

General Surgical Anatomy Course – (GSAC)

2020



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Introduction

The QUT Medical Engineering Research Facility (MERF) has designed an intensive, RACS Accredited, General Surgical Anatomy Course (GSAC) that enables delegates to further enhance their knowledge of anatomy education in relation to general surgical anatomy through delegate surgical dissection and dissection exploration.

This course creates an in-depth immersion into specific regions of the body through osteology, arthrology, clinical anatomy, surface anatomy, visceral anatomy, surgical approaches and clinical case studies in the regions of neurology, head and neck, thorax, abdomen, intra-pelvic, shoulder, elbow, wrist/hand, hip, knee, ankle/foot and spinal anatomy.

This course involves anatomical demonstrations with embalmed cadaveric prosected specimens as well as surgical approaches and dissection using fresh frozen cadaveric material demonstrated by current leading surgeons within those regions.

The final module is a radiological module where an experienced radiographer will be taking real-time x-rays of a real patient discussing radiation physics, radiation shielding, patient positioning and safety around mobile c-arms.

Delegates who enrol in the course have the opportunity to develop the skills required to perform various surgical approaches of all regions of the human body.

Candidates will be provided with this Course Profile prior to the commencement of the course. Each candidate will have the opportunity to perform surgical approaches that are demonstrated throughout the course under the guidance and supervision of experienced faculty members and / or onsite clinical anatomists.

Course Objectives

The Objectives of This Course are to:

1. Provide comprehensive surgically-relevant anatomy education for general surgeon trainees, resident / junior / senior / principal house officers of various disciplines, radiologists, medical officers and allied health professionals.
2. Provide specialist surgical training using fresh frozen cadaveric material in the Anatomical & Surgical Skill Laboratory.
3. Provide opportunities for delegates to facilitate and enhance learning experience through forums and workshops and hands on dissection of fresh frozen cadaveric tissue.
4. Provide opportunities for delegates to explore the anatomy and discuss sample Generic Surgical Sciences Examination (GSSE) questions and answers with first – class clinical anatomists and general surgeons.

RACS Accreditation & Competencies

Each year, MERF will engage with RACS in order to perform accreditation of the course.

The main RACS Competencies that the GSAC will relate to will be:

- Collaboration and Teamwork:
 - Demonstrate a respectful attitude towards other colleagues and members of inter-professional teams.
- Judgement – Decision Making:
 - Recognise symptoms, accurately diagnose and manage common problems in their area of expertise.
 - Appraise and interpret radiographic investigations against a patient's needs.
- Medical Expertise:
 - Basic sciences.
- Scholarship and Teaching:
 - Integrate new learning into practice.
 - Draw on different kinds of knowledge in order to weigh up patients' problems in terms of context, issues, needs and consequences.
 - Critically appraise new trends in surgery.
- Technical Expertise:
 - Consistently demonstrate sound surgical skills.
 - Demonstrate procedural knowledge and technical skill at a level appropriate to their level of experience.
 - Demonstrate manual dexterity required to carry out procedures.
 - Adapt their skills in the context of each patient-each procedure.
 - Maintain skills and learn new skills.
 - Approach and carry out procedures with due attention to safety of patient, self and others.
 - Analyse their own clinical performance for continuous improvement.

Acquired From: <https://www.surgeons.org/trainees/the-set-program/nine-racs-competencies>.

Delegate Attributes

At The Conclusion of This Course, Delegates Will Have Covered:

1. Specific knowledge of surface anatomy, osteology and surgical anatomy in an general surgical anatomy context as it refers to major regions of the body including neurology, head and neck, thorax, abdomen, intra-pelvic, shoulder, elbow, wrist, hip, knee, ankle/foot and spinal anatomy.
2. Knowledge and relevant understanding of specific surgical approaches to common injury / disease etiology in various regions of the body, including indications, structural risks, complications and contraindications.
3. Knowledge of a variety of case studies with clinical relevance to general surgical anatomy knowledge.

4. Knowledge and practice at answering GSSE sample questions.
5. Dissection and exploration through dissection of the whole human body utilising fresh frozen cadaveric specimens.

Prerequisites

Minimum undergraduate anatomy knowledge required as per Medical Degree/ Anatomical Sciences Degree – a minimum of 1 unit of anatomy at university level.

Delegates are required to undertake Self-Directed Learning to revise adjacent anatomical structures and pathways related to the specific region modules. Assumed knowledge will not be directly assessed.

There are no strict prerequisites for the course as it is open to all disciplines of anatomy and allied health.

Course Structure

- Duration:
 - Weekend # 1 – Friday, Saturday & Sunday;
 - Weekend # 2 – Friday, Saturday & Sunday;
 - Weekend # 3 – Sunday.
- 12 Surgical Presentations from Leading Surgeons utilising Fresh Frozen Cadaveric Material.
- 12 Surgical Opportunities for Delegates to Perform Surgical Approach and Regional Dissections.
- 2 Revision Presentations Exploring GSSE Sample Questions and Answers with Prosected Tissue.
- 1 Radiology Session with Mobile C-Arm and Fresh Frozen Cadaver.

Program Outline

June 2020							Brisbane, Queensland	Today 75° F/
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY		
1 Jun	2	3	4	5	6	7		
8	9	10	11	12	13	14	GSAC - 2020; 106 Lab Clinical Anatomy Neuro, Head & Neck, Thorax Pelvis & Abdomen	
15	16	17	18	19	20	21	GSAC - 2020 ; 106 Clinical Anatomy Shoulder, Elbow & Wrist; 106 Hip, Knee, Ankle & Spine; 106	
22	23	24	25	26	27	28	GSAC - 2020 Radiology C-Arms; 106	

2020 Dates – **Weekend # 1:** Friday, 12 June 2020 to Sunday, 14 June 2020

A. Neurology, Head & Neck, Thorax, Abdominal & Pelvic Modules

Day One – Friday (Weekend # 1) – Clinical Anatomy with Prosected Specimens		
7:00 – 7:30 AM	Welcome and Registration	Course Coordinator
7:30 – 9:00 AM (1.5 Hours)	Neurology Anatomy Presentations	Clinical Anatomists
9:00 – 9:15 AM	Morning Tea Break (15 Minutes)	
9:15 – 10:45 AM (1.5 Hours)	Head & Neck Anatomy Presentations	Clinical Anatomists
10:45 – 11:00 AM	Brunch Break (15 Minutes)	
11:00 – 12:30 PM (1.5 Hours)	Thorax Anatomy Presentations	Clinical Anatomists
12:30 – 1:30 PM	Lunch Break (60 Minutes)	
1:30 – 3:00 PM (1.5 Hours)	Abdominal Anatomy Presentations	Clinical Anatomists
3:00 – 3:15 PM	Afternoon Tea Break (15 Minutes)	
3:15 – 4:45 PM (1.5 Hours)	Pelvic Anatomy Presentations	Clinical Anatomists
4:45 – 5:45 PM	GSSE Sample Questions / Discussion / Revision	Clinical Anatomists
5:45 – 6:00 PM	Finish / Depart MERF	

Day Two – Saturday (Weekend # 1) – Surgical Approaches (Neurology, Head & Neck and Thorax)		
7:00 – 7:15 AM	Welcome and Registration	Course Coordinator
7:15 – 8:15 AM (1.0 Hours)	Neurology Surgical Approaches	Faculty
8:15 – 9:15 AM	Hands-On Delegate Approaches	Delegates
9:15 – 9:30 AM	Morning Tea Break (15 Minutes)	
9:30 – 11:00 AM (1.5 Hours)	Head & Neck Surgical Approaches	Faculty

11:00 – 12:30 PM	Hands-On Delegate Approaches	Delegates
12:30 – 1:00 PM	Lunch Break (30 Minutes)	
1:00 – 2:30 PM (1.5 Hours)	Thorax Surgical Approaches	Faculty
2:30 – 4:00 PM	Hands-On Delegate Approaches	Delegates
4:00 – 4:15 PM	Afternoon Tea Break (15 Minutes)	
4:15 – 5:15 PM	Free-Style Dissection Session (60 Minutes)	Delegates
5:15 – 5:30 PM	Finish / Depart MERF	

Day Three – Sunday (Weekend # 1) – Surgical Approaches (Abdominal and Pelvic)

7:00 – 7:15 AM	Welcome and Registration	Course Coordinator
7:15 – 8:45 AM (1.5 Hours)	Intra-Pelvic Surgical Approaches	Faculty
8:45 – 10:15 AM	Hands-On Surgical Approaches	Delegates
10:15 – 10:30 AM	Morning Tea Break (15 Minutes)	
10:30 – 12:00 PM (1.5 Hours)	Abdominal Surgical Approaches	Faculty
12:00 – 1:30 PM	Hands-On Delegate Approaches	Delegates
1:30 – 2:30 PM	Lunch Break (60 Minutes)	
2:30 – 4:00 PM	Free-Style Dissection Session	Delegates
4:00 – 5:00 PM	Afternoon Tea Break (15 Minutes)	
5:00 – 5:15 PM	Finish / Depart MERF	

GSAC 2020 Dates – **Weekend # 2:** Friday, 19 June 2020 to Sunday, 21 June 2020

B. Shoulder, Elbow, Wrist/Hand, Hip, Knee, Ankle/Foot, Back/Spine Modules

Day One – Friday (Weekend # 2) – Clinical Anatomy with Prosected Specimens		
7:00 – 7:15 AM	Welcome and Registration	Course Coordinator
7:15 – 8:30 AM (1.25 Hours)	Shoulder Anatomy Presentations	Clinical Anatomists
8:30 – 9:45 AM (1.25 Hours)	Elbow Anatomy Presentations	Clinical Anatomists
9:45 – 10:00 AM	Morning Tea Break (15 Minutes)	
10:00 – 11:15 AM (1.25 Hours)	Wrist & Hand Anatomy Presentations	Clinical Anatomists
11:15 – 12:30 PM (1.25 Hours)	Hip & Pelvis Anatomy Presentations	Clinical Anatomists
12:30 – 1:30 PM	Lunch Break (60 Minutes)	
1:30 – 3:00 PM (1.25 Hours)	Knee Anatomy Presentations	Clinical Anatomists
3:00 – 4:30 PM (1.25 Hours)	Ankle Anatomy Presentations	Clinical Anatomists
4:30 – 4:45 PM	Afternoon Tea Break (15 Minutes)	
4:45 – 6:00 PM (1.25 Hours)	Back & Spine Anatomy Presentations	Clinical Anatomists
6:00 – 7:00 PM (1.0 Hours)	GSSE Sample Questions / Discussion / Revision	
7:00 PM	Finish / Depart MERF	

Day Two – Saturday (Weekend # 2) – Surgical Approaches (Shoulder, Elbow, Wrist & Hand)		
7:00 – 7:15 AM	Welcome and Registration	Course Coordinator
7:30 – 9:00 AM (1.5 Hours)	Shoulder Surgical Approaches	Faculty
9:00 – 10:30 AM	Hands-On Delegate Approaches	Delegates
10:30 – 10:45 AM	Morning Tea Break (15 Minutes)	
10:45 – 11:45 AM (1.0 Hours)	Elbow Surgical Approaches	Faculty
11:45 – 12:45 PM	Hands-On Delegate Approaches	Delegates
12:45 – 1:45 PM	Lunch Break (60 Minutes)	
1:45 – 3:15 PM (1.5 Hours)	Wrist & Hand Surgical Approaches	Faculty

3:15 – 4:45 PM	Hands-On Delegate Approaches	Delegates
4:45 – 5:00 PM	Afternoon Tea Break (15 Minutes)	
5:00 – 5:30 PM	Free-Style Dissection Session	Delegates
5:30 – 5:45 PM	Finish / Depart MERF	

Day Two – Sunday (Weekend # 2) – Surgical Approaches (Hip, Knee, Foot / Ankle and Spine)		
7:00 – 7:15 AM	Welcome and Registration	Course Coordinator
7:15 – 8:45 AM (1.5 Hours)	Hip Surgical Approaches	Faculty
8:45 – 10:15 AM	Hands-On Delegate Approaches	Delegates
10:15 – 10:30 AM	Morning Tea Break (15 Minutes)	
10:30 – 11:30 AM (1.0 Hours)	Knee Surgical Approaches	Faculty
11:30 – 12:30 PM	Hands-On Delegate Approaches	Delegates
12:30 – 1:30 PM	Lunch Break (60 Minutes)	
1:30 – 2:45 PM (1.25 Hours)	Ankle & Foot Surgical Approaches	Faculty
2:45 – 4:00 PM	Hands-On Delegate Approaches	Delegates
4:00 – 4:15 PM	Afternoon Tea Break (15 Minutes)	
4:15 – 5:30PM (1.25 Hours)	Back & Spine Surgical Approaches	Faculty
5:30 – 7:00 PM	Hands-On Delegate Approaches	Delegate Approaches
7:00 – 7:30PM	Free-Style Dissection Session	Delegate Approaches
7:00 – 7:30PM	Finish / Depart MERF	

GSAC 2020 Dates – **Weekend # 3:** Sunday, 28 June 2020

Day One – Sunday (Weekend # 3) – Radiology Session		
7:00 – 7:15 AM	Welcome and Registration	Course Coordinator
7:30 – 8:30 AM (1.0 Hours)	Head & Neck Radiography	Clinical Anatomist & Radiographer
8:30 – 9:30 AM (1.0 Hours)	Vertebral Column Radiography	Clinical Anatomist & Radiographer
9:30 – 9:45 AM	Morning Tea Break (15 Minutes)	
9:45 – 10:45 AM (1.0 Hours)	Thorax & Abdominal Radiography	Clinical Anatomist & Radiographer
10:45 – 11:45 AM (1.0 Hours)	Shoulder, Elbow and Wrist Radiography	Clinical Anatomist & Radiographer
11:45 – 12:45 PM (1.0 Hours)	Lunch Break (60 Minutes)	
12:45 – 1:45 PM (1.0 Hours)	Hip (Pelvic), Knee & Ankle Radiography	Clinical Anatomist & Radiographer
1:45 – 2:00 PM	Afternoon Tea Break (15 Minutes)	
2:00 – 3:00 PM (1.0 Hours)	Sample Questions & Discussions	Clinical Anatomist & Radiographer
3:00 – 3:15 PM	Finish / Depart MERF	

C. Surgeons / Faculty Support / Clinical Anatomists

Weekend #	Module # and Name	Demonstrating Faculty Surgeon (All TBC)
1	Module 1 – Neurology	Dr. Richard Laherty
1	Module 2 – Head & Neck	Dr. Nigel Johnson
1	Module 3 – Thorax	Dr. Morgan Windsor
1	Module 4 – Abdominal	Dr. Carina Chow
1	Module 5 – Intra-Pelvic	Dr. Luke McLindon
2	Module 6 – Shoulder	Dr. Mark Ross
2	Module 7 – Elbow	Dr. Andrew Mayo
2	Module 8 – Wrist & Hand	Dr. Greg Couzens
2	Module 9 – Hip & Pelvis	Dr. Rohan Brunello
2	Module 10 – Knee	Dr. Tony Ganko
2	Module 11 – Ankle	Dr. Jeff Peereboom
2	Module 12 – Back & Spine	Dr. Dennis Hartig
3	Module 13 – Radiology	Mr. Bradley Robertson
1 – 3	Clinical Anatomist # 1	Dr. Stephanie Stoddart
1 – 3	Clinical Anatomist # 2	Dr. Gareth Davies
1 – 3	Clinical Anatomist # 3	Dr. Josh Russell
1 – 3	Clinical Anatomist # 4	Dr. Sidharth Mantha

** Note: All surgeons to be confirmed prior to and during the course. MERF endeavours to confirm the above surgeons, however, there might be some variations depending on surgeon availability.

Course Contacts

Course Coordinator (Main Contact)

Mr. Matthew Wissemann
B.Sc Hons Anatomy Qld Anatomical and
Surgical Skills Facility Manager
Medical Engineering Research Facility (MERF)
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Surgical Director

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M.B.,B.S (Qld), F.R.A.C.S (Orth.), D.Phil (Oxon)
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Course Director

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IT Support

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AV Support

Mr Ross Hutton
Technology Support Officer
Learning Environments and Technology
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Course / Clinical Anatomists

Dr. Gareth Davies
MBBS (Qld)

Dr. Stephanie Stoddart
MBBS (Qld) / Bsc / BA

Dr. Joshua Russell
MBBS (Qld)

Dr. Sidharth Mantha
MBBS (Qld)

Dr. Mostyn Young
MB ChB (UK) / MEng

Radiographer

Mr. Bradley Robertson
BSc M.R.T. (Qld)
Radiographer Team Leader – Operating
Theatres at Gold Coast university Hospital

Anatomy Presentations & Surgical Approaches

- Commencing Week 1 of the course, delegates are given a one day anatomical presentation using embalmed cadaveric specimens to describe the anatomical features of viscera, innervations, blood supply and clinical relevance of a specific region of the body.
- On the second and third days, delegates then receive a clinical demonstration from a surgical skills specialist for the surgical approach and dissection of the same region on a fresh frozen cadaver(s) exploring anatomical features of that region. After the clinician has performed their session, delegates are then given the opportunity to perform their own surgical approach session and dissection session for that regional anatomy.
- In some rare circumstances the Program Outline may change depending on surgeon availability. The Course Coordinator will email all registered delegates with any changes in advance of the change.

Assessment

- 10% Attendance (all modules). **We highly encourage onsite attendance even if it is only for specific modules that you are interested in.**
- 90% Case Studies.
- There is no formal assessment for this course in terms of examinations.
- Every delegate will receive a certificate of completion with their overall achievement at the conclusion of the course.

The overall levels of achievement are the following:

- | | |
|------------|-------------------|
| ➤ 50 – 70% | Pass Conceded |
| ➤ 70% | Pass |
| ➤ 80% | Commendation |
| ➤ 90% | High Commendation |

Attendance

- Attendance is either in person or by correspondence with Zoom (specified during enrolment).
- On-site delegates are required to fill out an attendance sheet each week.
- GSSE revision sessions are not compulsory, although it is highly recommended.

MERF has designed the course in consultation with faculty surgeons to encourage onsite attendance. Delegates are given the opportunity to perform surgical dissections with faculty surgeons as mentors and supporting staff for each day of the surgical approach session.

Online registrations are limited as we encourage onsite attendance where possible. Delegates can attend the course both onsite or online. Regardless of your enrolment, all delegates will receive recordings of each module.

D. On Site Attendance

Delegates are required to inform the course coordinator at merf.gsac@qut.edu.au of their onsite attendance to ensure that an adequate number of specimens are available for all delegates. The course coordinator will email a timetable in which you can register your onsite attendance with prior to the commencement of the course.

Failure to register your interest could result in no specimen being allocated to that particular delegate.

Due to the number of delegates and specimens, some modules will require delegates to work in groups in order to maximise their learning experience.

Case Studies

- Each week delegates will receive case studies which relates to the following week's topic.
- Delegates have one week to complete and return-email their case studies to merf.gsac@qut.edu.au.
- Case studies marks will be returned within 2 – 3 weeks from the date of submission.
#unless special consideration is applied.
- Each Case study will require you to review a clinical case, diagnose the injury/condition and then propose the course of treatment you would provide.

When you receive the case study, it will be given a file name:

E.g CS1 Neurology.doc

Open the file and enter the answers in the space provided. You need to save the file with your details in the file name then email it back to the Course Co-ordinator as an attachment with this name in the email subject:

E.g CS1JaneSmith.doc

Marks awarded for the case studies will be made available within 2 – 3 weeks of submission. You will receive your marks via email.

If you have any questions/concerns about your case study results, you will need to contact the course co-ordinator via email to discuss.

Case Study Due Dates

Module	Topics	Case Study Due Date:
1 – 3	Neurology, Head & Neck and Thorax	Saturday, 20 June 2020
4 – 5	Abdomen & Pelvis	Sunday, 21 June 2020
6 – 8	Shoulder, Elbow and Wrist	Saturday, 27 June 2020
9 – 12	Hip, Knee, Ankle & Foot and Spine	Sunday, 28 June 2020

Access to Online Recording Sessions

Access to online recordings will be accessible to Thursday, 31 December 2020.

There are no exceptions to this access. After the date stated above, all access to Media Warehouse will be removed by QUT AV / IT.

Resources

There is no “set textbook” for GSAC. However, we do recommend the following texts to assist your learning:

- Lasts Anatomy. Sinnatamby et al. 9th – 11th Edition.
- Clinically Orientated Anatomy. Keith L Moore et al. 6th Edition
- McMinns Clinical Atlas of Human Anatomy. Peter H Abrahams et al. 6th Edition
- Surgical Exposures in Orthopaedics: The Anatomic Approach. Stanley Hoppenfeld et al. 4th Edition.

QUT Code of Conduct

At all times during this course, delegates are expected to comply with the QUT Student Code of Conduct. This Code can be accessed at http://www.mopp.qut.edu.au/E/E_02_01.jsp.

Onsite Delegates – Parking at QUT MERF

