

# Cardiff MRCS OSCE Course: Applied Surgical Sciences and Critical Care

**Date: 30<sup>th</sup> January (Thursday) 2020**  
**Time: 0825 – 1915 hrs;**  
**Venue: School of Biosciences, Cardiff University**

## COURSE PROGRAMME

0815 - 0820 Registration

### MORNING SESSION

0820 - 0830 Welcome, Introduction and Format (Prof Stuart Enoch)

0830 - 0920 **Physiological Principles in the Management of Trauma (Prof Stuart Enoch)**

- Long bone fractures
- Fracture neck of femur
- Pelvic fractures
- Polytrauma
- Hypovolemic shock and management

0920 - 1030 **Respiratory System (Dr Teresa Evans)**

- Normal ventilatory cycle
- Controls of ventilation
- Causes and management of post-operative respiratory failure
- Indications for ventilatory support and weaning off ventilator
- Intermittent positive pressure ventilation
- Acute (adult) respiratory distress syndrome

1030 - 1045 Coffee Break

1055 - 1125 **General Physiological Principles 1 (Dr Paul Morgan)**

- Homeostasis, feedback loops
- Applied acid-base balance

1125 - 1155 **General Physiological Principles 2 (Dr Paul Morgan)**

- Sepsis
- Septic shock

1200 - 1300 OSCE Discussion and Lunch

## EARLY AFTERNOON SESSION

- 1300 - 1340**      **Management of Major Burns (Prof Stuart Enoch)**
- Assessment
  - Pathophysiology and principles of management
  - Inhalation burns; fluids and nutrition
  - Indications for referral
- 1340 - 1410**      **Fluid and Renal Physiology (Prof Stuart Enoch)**
- 1410 - 1425**      **Rhabdomyolysis (Prof Stuart Enoch)**
- 1430 - 1530**      **Spinal Cord Injuries and Cord Syndromes (Prof Stuart Enoch)**
- Vertebral fractures
  - Cord compression; conus medullaris and cauda equina Syndrome
  - Spinal and neurogenic shock
  - Autonomic nervous system and bladder dysfunction
  - Spinal cord lesions and vascular conditions
- 1530 - 1600**      **Calcium Metabolism and its Role in Surgery (Prof Stuart Enoch)**

1600 - 1615

Coffee Break

## LATE AFTERNOON SESSION

- 1615 - 1645**      **General Physiological Principles 3 (Dr Paul Morgan)**
- Bleeding
  - Coagulation/Anti-coagulation
- 1645 - 1715**      **General Physiological Principles 4 (Dr Paul Morgan)**
- Resuscitation
  - Temperature regulation
  - Hypothermia
- 1715 - 1745**      **General Physiological Principles 5 (Dr Paul Morgan)**
- Principles of epidural anaesthesia/assessment
  - Pain pathways
  - Pre-op assessment
- 1745 - 1815**      **Central nervous system (Dr Paul Morgan)**
- Cerebral autoregulation
  - Causes and management of raised intra-cranial pressure
  - Management of head injury
- 1830 - 1915**      **Infection, Surgical Microbiology and Scenarios in Surgical Critical Care (Prof Stuart Enoch)**
- Tuberculosis
  - Necrotising fasciitis
  - Compartment syndrome
  - Nerve injuries
  - Action potentials
  - Bilirubin metabolism
- 1915**              **END OF COURSE!**