



# DOCTORS ACADEMY

BETTER EDUCATION. BETTER HEALTH.

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

**Feedback - September 2019**

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

In the final part of the MRCS exam, surgical trainees are expected to have a good working knowledge of general physiological principles, core knowledge of the physiology of specific systems and an understanding of their application in surgical practice.

This intensive one-day revision course provided the candidates with an overview of basic physiological principles and the physiology of the respiratory, cardiovascular, renal, endocrine, gastrointestinal, and central nervous systems.

The course was delivered using a series of interactive lectures with an OSCE focus using OSCE scenarios. All major areas as stipulated in the MRCS Part B syllabus were covered.

### Topics:

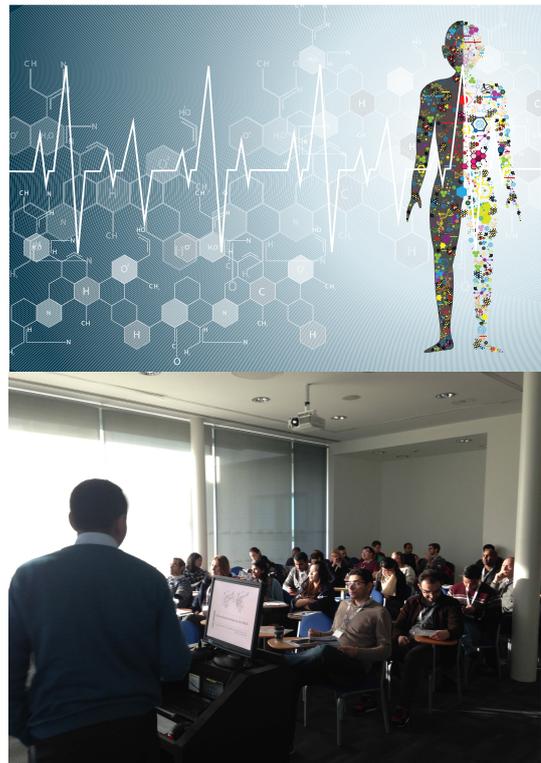
- General Physiological Principles
- Cardiovascular System
- Respiratory System
- Endocrine System
- Renal System
- Central Nervous System
- Gastrointestinal System
- Burns
- Management of Patients Undergoing Surgery
- Management of Trauma
- Surgical Microbiology

### Course Information

<b>Course Date:</b>	<b>19<sup>th</sup> September 2019</b>
<b>Venue:</b>	<b>School of Biosciences, Cardiff University, Cardiff</b>
<b>Attendance:</b>	<b>35 Delegates</b>
<b>Aimed at:</b>	<b>Delegates looking to take their membership to the Royal College of Surgeons Part B exam.</b>
<b>Course Fee:</b>	<b>£190.00</b>



Surgical trainees can apply to be sponsored by ASiT to receive a bursary to attend this course.



## Course Programme

0815 - 0820      **Registration**

### MORNING SESSION

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

0830 - 0930      **Physiological Principles in the Management of Trauma (Prof Stuart Enoch)**

- Long bone fractures
- Fracture neck of femur
- Pelvic fractures
- Polytrauma
- Compartment syndrome
- Nerve injuries

0930 - 1040      **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

1040 - 1100

**Coffee Break**

1110 - 1140      **General Physiological Principles 1 (Dr Paul Morgan)**

- Homeostasis, feedback loops
- Applied acid-base balance

1145 - 1215      **General Physiological Principles 2 (Dr Paul Morgan)**

- Sepsis
- Septic shock

1220 - 1300      **General Physiological Principles 3 (Dr Paul Morgan)**

- Bleeding
- Coagulation/Anti-coagulation

1300 - 1340

**Lunch Break**

# Course Programme

## AFTERNOON SESSION

<b>1340 - 1420</b>	<b>Management of Major Burns (Prof Stuart Enoch)</b> <ul style="list-style-type: none"><li>• Assessment</li><li>• Pathophysiology and principles of management</li><li>• Inhalation burns</li><li>• Fluids and nutrition</li><li>• Indications for referral</li></ul>
<b>1425 - 1445</b>	<b>Rhabdomyolysis (Prof Stuart Enoch)</b>
<b>1445 - 1515</b>	<b>General Physiological Principles 4 (Dr Paul Morgan)</b> <ul style="list-style-type: none"><li>• Resuscitation</li><li>• Temperature regulation</li><li>• Hypothermia</li></ul>
<b>1515 - 1545</b>	<b>General Physiological Principles 5 (Dr Paul Morgan)</b> <ul style="list-style-type: none"><li>• Principles of epidural anaesthesia/assessment</li><li>• Pain pathways</li><li>• Pre-op assessment</li></ul>
<b>1545 - 1605</b>	<b>Coffee Break</b>
<b>1605 - 1635</b>	<b>Central Nervous System (Dr Paul Morgan)</b> <ul style="list-style-type: none"><li>• Cerebral autoregulation</li><li>• Causes and management of raised intra-cranial pressure</li><li>• Management of head injury</li></ul>
<b>1635 - 1725</b>	<b>Spinal Cord Injuries and Cord Syndromes (Prof Stuart Enoch)</b> <ul style="list-style-type: none"><li>• Vertebral fractures</li><li>• Cord compression; conus medullaris and cauda equina syndrome</li><li>• Spinal and neurogenic shock</li><li>• Autonomic nervous system and bladder dysfunction</li><li>• Spinal cord lesions and vascular conditions</li></ul>
<b>1730 - 1800</b>	<b>Infection and Surgical Microbiology (Prof Stuart Enoch)</b> <ul style="list-style-type: none"><li>• Tuberculosis</li><li>• Necrotising fasciitis</li></ul>
<b>1800 - 1830</b>	<b>Calcium Metabolism and Its Role in Surgery (Prof Stuart Enoch)</b>
<b>1830 - 1915</b>	<b>OSCE Topics and Scenarios in Surgical Critical Care (Prof Stuart Enoch)</b>
<b>1915</b>	<b>END OF COURSE!</b>

## Faculty List

**Dr Paul Morgan, FRCA**

Examiner - Royal College of Surgeons of England  
Consultant Intensivist, Adult Critical Care  
University Hospital of Wales, Cardiff

**Professor Stuart Enoch, MB BS, PhD, PGCert (Med Sci), MRCSEd, MRCS (Eng)**

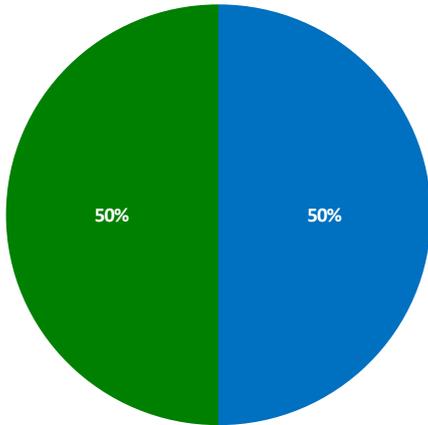
Senior Lecturer; Director of Education and Research  
Doctors Academy Group

**Dr Teresa Evans, FRCA**

Consultant Anaesthetist  
Royal Gwent Hospital, Newport

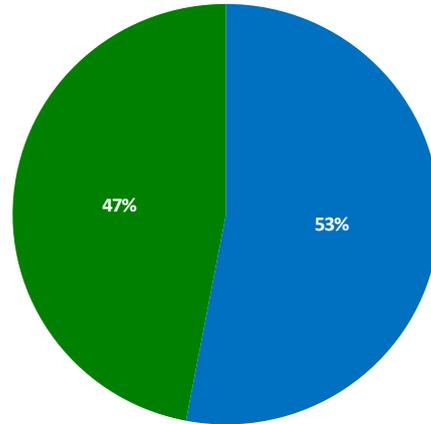
# Overall Teaching Feedback

How was the content of the course?



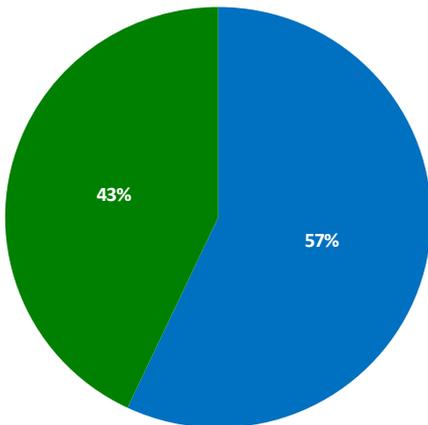
■ Excellent ■ Very good ■ Neutral ■ Fair ■ Poor

How was the clarity of the presentations?



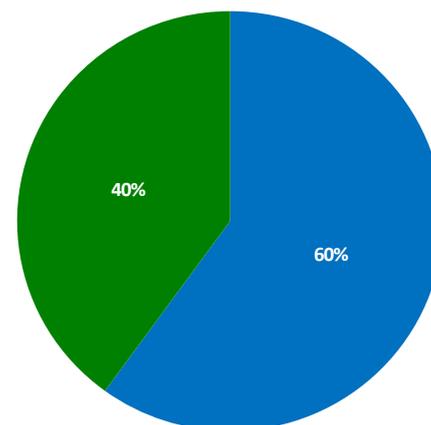
■ Excellent ■ Very good ■ Neutral ■ Fair ■ Poor

How do you rate the relevance of the course to your exam?



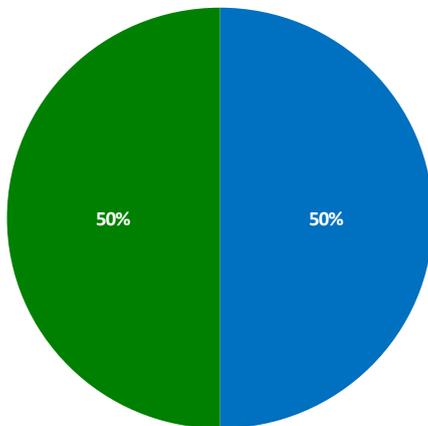
■ Excellent ■ Very good ■ Neutral ■ Fair ■ Poor

How would you rate the general academic standard of the lectures?



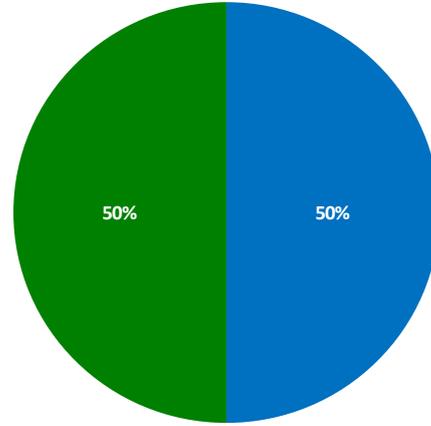
■ Excellent ■ Very good ■ Neutral ■ Fair ■ Poor

Homeostasis and Fluid Management



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

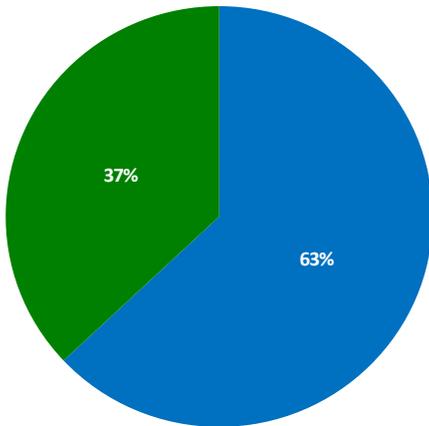
Applied Acid-Base Balance



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

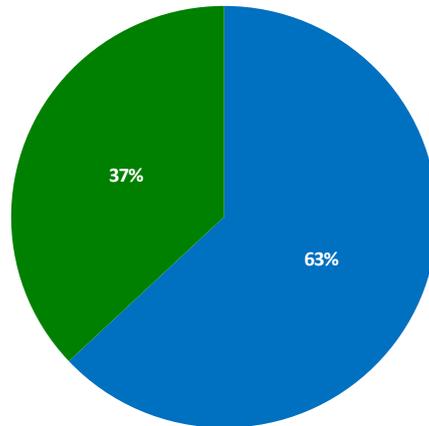
# Overall Teaching Feedback

Sepsis



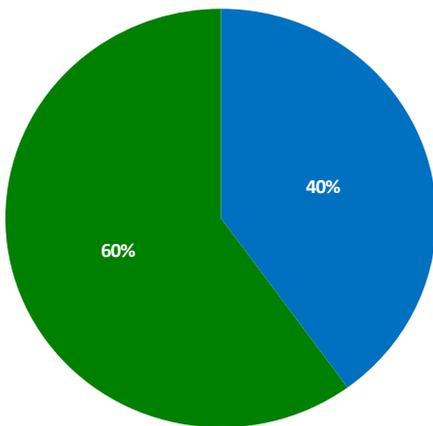
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Septic Shock



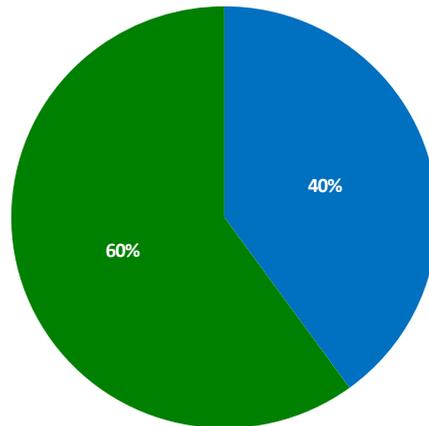
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Normal Ventilatory Cycle



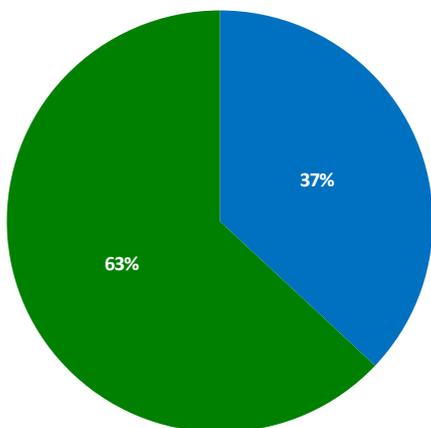
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Controls of Ventilation



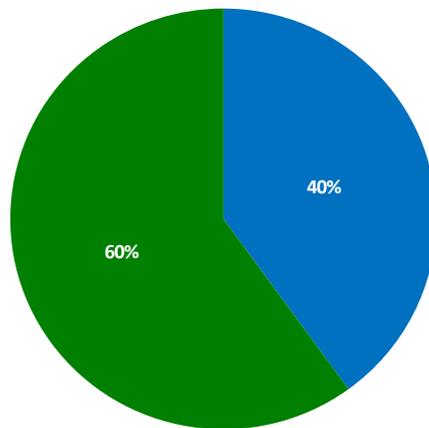
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Causes and Management of Post-Operative Respiratory Failure



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

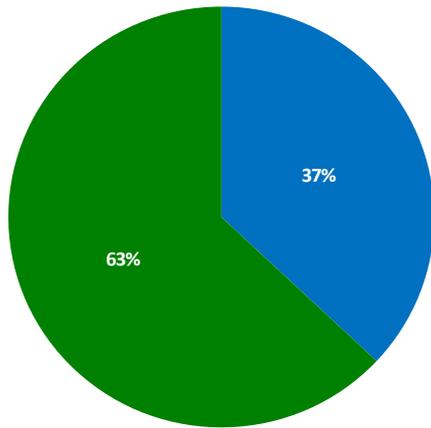
Indications for Ventilatory Support and Weaning Off Ventilator



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

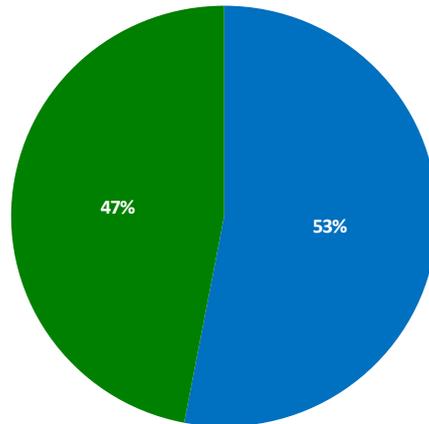
# Overall Teaching Feedback

Intermittent Positive Pressure Ventilation



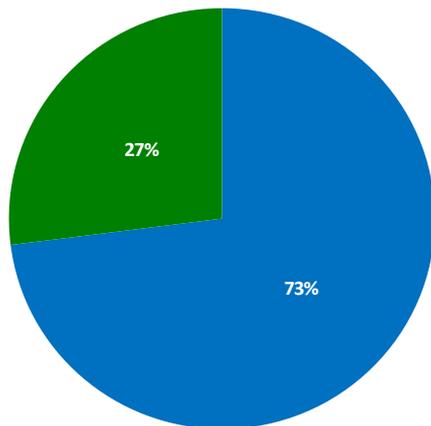
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Acute Respiratory Distress Syndrome



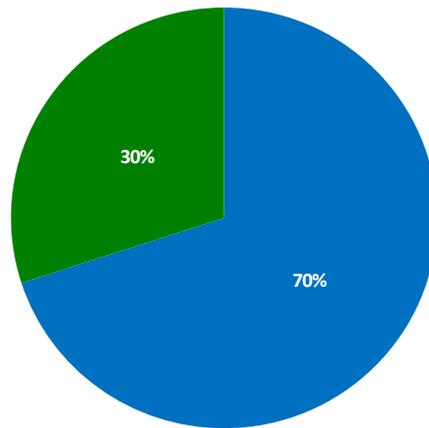
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Pathophysiology and Principles of Management in Burns



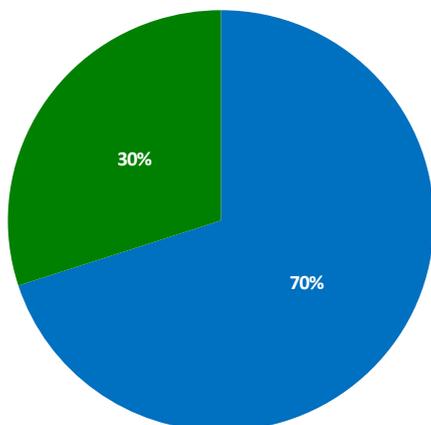
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Inhalation Burns



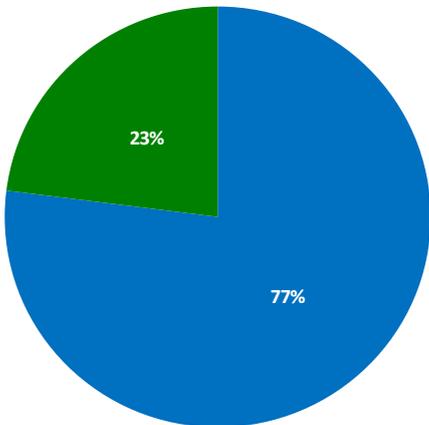
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Fluids and Nutrition in Burns



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

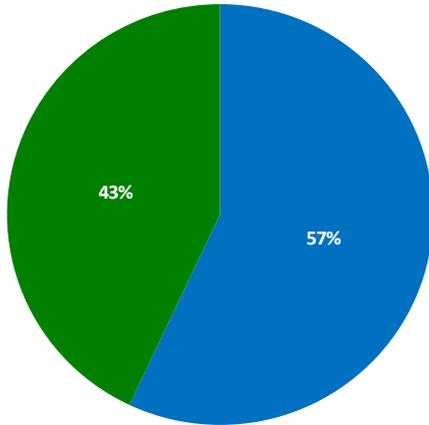
Indications for Referral in Burns



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

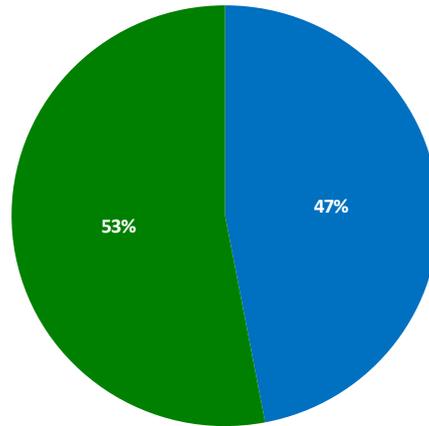
# Overall Teaching Feedback

Principles of Management of Pelvic Fractures



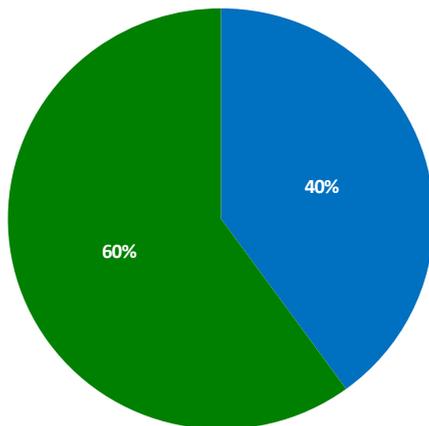
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Long Bone Fractures



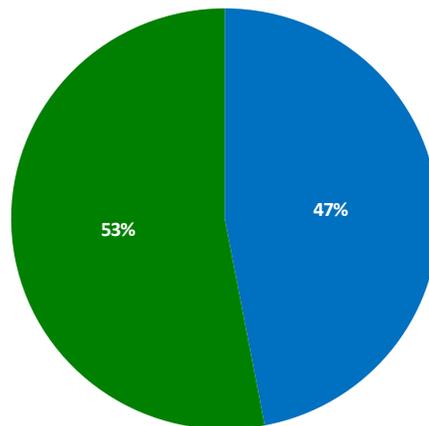
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Basics of Tuberculosis



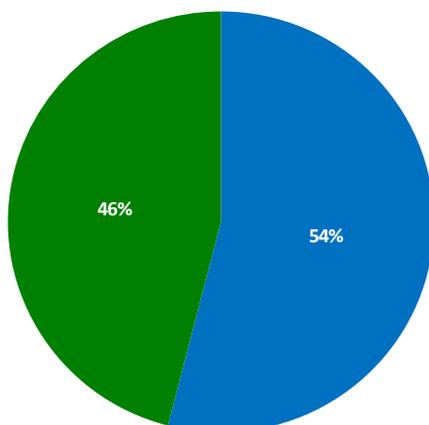
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Bleeding



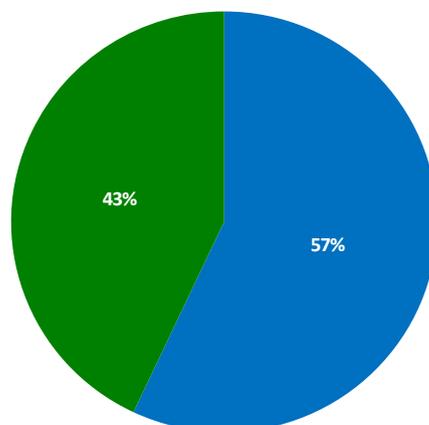
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Coagulation/Anti-Coagulation



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

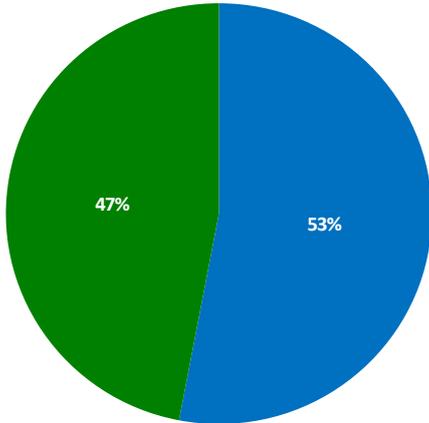
Resuscitation



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

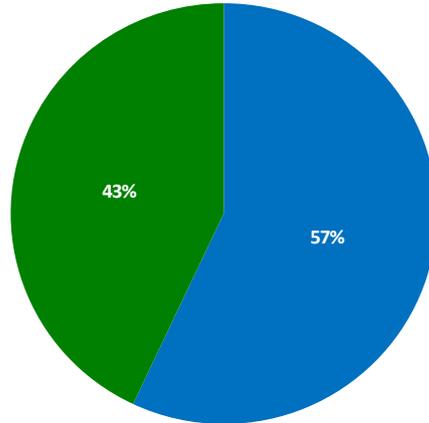
# Overall Teaching Feedback

Temperature Regulation



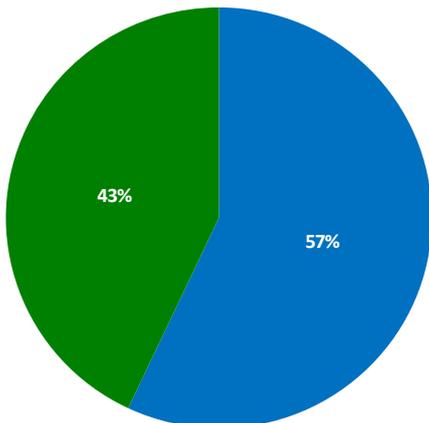
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Hypothermia



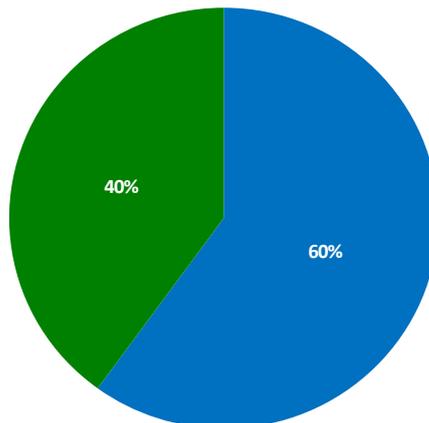
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Necrotising Fasciitis



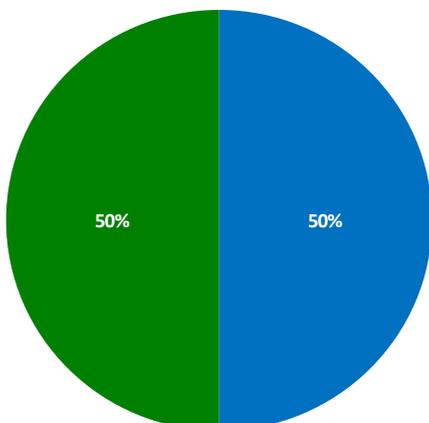
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Calcium Metabolism



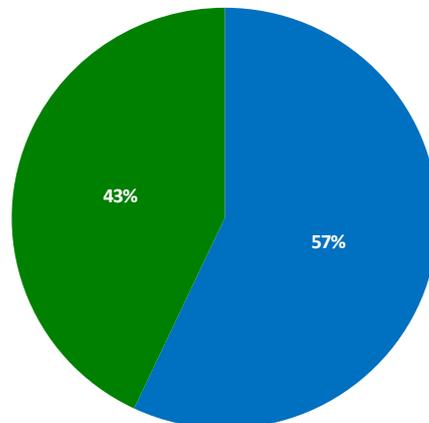
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Principles of Epidural Anaesthesia/Assessment; Pain Pathways



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

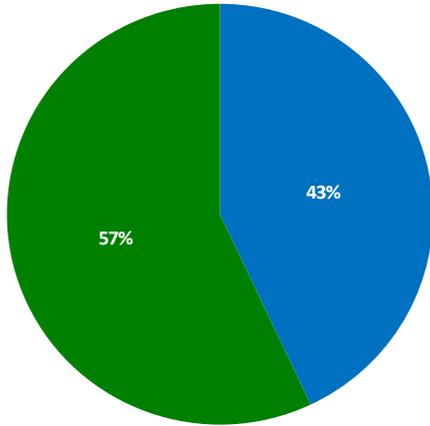
Rhabdomyolysis



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

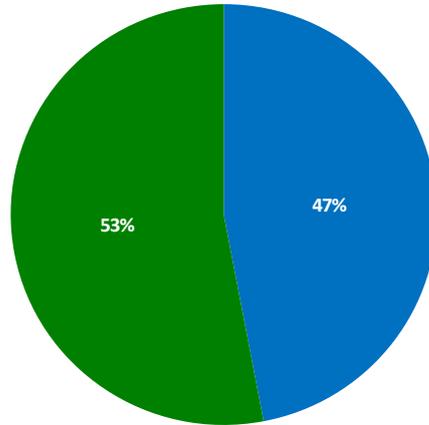
# Overall Teaching Feedback

Head Injury



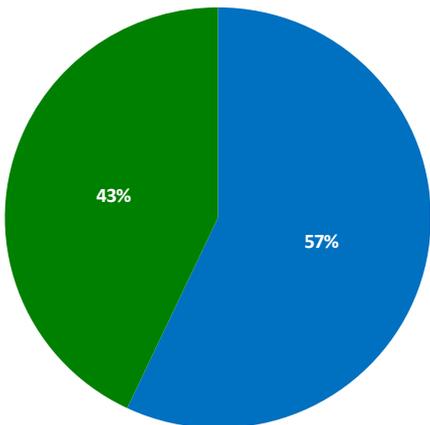
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Subarachnoid Haemorrhage



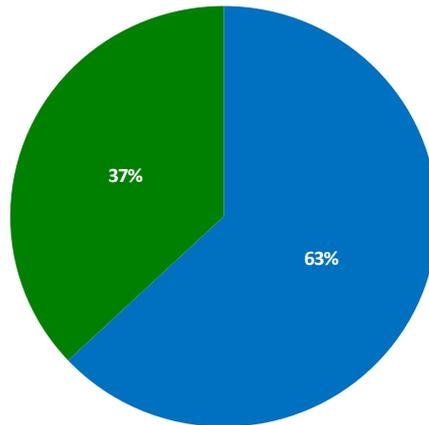
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Spinal Cord Lesions



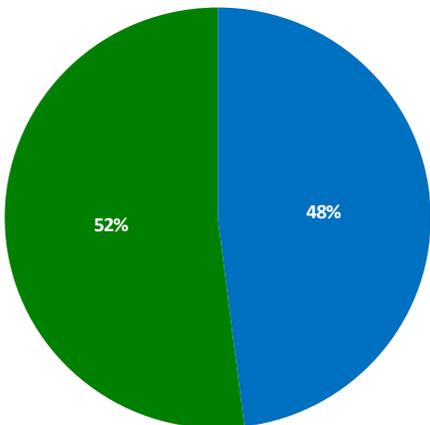
■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

Would you recommend this course to a friend?



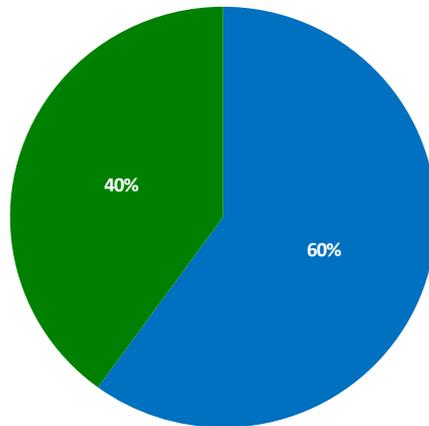
■ Most certainly ■ Certainly ■ Neutral ■ Maybe ■ Don't think so

Do you think that this course provided good value for money?



■ Most certainly ■ Certainly ■ Neutral ■ Maybe ■ Don't think so

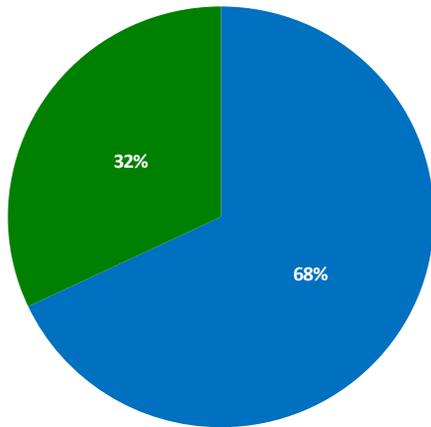
How were the facilities and venue?



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

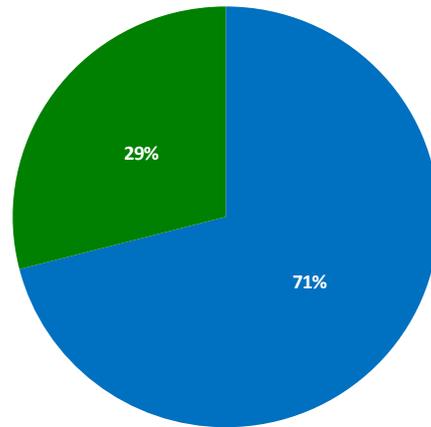
# Overall Teaching Feedback

How were the refreshments and lunch?



■ Excellent ■ Good ■ Neutral ■ Fair ■ Poor

How was the general friendliness of the faculty and organisers?



■ Very friendly ■ Friendly ■ Neutral  
■ Not very friendly ■ Can't comment

## Individual Comments

It was very good.

**ED**

*South Warwickshire NHS Foundation Trust, United Kingdom*

This was a well-designed and efficient course.

**KW**

*Kingston Public Hospital, Kingston, Jamaica*

Great.

**MA**

*Mackay Base Hospital, Queensland, Australia*

It was very good.

**MM**

*Leicester Royal Infirmary, Leicester, United Kingdom*

Great.

**TB**

*Western General Hospital, Edinburgh, United Kingdom*

Brilliant.

**EW**

*Stepping Hill Hospital, Stockport, United Kingdom*

The course provided an excellent review of exam topics, with very good faculty.

**CK**

*University Hospital Limerick, Limerick, Ireland*

It was very good.

**SS**

*Whipps Cross University Hospital, London, United Kingdom*

The content and teaching were excellent.

**VK**

*Wrightington, Wigan and Leigh NHS Trust, United Kingdom*

Great.

**TB**

*Western General Hospital, Edinburgh, United Kingdom*

## Individual Comments

Excellent.

**MS**

***Royal Preston Hospital, Preston, United Kingdom***

I would 100% recommend this course; it covers the high yield areas of the exam.

**WF**

***Daisy Hill Hospital, Newry, Northern Ireland***

This was a very intense course but it gave me an overall picture of what to expect in the exam and how much I needed to learn.

**IO**

***Royal Glamorgan Hospital, Llantrisant, United Kingdom***

It was a worthwhile experience.

**SS**

***Wrightington, Wigan and Leigh NHS Trust, United Kingdom***

I enjoyed the course; it was a good experience before going into the exam, and it increased my level of confidence.

**JA**

***Jos University Teaching Hospital, Jos, Nigeria***

This was an excellent course; I will be recommending it to my colleagues.

**EC**

***University Hospital Plymouth NHS Trust, United Kingdom***

Great.

**MI**

***Royal Berkshire NHS Foundation Trust, United Kingdom***

It was very good.

**VA**

***Warwick Hospital, Warwick, United Kingdom***

This was excellent preparation for the exam.

**EM**

***Cork University Hospital, Cork, Ireland***

## Individual Comments

It was very good.

**ZK**

*Lister Hospital, Stevenage, United Kingdom*

The content and the support from the tutors were excellent. I recommend this course to anyone applying for the MRCS Part B. It's a very solid course.

**RP**

*Hamad Medical Corporation, Qatar*



# DOCTORS ACADEMY

BETTER EDUCATION. BETTER HEALTH.

Doctors Academy is a UK-based International Non-Profit Organisation comprising of doctors, dentists and scientists that undertakes a diverse range of educational activities globally. The aim of the Academy is to disseminate information and exchange medical knowledge between professionals from diverse backgrounds working in a variety of healthcare settings. This is achieved by the provision of a number of attendance courses, publishing house, online resources and international events / competitions.

## Courses (a selection):

### Undergraduate:

- Final Year Medicine and Surgical Revision Courses
- Training the Clinical Anatomy Trainer
- Clinical Anatomy as Applied to Trauma and Emergency Medicine
- Surgical Anatomy of Important Operative Procedures
- Future Surgeons: Key Skills (RCSEd delivered)
- Structured Introduction to Surgical Skills

### Postgraduate:

- MRCS Part A
- MRCEM Part A
- MRCS Part B OSCE
- DOHNS: Intensive Revision & OSCE
- Intercollegiate Basic Surgical Skills (RCSEd delivered)
- MRCP PACES Part 2
- FRCS (General Surgery) Exit Exam
- Cadaveric Ultrasound-Guided Musculoskeletal Intervention Course
- Ultrasound-Assisted Botulinum Toxin Injection for Neuromuscular Disorders
- Live Advanced Laparoscopic Colorectal Course



## Forthcoming key events:

- International Medical Summer School
- International Academic and Research Conference
- World University Anatomy Challenge

## Publications



[publications.doctorsacademy.org](http://publications.doctorsacademy.org)

## World Journal of Medical Education & Research



Peer-reviewed academic journal  
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- No submission fees
- No manuscript processing fee
- No publishing fee
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## Online Revision Resources

DoctorExams consists of 1000s of questions with detailed explanations in MCQ, EMQ, SBA and SAQ formats. Questions are written by the Doctors Academy group of experienced clinicians and clinical academics, with mock exams and feedback on performance included to aid a candidate's focused revision of topics. Based on past exams, these questions are carefully crafted to suit the requirements of undergraduate students & postgraduate trainees undertaking relevant speciality exams.

### Resources for:

- Medical Students
- Dental Students
- International Entrance Exams
- MRCS Exams
- General Surgery Exams
- Plastic Surgery Exams
- DOHNS Exams

[www.doctorexams.co.uk](http://www.doctorexams.co.uk)

# [www.doctorsacademy.org](http://www.doctorsacademy.org)