

# **Surgical Training for Austere Environments**

## **Provisional Programme**

### **Course Director:**

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| <b>Day 1: Airway, Breathing and Circulation</b> |                                                                                                                                                                                                            |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Time</i>                                     | <i>Content</i>                                                                                                                                                                                             |
| <b>0745-0800</b>                                | <b>Registration and Refreshments</b>                                                                                                                                                                       |
| 0800-0810                                       | Introduction and Course Themes                                                                                                                                                                             |
| 0810-0850                                       | The Austere Environment/Damage Control                                                                                                                                                                     |
| 0850-0920                                       | Resuscitation and Anaesthesia                                                                                                                                                                              |
| <b>0920-0930</b>                                | <b>Changing and moving to lab</b>                                                                                                                                                                          |
| 0930-1000                                       | The Primary and Secondary Survey                                                                                                                                                                           |
| 1000-1030                                       | Management of the Airway<br>Cricothyroidotomy<br>Tracheostomy<br>Chest Drain                                                                                                                               |
| 1030 -1200                                      | THORACOTOMY FOR CHEST INJURIES<br>Lecture<br>Left Anterolateral Thoracotomy<br>Clamshell Thoracotomy<br>Repair of Atrial and Ventricular Injuries<br>The Hilum<br>Pulmonary Injuries<br>Closure and Drains |
| <b>1200-1230</b>                                | <b>Lunch</b>                                                                                                                                                                                               |
| 1230 -1240                                      | Vascular Didactic                                                                                                                                                                                          |
| 1240 -1310                                      | Neck Injuries<br>Carotid<br>Patching Techniques                                                                                                                                                            |
| 1310 -1330                                      | Zone 1 Neck (Subclavian)                                                                                                                                                                                   |
| 1330 -1400                                      | Nerve Blocks                                                                                                                                                                                               |
| 1400-1445                                       | Exposure of Axillary<br>Brachial Vessels<br>Patch Repair Brachial Artery<br>Arm Fasciotomy                                                                                                                 |
| 1445-1530                                       | Exposure of Groin Vessels<br>Shunting of Groin Vessels                                                                                                                                                     |
| 1530-1700                                       | Thigh and Leg Fasciotomy<br>End to End Anastomosis<br>Vein Patch<br>Reversed Vein Bypass<br>Vascular Shunts                                                                                                |
| <b>1700-1715</b>                                | <b>Refreshments</b>                                                                                                                                                                                        |
| 1715 -1900                                      | Paediatric Surgery and anaesthesia                                                                                                                                                                         |
| <b>1900</b>                                     | <b>Finish</b>                                                                                                                                                                                              |

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| <b>Day 2: General Surgical, Neurosurgical and Facial Trauma</b> |                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Time</i>                                                     | <i>Content</i>                                                                                                                                                                                                                                                                                                                                                            |
| <b>0745-0800</b>                                                | <b>Refreshments</b>                                                                                                                                                                                                                                                                                                                                                       |
| 0800-0830                                                       | Ballistics                                                                                                                                                                                                                                                                                                                                                                |
| 0830-1100                                                       | Appendicectomy<br>Trauma Laparotomy<br>Supraceliac Aortic Control<br>Stomach Injuries, Splenectomy<br>Management of Liver Injuries<br>R to L Visceral Medial Rotation/IVC Repair<br>Duodenal Injury Pancreatic Injury<br>Renal Repair and Nephrectomy<br>Right Visceral Medial Rotation for Inferior vena Cava and Aortic Injury<br>Small Bowel Resection and Anastomosis |
| <b>1100-1115</b>                                                | <b>Refreshments</b>                                                                                                                                                                                                                                                                                                                                                       |
| 1115-1230                                                       | Stomas, Ileostomy and Colostomy<br>Right Hemicolectomy<br>Hartmanns Operation                                                                                                                                                                                                                                                                                             |
| 1000-1230<br>(rotations during the lab work)                    | FAST scanning and general ultrasound                                                                                                                                                                                                                                                                                                                                      |
| <b>1230-1300</b>                                                | <b>Lunch</b>                                                                                                                                                                                                                                                                                                                                                              |
| 1300 -1500                                                      | Neurosurgery                                                                                                                                                                                                                                                                                                                                                              |
| <b>1500-1530</b>                                                | <b>Refreshments</b>                                                                                                                                                                                                                                                                                                                                                       |
| 1530-1800                                                       | Maxillo –facial Injuries                                                                                                                                                                                                                                                                                                                                                  |
| <b>1800</b>                                                     | <b>Finish</b>                                                                                                                                                                                                                                                                                                                                                             |

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**Day Three: Obstetrics and Gynaecology (held at the RCOG)**

| <i>Time</i>      | <i>Content</i>                           |
|------------------|------------------------------------------|
| 0900-0920        | Registration and refreshments            |
| 0920-0930        | Welcome and introduction                 |
| 0930-1000        | Managing the difficult Caesarean Section |
| 1000-1020        | Ruptured Uterus                          |
| 1020-1040        | Caesarean Hysterectomy                   |
| <b>1040-1100</b> | <b>Break</b>                             |

**Order of training rotations**

You will be split into 3 groups (A, B and C). Your group will be identified by the colour of your badge.  
The station names will be up on the wall outside each room.

**Group A – Red**

**Group B – Green**

**Group C – Blue**

| <b>Stations</b>    |                        |                              |                               |
|--------------------|------------------------|------------------------------|-------------------------------|
|                    | <b>Normal Delivery</b> | <b>Fully dilated Section</b> | <b>Destructive Craniotomy</b> |
| 1100-1135          | <b>A</b>               | <b>B</b>                     | <b>C</b>                      |
| 1135- 1210         | <b>C</b>               | <b>A</b>                     | <b>B</b>                      |
| 1210-1245          | <b>B</b>               | <b>C</b>                     | <b>A</b>                      |
| <b>1245 – 1330</b> | <b>Lunch</b>           |                              |                               |

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| Stations      |                                                             |                 |                              |
|---------------|-------------------------------------------------------------|-----------------|------------------------------|
|               | Difficult Delivery<br>C-section floating head<br>and Breech | Perineal Trauma | Compression and<br>Tamponade |
| 1330-1400     | A                                                           | B               | C                            |
| 1400-1430     | C                                                           | A               | B                            |
| 1430-1500     | B                                                           | C               | A                            |
| 15.00 – 15.20 | Break                                                       |                 |                              |

| Stations  |                    |                           |                  |
|-----------|--------------------|---------------------------|------------------|
|           | Gynaecology        | Neonatal<br>Resuscitation | Lived Experience |
| 1520-1550 | A                  | B                         | C                |
| 1550-1620 | C                  | A                         | B                |
| 1620-1650 | B                  | C                         | A                |
| 1650-1700 | Feedback and Close |                           |                  |
| 1710-1730 | Faculty Meeting    |                           |                  |

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| Day Four: Plastic Surgery |                                                                              |
|---------------------------|------------------------------------------------------------------------------|
| Time                      | Content                                                                      |
| <b>0745-0800</b>          | <b>Refreshments</b>                                                          |
| 0800-0805                 | Programme overview                                                           |
| 0800-0930                 | Burns                                                                        |
| 0930-1000                 | Flaps lecture - key points<br><b>Defects you need to be able to fill</b>     |
| 1000-1100                 | Skin graft demo and practical                                                |
|                           | Lower limb 1: Defect middle third leg <b>fasciocutaneous perforator flap</b> |
|                           | Lower limb 2: Defect upper third leg <b>gastroc flap</b>                     |
| <b>1100-1115</b>          | <b>Refreshments</b>                                                          |
| 1115-1145                 | Lower limb 3: Defect lower third/foot <b>adipofascial perforator flap</b>    |
| 1145-1215                 | Hand: Defect hand <b>groin flap</b>                                          |
| 1215-1245                 | Upper limb: Defect arm/forearm <b>adhoc perforator flap</b>                  |
| 1245-1330                 | Upper limb/shoulder/chest defect <b>lat dorsi flap</b>                       |
| <b>1330-1400</b>          | <b>Lunch</b>                                                                 |
| 1400-1420                 | Random pattern flaps for face / small defects                                |
| 1420-1440                 | Basic tendon repair                                                          |
| 1440-1525                 | Abdominal wall defect <b>component separation</b>                            |
| 1525-1600                 | Face / small defects <b>random pattern flaps</b>                             |
| <b>1600-1615</b>          | <b>Refreshments</b>                                                          |
| 1615 -1800                | Flexor tendon repair                                                         |
|                           | Extensor tendon repair                                                       |
|                           | Nerve tagging / large nerve repair                                           |
| <b>1800</b>               | <b>Finish</b>                                                                |

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| Day 5: Orthopaedic Trauma |                                                                              |
|---------------------------|------------------------------------------------------------------------------|
| <i>Time</i>               | <i>Content</i>                                                               |
| <b>0745-0800</b>          | <b>Refreshments</b>                                                          |
| 0800-1000                 | Plastering and Skin traction                                                 |
| <b>1000-1015</b>          | <b>Refreshments</b>                                                          |
| 1015-1230                 | Fracture management                                                          |
| <b>1230 – 1300</b>        | <b>Lunch</b>                                                                 |
| 1300–1400                 | Pelvic Trauma                                                                |
| 1400-1515                 | Management of Osteomyelitis and Chronic Wounds<br>Advanced Wound Debridement |
| <b>1515-1530</b>          | <b>Refreshments</b>                                                          |
| 1530-1700                 | Amputations                                                                  |
| 1700-1730                 | Course conclusion                                                            |
| <b>1730</b>               | <b>Finish</b>                                                                |

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