.
- Public health policy and physical activity in health.
- Services supporting the promotion of physical activity including the NHS, local authorities, voluntary and private sector and demonstrate the ability to evaluate the quality of these services.
- Measuring physical activity fitness in health and individuals and populations.

All candidates must understand the basic principles of screening for health and disease. They must understand local and national organisational screening programmes, be able to initiate appropriate screening programmes utilising appropriate clinical expertise. They must be aware of the limitations and risks of screening.

All candidates must develop the skills to provide practical guidance on setting up and managing exercise programmes for people with medical problems as well to deal with any technical or patient problems that may arise in such a programme.

All candidates must be able to appraise the evidence for the effectiveness of physical activity, health promotion programmes or services and be able to examine the effectiveness of any such service.

All candidates must be able to develop and promote a physical activity programme for a given population in co-ordination with other health care professionals. The candidates should be able to provide leadership role and work collaboratively, communicating with a range of different audiences from lay to health professional in order to promote the appropriate health messages and information.

### **Effect of Illness on Exercise Capacity (VIVA)**

All candidates must have knowledge and understanding of medical conditions commonly encountered in the exercising population and demonstrate an awareness and working knowledge of the effect that these conditions may have on an individual's ability to exercise, from both an exercise capacity and a safety perspective. An understanding of the potential effect of medications prescribed for these conditions on the individual's

ability to exercise is also required. They must be able to assess the severity of the disease state from appropriate clinical history, examination and investigation and be able to provide clear and safe advice to the individual regarding exercise. All candidates must also recognise their limitations and the need to consult appropriate specialists for the treatment of specific conditions.

## **MODULE 3. Musculoskeletal Medicine**

### **General Pathology of the Musculoskeletal System (EMI/SBA/OSCE)**

All candidates must understand and apply knowledge of general musculoskeletal pathology which may present in athletes. Such conditions may include malignancy, infection, inflammatory arthritis, connective tissue disorders, neuropathy, myopathy, degenerative joint disease, spinal disorder, developmental disorders and disorders of childhood, metabolic and endocrine conditions. They must be able to demonstrate an understanding of the changes which may be detectable with medical imaging and pathology testing in such conditions.

All candidates must be able to take a thorough history which is capable of detecting suspected non-traumatic pathology, be able to detect key signs on clinical examination and utilise appropriate pathological and medical imaging services to confirm or exclude non-traumatic pathology.

### **Management of soft tissue and sports injuries (EMI/SBA/OSCE)**

All candidates must understand and apply knowledge with regard to injury prevention for participants in sports and exercise. This includes-

- Pre-participation screening.
- Evidence regarding warm-up and stretching.
- Health and safety pertinent to sports equipment and protective equipment.
- Targeted strength and conditioning programmes.
- Training surfaces and footwear.
- Rule changes in sports with regard to safety.

All candidates must understand and apply knowledge of the pathophysiology of soft tissue injuries and the possible effects of common treatment strategies including, pharmacological treatments on these processes.

All candidates must be able to demonstrate their ability to assess and manage acute soft tissue injury and acute bone and joint injuries.

All candidates must understand and apply knowledge in the assessment, investigation and management of overuse injury.

All candidates must understand and apply knowledge about the principles of injury rehabilitation including the involvement of other health care professionals in the multi-disciplinary approach to rehabilitation. This includes-

- Manual therapies.

- Taping, splints, braces, orthotics, including practical application of appropriate supports, dressings and devices.
- Preservation of cardiovascular fitness.
- The role and limitations and potential side-effects of joint and soft tissue injections.
- Protected function and progressive functional approach to rehabilitation.

All candidates must understand and apply knowledge regarding the basic principles of surgical management of musculoskeletal injury.

All candidates must understand and apply knowledge regarding the principles of tissue injury and repair.

All candidates must be able to demonstrate the application of rehabilitation techniques including joint and soft tissue injection techniques.

### **Musculoskeletal Radiology (EMI/SBA/OSCE/VIVA)**

All candidates must be aware of the role of various imaging techniques and the way in which images are produced. They must be able to request and interpret appropriate radiological and related investigations. They must understand the limitations of the investigation and the implications of a positive or negative test result. They must be aware of the possible discomfort and distress and risks including hazards of ionising radiation to which the patient may be exposed during tests as well as the costs and resources involved.

All candidates must be aware of the relative strengths and weaknesses of different imaging techniques and their ability to demonstrate with normal/abnormal structures within tendons, ligaments, muscles, bones and joints.

All candidates must be able to construct a differential diagnosis based on history and clinical findings in addition to the use of imaging to reach a definitive diagnosis by utilising their ability to interpret different modalities of medical imaging in a logical and structured manner.

All candidates must demonstrate an understanding of the use of medical imaging for targeted treatment.

### **Gait and Biomechanical Assessment (EMI/OSCE/SBA/VIVA)**

All candidates must demonstrate knowledge of functional anatomy of joints and musculo-tendinous units, including characteristics of bone, tendon, ligament, articular cartilage, muscle under stress and strain and potential for fatigue.

All candidates must understand and apply knowledge of human movement analysis - basic kinematics and kinetics. They must be aware of the biomechanical analysis of sports specific techniques and the performance aspect of sport specific equipment.

All candidates must be able to recognise the effects of faulty biomechanics and methods of affecting change to these. All candidates must be aware of the principles of body morphology.

## **MODULE 4. Working within the Team Environment**

### **Team Physician (viva)**

All candidates must be aware of the role of the team physician, demonstrating the ability to work and communicate with individual athletes, a full team, trainers and coaches, other members of the medical team and the media.

All candidates must be able to understand, apply knowledge, initiate and direct pre-participation screening in sport, health education and assessment and the acquisition of skills and physique for entire teams and individuals alike.

All candidates must be able to monitor the environment/hygiene/facilities and ensure that the protective equipment is utilised.

All candidates must be able to demonstrate the ability to prepare individual athletes, sports teams and medical teams for travel. This includes ensuring that the appropriate equipment and pharmacy supplies are available and the appropriate traveller's issues including immunisations and combating jet-lag are in place.

All candidates must have an up to date and working knowledge the utilisation of drugs in sport including banned drugs, doping control and doping classes and methods.

All candidates must be aware of the medico-legal aspects of team care and athletes' confidentiality and an up to date knowledge regarding issues around child protection.

All candidates must be able to undertake the appropriate pre-hospital care of an injured athlete and demonstrate the ability to refer to the appropriate department within a realistic time scale.

### **Event Physician (VIVA)**

All candidates must be able to demonstrate knowledge of legislative and medico-legal guidelines with regard to medical and crowd safety facilities at sporting events. This includes a working knowledge of the guidelines for the number and type of medical personnel required for sporting events with large numbers of participants and be able to lead a medical team under such circumstances, and an awareness of relevant EU safety legislation governing the running of Sporting Events.

All candidates must be able to demonstrate knowledge and understanding of the procedures for evacuation of an injured athlete or member of the crowd from any given sporting event by establishing appropriate protocols if necessary. They must have a knowledge of liaison with ambulance, police, fire and other emergency services.

All candidates must be able to evaluate the requirement in terms of pharmacy supplies, medical equipment, medical personnel, paramedical personnel and communication equipment for any given sporting event.

### **Specific Sports**

All candidates must be able to demonstrate some familiarity with a wide variety of sports in terms of rules and regulations, physiological requirements and the injury risk profiles of each. With this background they should be able to apply basic common principles

and provide appropriate medical treatment for athletes involved in each sport and give advice regarding pre-participation screening, training programmes, injury risk management and injury treatment for these sports.

## **MODULE 5. Medical Emergencies**

### **Head Injury and Concussion (OSAT/VIVA/EMI/SBA)**

All candidates must have a working knowledge of concussion including the underlying pathophysiology, grading, various definitions and an understanding of possible complications.

All candidates must be able to assess a patient who has concussion and be capable of leading an on field retrieval team to provide appropriate immediate management, diagnose concussion on history and examination (“Red Flags”) and neuro-psychological testing, clinically detect significant deterioration and provide appropriate management.

All candidates must possess an understanding the short and long-term sequelae of concussion and be able to utilise this knowledge with regard to rehabilitation and the rationale for return to play including the ability to provide safe and scientifically sound advice to athletes in team management. This must include knowledge of sports specific regulations.

### **Sudden Death in Sport (Viva / OSCE)**

All candidates must understand and apply knowledge regarding the incidence and prevalence of sudden death in sport including the aetiology from all possible causes.

All candidates must possess knowledge regarding the risk of sudden death in sport and be able to implement strategies to reduce this via pre-participation screening, appropriate clinical assessment, investigation and management of athletes at risk and awareness of the role of the environment and the risks of particular sports.

### **Resuscitation Skills (OSCE)**

The candidates should be able to:-

- Recognise cardiac arrest.
- Follow a recognised Resuscitation Guideline e.g. Resuscitation Council (UK), ([www.resuscitation.org.uk](http://www.resuscitation.org.uk))
- Be aware of differences in treatment of cardiac arrest in:-
  - Children
  - Near-drowning
  - Electrocution

For specific skills see below.

### **Major Trauma (OSCE)**

The candidates should be able to:-

- Recognise when an athlete has sustained major trauma.
- Follow a recognised (e.g. ATLS) treatment guideline.
- Be aware of trauma management in difficult situations e.g. swimming pool, rough terrain, motor circuit etc.

For specific skills see below.

### **Resuscitation Skills (OSCE)**

#### 1. Basic Airway Manoeuvres:-

- Chin lift/head tilt (no neck injury).
- Jaw thrust (neck injury).
- Oropharyngeal airway – safe use.
- Nasopharyngeal airway – safe use

#### 2. Basic Ventilation

- Mouth to mouth/mask ventilation.
- Use of bag-valve-mask ventilation system.
- Needle thoracotomy.

#### 3. Basic Circulatory Care

- Appropriate cardiac compression.
- IV access.
- IV fluid therapy.
- Identify colloid vs. crystallised resuscitation.
- Able to safely use automatic defibrillator.

#### 4. Appropriate Neuro-Spinal Care

- Immobilise a cervical spine.
- Apply a cervical collar.
- Log role.
- Use of VSV spinal stretcher.
- Assess conscious level.

#### 5. Perform near patient glucose test.

### **Advanced Life Support (OSCE)**

Airway: - Safe intubation  
Cricothyroidotomy

Circulation: - Non-advisory defibrillation

### **Medical Emergencies (OSCE)**

The candidates should be able to recognise medical emergencies likely to occur in sport according to recognised guidelines.

- Anaphylaxis
- Status epilepticus
- Asthma
- Hypoglycaemia
- Hypothermia/exposure
- Hyperthermia/heat stroke
- Coma

The candidates should be able to discuss “pitchside” care taking cognisance of privacy issues.

### **Trauma Emergencies (OSCE)**

The candidate should be able to recognise and manage the following according to standard guidelines.

- Head injury (including traumatic coma)
- Facial trauma (including ocular trauma)
- Dental injury
- Spine injury (all levels)
- Upper limb (including clavicle) fracture/dislocation
- Lower limb (including pelvis) fracture/dislocation

Where appropriate emergency care should include assessment of neurovascular status, appropriate splinting, safe evacuation from scene of injury, transfer to hospital and appropriate analgesia (see below).

### **Analgesia (OSCE/VIVA/EMI/SBA)**

The candidates should be able to discuss analgesia appropriate to the severity of trauma, the environment and available resources.

### **Minor Injury (OSCE/OSAT/EMI/VIVA/SBA)**

The candidates should be able to demonstrate competence in managing common minor injury:-

- Wounds
  - Full assessment of neurovascular status
  - Full function of tendons etc
  - Methods of wound closure
  - Tetanus prophylaxis
  - Antibiotic usage
  - Sport specific knowledge of blood injury regulations

- Knowledge of wound closure techniques
  - Local anaesthetic/regional block
  - Wound debridement
  - Closure materials – glue, strips, suture, staple
- Sprains and strains to joints, tendons and ligaments
- Muscle haematoma
- Ocular trauma/Foreign body
- ENT trauma
- Facial trauma
- Testicular trauma
- Refer appropriately for ongoing hospital care
- Appropriate use of splints, ice, heat, dressings

### **Surgical Emergency Trauma**

- Abdominal pain
- Abscess/cellulitis/scrum pox
- Testicular swelling

## **MODULE 6. Drugs in Sport (VIVA/SBA/EMI)**

All candidates must be aware of and be able to apply knowledge regarding the effects of various pharmaceutical agents and exercise performance, including those available over the counter (OTC).

All candidates must be aware of banned substances and be aware of the legal implications regarding the doctor and the athlete and be able to educate players and management regarding drugs in sport and access current information regarding drugs in sport.

All candidates must be aware of the therapeutic uses of drugs for all illness and injury and be able to advise athletes regarding appropriate pharmacological treatment of medical conditions.

All candidates must be aware of sport specific patterns of drug abuse, sport specific regulations regarding specific substances and medical exceptions to these rules.

All candidates must be aware of the testing procedures and the doctors' role in such procedures and be able to provide support to the athlete during testing.

All candidates must be aware of the doctors' roles and responsibilities and strictly adhere to relevant government legislation and sporting regulations.

## **MODULE 7. Psychosocial Aspects of Sport & Exercise Medicine (VIVA)**

All candidates must be able to apply knowledge regarding psychosocial aspects of sport and exercise medicine including:-

- Awareness of motor learning and information processing.
- Psychology of behavioural change.
- Psychological aspects of stress, trauma and disability/rehabilitation and failure in sport.
- Psychological aspects of motivation, arousal and performance.
- Group psychology including team, coach and medical team.
- Psychological/mood effects of physical activity.
- Sociology of sport including violence, influences, role models and drug issues.
- Psychosocial effects of retirement from sport.
- Recognition of athletes with suspected eating disorders.
- Psychology of exercise and health promotion.

## **MODULE 8. Investigations & Procedures (OSCE/VIVA/SBA/EMI)**

All candidates must be able to order and interpret and in some instances perform appropriate investigations in the medical assessment of the athlete. They must be aware of the limitations and understand the purpose of such tests and the implications of negative and positive results. They must be aware of the potential distress, discomfort and risks associated in such tests as well as the cost and resource implications. This includes blood tests, imaging and electrophysiology.

All candidates must be aware of the regulations regarding the use of ionising radiation

All candidates must have a thorough knowledge of muscular compartmental anatomy, joint anatomy, lower limb biomechanics and the use of orthotics and musculoskeletal ultrasound.

All candidates must be able to demonstrate indications for injection and correct techniques for injection.

## **MODULE 9. Spinal Injuries, Amputee Rehabilitation & Disability Sport (EMI/SBA OSCE/Viva)**

All candidates must be aware of special needs of disabled athletes in exercise and special medical needs of disabled athletes and exercisers including the importance of spasticity, hypotonia, absent limbs, paralysis and gait disorders.

All candidates must understand the physical problems experienced by amputees and wheelchair users and have knowledge regarding prosthesis available (particularly for sport) and the type of wheelchairs available with appropriate adaptations.

All candidates must be aware of support groups and sports organisations for disabled people and have knowledge of disability classification and relevant competition rules and regulations.

## **MODULE 10. Physical Activity in Special Groups**

### **Female athletes (VIVA/OSCE/EMI/SBA)**

All candidates must have a working knowledge of aspects of sport and exercise in relation to women, including the effect of hormones and performance, the effect of exercise on the menstrual cycle and mechanisms of manipulating this. Regarding female athletes, all candidates must be aware of the implications of:-

- Contraception.
- Pregnancy.
- The post-partum period.

All candidates must understand the relationship between hormones, weight, osteoporosis and stress fractures in female athletes and have a full understanding of gender differences in exercise.

### **Older Athletes (VIVA/SBA/EMI)**

All candidates must understand the effect of ageing on muscle bulk cardiovascular fitness and endurance and understand the risks and benefits of exercise in older people including the effects of medications used in this group.

All candidates must have an understanding of exercise prescription and screening for exercise.

### **Children/Adolescent (VIVA)**

All candidates must understand and apply knowledge with regard to anatomical and physiological differences of the child and adolescent compared with the adult in relation to the management of injury and illness relevant to sport and exercise.

- Identification of the sick child.
- Interpretation and management of musculoskeletal injuries in the child including awareness of epiphyseal injury.
- Asthma, diabetes and epilepsy.
- Identification and the impact and management of common eating and body perception disorders in the developing athlete.

All candidates must understand and apply knowledge regarding legal and protective issues in children.

- Child protection including knowledge of non-accidental injury and sexual abuse. Be aware of national legislation regarding the rights of children regarding consent and competency

All candidates must understand and be aware of the principles of pre-participation screening in children.

## **MODULE 11. Research, Statistics & Audit (VIVA/SBA/EMI)**

All candidates must be aware of ethical issues surrounding research.

All candidates must understand basic principles of research in medicine. They must be able to appraise research and understand how findings contribute to clinical practice.

Candidates need to comprehend the principles underpinning the audit cycle and must understand how audit can contribute to the improvement in clinical practice and take appropriate action arising from any clinical audit.

All candidates must be able to demonstrate the basic ability to design an appropriate research project with an underlying knowledge of appropriate study design and the principles of statistics, randomisation and techniques of data analysis. This includes and appreciation of epidemiological research with particular emphasis on that related to sport and exercise medicine.

## **MODULE 12. Teaching & Presentation Skills (VIVA)**

All candidates must be able to present relevant information to groups of varying levels of medical understanding (athletes, trainers, allied health professionals, other sport and exercise medicine specialists) by the most appropriate methodology. They must be familiar with commonly used software packages for the presentation of information.

## **Module 13. Sport and Exercise Medicine Management (VIVA)**

All candidates must understand the basic principles of how health services and organisations are managed including

- Human resource issues
- Organisations within the medical profession, for example GMC, Royal Colleges, BASEM, FSEM (UK)
- Clinical Governance
- Appraisal
- Organisation of the NHS including limitation of funding and the role of the Private Sector.
- Health & Safety Legislation

All candidates must have working knowledge of the principles of personal effectiveness and time management. All candidates must have an understanding of the role of IT in medical practice.

All candidates must be aware of the principles of good team work and be able to work effectively within multi-disciplinary teams of athletes and exercisers and medical and paramedical staff.

All candidates must be able to demonstrate the ability to communicate effectively with individuals, colleagues and teams and be able to counsel where appropriate.

## **MODULE 14. Ethical & Medico- Legal Aspects (VIVA/OSCE)**

All candidates must have a working awareness of relevant EU legislation and medico-legal guidelines as regard to all aspects of medical practice.

All candidates must respect patient confidentiality. They must be aware of the appropriate circumstances for disclosure of patient information including handling the media and awareness of privacy legislation.

All candidates must understand and apply a legal duty of care to patients in accordance with the GMC's guidance – The Duties of a Doctor.

All candidates must be able to apply the principles of data protection and freedom of information legislation in relation to the use and disclosure of health data.

All candidates must be aware of the requirements for patient consent and be able to provide relevant information to patient.

All candidates must understand and be able to apply child protection legislation in relation to sports and exercise medical practice. They must recognise when a child may require protection and be able to take action using appropriate local measures to secure the child's safety. They must also be aware of the guidelines for dealing with other potentially vulnerable individuals.

All candidates must have a working knowledge of medical and sporting regulatory bodies.

All candidates must be aware of the need of a chaperone under specific circumstances.

## **MODULE 15. Self-Directed Learning (VIVA)**

All candidates must demonstrate the ability to self reflect and direct their own personal learning and future professional development.