NSW GOVERNMENT

HETI HEALTH EDUCATION & TRAINING

Surgical Sciences Intensive Course (SSIC)

Course outline

Revised 2026

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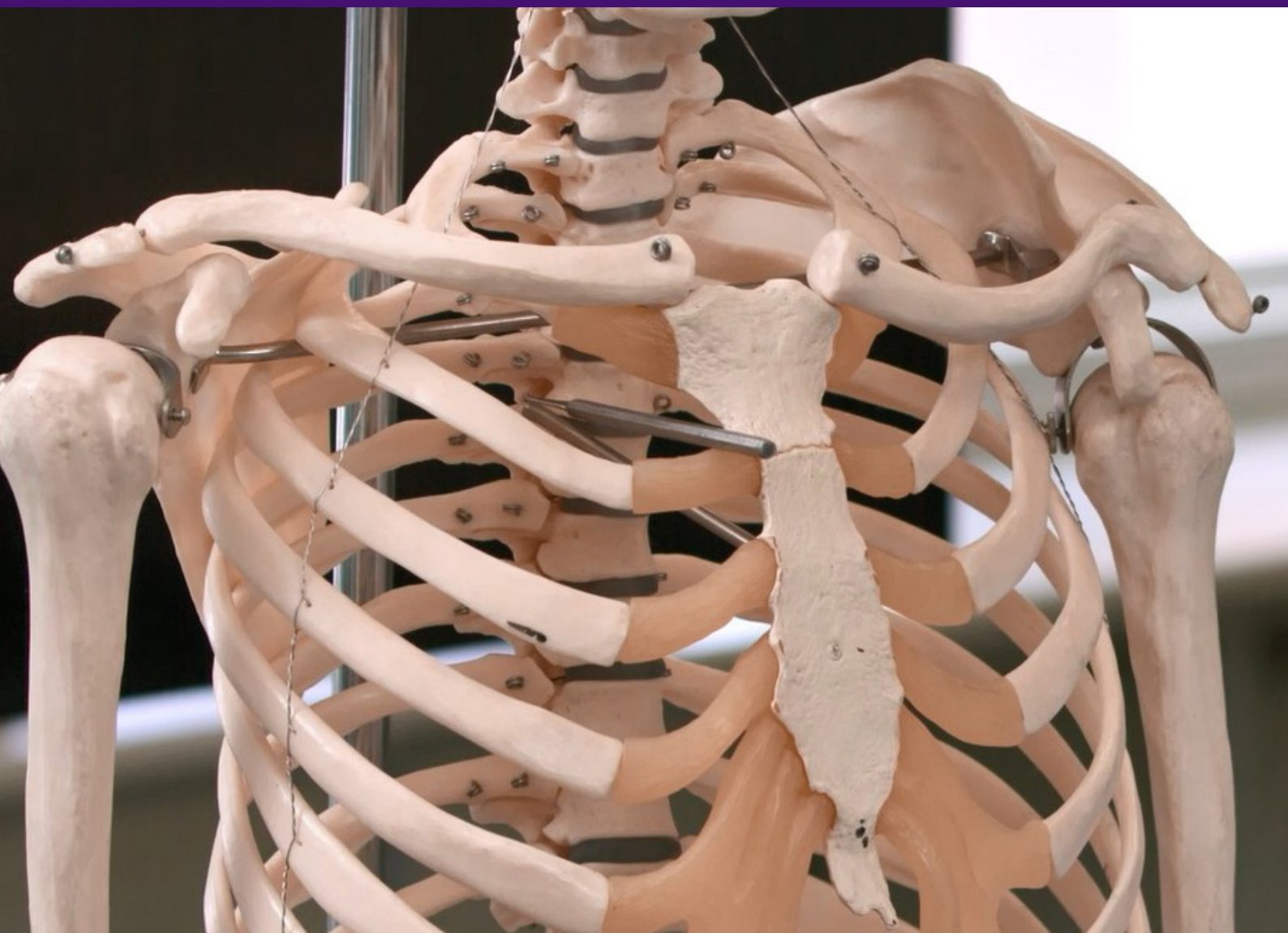

HETI'S VISION AND PURPOSE

VISION

To be the first-choice partner for
Education and Training in NSW Health

PURPOSE

We educate for better health outcomes

February 2026

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Background to the revised model of delivery for the SSIC

The original SSIC was a course designed to assist surgical trainees achieve success in the Royal Australasian College of Surgeons (RACS) General Surgical Science Examination (GSSE). The course comprised a 10 day face-to-face intensive lecture series in Anatomy, Physiology and Pathology, complemented by intensive anatomy tutorials using cadaveric specimens in a laboratory setting.

The course was conducted in January each year, immediately prior to the RACS annual offering of the Generic Surgical Science Examination each February. The course was a successful collaboration between the Health Education and Training Institute and Western Sydney University and ran from 2010 until 2017.

The original SSIC was cancelled in 2018 due to a decline in registration numbers. This decline was due to a number of factors, including the difficulties experienced by surgical trainees getting approval for 10 days of leave to attend the SSIC, given the timing of the leave (last three weeks of final terms) and the potential significant impacts on service delivery.

Representatives of the Clinical Surgical Training Council Trainee Subcommittee (n=60) were surveyed to determine what resources and existing courses trainees were utilising to support their examination preparation activities for the RACS GSSE. The survey also asked whether trainees perceived value in HETI developing or facilitating examination preparation resources. Of the 32 respondents to the survey, 22 indicated they would value both the development of online resources and weekend anatomy tutorials while 26 indicated they would value practice examination papers.

In April 2020, Dr Claire Blizard, Medical Director HETI approved formation of a Subject Matter Expert (SME) group to review the SSIC. Membership of the SME group included:

Professor Robert Rae – Original SSIC Course Coordinator

Professor David Storey - Network Director, Sydney South West Surgical Skills Network

Professor Kerin Fielding - Clinical Chair, Clinical Surgical Training Council (CSTC)

Professor John Morley - Dean of Anatomy, Western Sydney University

Dr Sarah Whereat – Education Support Officer, Sydney South West Surgical Skills Network

Dr Lucy Hanlon - Surgical Trainee, Sydney South West Surgical Skills Network

The primary functions of the SME group were:

- Provision of strategic direction for the future delivery and administration of the SSIC, aligning with work undertaken by the Health Education and Training Institute (HETI) as appropriate.
- Oversight for the development of a clinically relevant education plan for the SSIC to support trainees attempting the Royal Australasian College of Surgeons GSSE.
- Oversight of the drafting of an options paper with recommendations for a revised education methodology for the SSIC. This included development of a model of delivery that will be sustainable into the future, an indicative budget for development of that model of delivery, as well as opportunities for cross-specialty participation in the SSIC where appropriate.

In September 2020, Adjunct Professor Annette Solman, HETI Chief Executive approved the SME group's recommendation for full development of a blended delivery methodology for the SSIC which comprises a series of online didactic lecture videos, a library of anatomy demonstration videos and a one-day weekend workshop with SMEs to explore more complex anatomical regions.

For eight months from September 2020 to April 2021, SME faculty recorded the didactic lecture series with the HETI Team, working with a professional videography team to capture the anatomy library. A pilot of the course was launched in July 2021. Following evaluation of the Pilot, the SSIC was implemented in 2022 and is now in its fifth year of delivery.

How the SSIC works

Enrolment Process

Activity	Date	Actions and/or expectations
Registrations open	1 April 2026	Candidates register and pay for the course
Registrations close	30 April 2026	
Course Commences	20 May 2026	Orientation to the course
	23 May 2026	Entrance Examination

Key features

- Course extends from 23 May 2026 to late September 2026.
- Participants will be required to complete an Entry Examination (Week 1) and an Exit Examination (Week 16). The Entry Examination will measure baseline knowledge at the commencement of the course and knowledge acquisition and retention following completion of the course.
- Content is a library of 71 videos recorded with subject matter experts in anatomy, pathology and physiology.
- Videos include a didactic lecture series (47 videos) and anatomy demonstrations (24 videos).
- Every three weeks during the course, participants will have a “content free” week – a chance to catch up if required. During this week, participants will receive exam practice questions and answers – facilitating self-reflection on individual responses.
- Week 15 will feature a virtual weekend Anatomy workshop to explore those more complex anatomical regions.

SSIC Overview

Who is the course designed for?

The SSIC has been developed for trainees with an interest in surgery.

How is the course being delivered?

The course will be delivered via the HETI My Health Learning Platform.

The course will include:

- Entry and Exit examinations
- On-line didactic lecture sessions (video-recorded)
- On-line library of Anatomy resources (video-recorded)
- Virtual Anatomy Workshop – to be conducted in September 2026

Is there a cost?

Yes $995. The course is being conducted on a cost-recovery basis. Participants are being charged for the cost of marking and analysis of entry and exit examinations, and the virtual anatomy weekend workshop (including venue, cadaveric specimens, technical staff and SME anatomists)

Course requirements

TECHNOLOGY

- Computer/ laptop
- Audio (computer speakers or headphones)
- Webcam
- Microphone
- Fast and reliable internet connection

LOCATION

- A quiet space to work without disruptions

Sustainability

Our approach to sustainability spans across every aspect of our products, services, staff and facilities. Aligning to this philosophy, the SSIC is delivered using paper-lite principles; using digital resources only.

Evaluation

HETI recognises that monitoring and evaluation is vital to ensure training delivery is appropriate for participants and that training achieves its intended objectives and learning outcomes. The process is underpinned by an evaluation framework where data is collected and analysed in a systematic way.

PARTICIPANT FEEDBACK
Assesses whether the programs are appropriate for their intended audiences and assess the quality of implementation.

IMPACT EVALUATION
Measures the extent to which a program's aims have been achieved.

Learning outcomes

YOU ARE EXPECTED TO:

- Undertake pre-reading as stipulated in the course structure
- Undertake the entry examination prior to course commencement
- Engage in the SSIC utilizing adult- based learning, self-directed and reflective approaches
- Participate in practice exam questions
- Participate in the virtual anatomy workshop as scheduled
- Undertake the exit examination at the conclusion of the course

LEARNING OUTCOMES:

By the end of the course you should be able to:

1. Apply feedback you receive to target specific disciplines of knowledge for further study and practice ahead of the RACS GSSE
2. Build a sound knowledge base in each surgical science discipline and across the board to the minimum standard required for the RACS GSSE
3. Identify the minimum standard of knowledge in surgical sciences and anatomy to practical skills expected of an early SET 1 trainee
4. Recognise the importance of strong foundations in the surgical sciences to support patient safety
5. Explain core basic surgical anatomy in the context of inter-specialty communication
6. Self-assess your surgical sciences knowledge through pre- and post- course assessments
7. Approach the RACS GSSE with greater confidence and a sound knowledge base in the surgical sciences.

Course is considered completed when:

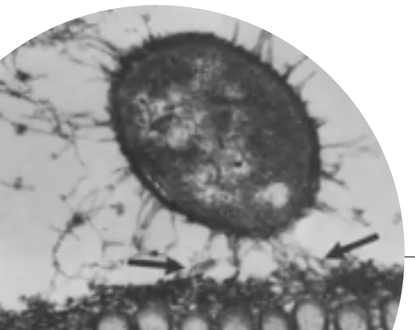
Participant attends Orientation
and
Participant submits Entry Examination
and
Participant attends Virtual Anatomy Workshop
and
Participant submits Exit Examination

Course completion

Participants completing all of the above will be issued with a HETI Certificate of Participation.

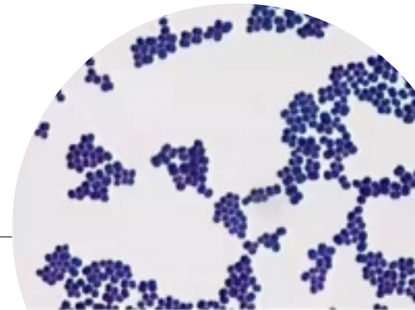
SSIC Program of Delivery

Session	Presenter	Should be completed (Week)	Date
Orientation Evening and Entrance Exam			
Introduction to the SSIC: – Course structure and self-directed learning approach – Reading list: Lasts, Ganong, Introductory Pathology, Wests (recommended) – Entry and Exit Examinations – Practice Questions in Revision Weeks – Anatomy Library	HETI SSIC Team	Orientation Week	Wed 20/5
Entry Examination (Online - Time limited – 3 hours) Anatomy, Physiology, Pathology	**HETI Administration**	**Orientation Week**	**Sat 23/5**
Week 1			
General Pathology 1 General Pathology 2 General Pathology 3 Overview of Genetics Cancer Genetics	Tristan Rutland	1	Mon 25/5
Week 2			
Common Cancers 1 Common Cancers 2 Pathology of Adaptive Growth and Neoplasia Non-Ischaemic types of Cell Injury	Tristan Rutland	2	Mon 1/6
Week 3			
Revision/Catch Up Week The Revision/Catch Up Weeks have been incorporated into the program to facilitate your timely progression through the SSIC. As busy clinicians it is important that you have sufficient time to review the SME lectures and demonstrations, as well as to complete recommended readings. This time should also be used to study the anatomy learning outcomes as you progress though the Anatomy Library.	SSIC Participants	3	Mon 15/6
Week 4			
CNS Physiology 1: Autonomic Nervous System CNS Physiology 2: CSF and cerebral circulation physiology CNS Physiology 3: Electrical properties of nerves CNS Physiology 4: Hypothalamus and physiology of sensory systems Pain Physiology	Peter Kam	4	Mon 22/6
Week 5			
Chest Wall and Lungs Cardiovascular Physiology 1: Applied DVS physiology topics Cardiovascular Physiology 2: Determinants and regulation of blood pressure Cardiovascular Physiology 3: Determinants of cardiac function	Robert Rae Peter Kam Peter Kam Peter Kam	5	Mon 29/6
Week 6			
Revision/Catch Up Week The Revision/Catch Up Weeks have been incorporated into the program to facilitate your timely progression through the SSIC. As busy clinicians it is important that you have sufficient time to review the SME lectures and demonstrations, as well as to complete recommended readings. This time should also be used to study the anatomy learning outcomes as you progress though the Anatomy Library.	SSIC Participants	6	Mon 6/7
Week 7			
Cardiovascular Physiology 4: Electromechanical events of the heart Cardiovascular Physiology 5: Peripheral blood vessels and regional circulation Microbiology 1 Microbiology-Stains Microbiology 2 Microbiology 3	Peter Kam Peter Kam Emma Sweeney Robert Rae Emma Sweeney Emma Sweeney	7	Mon 13/7



E Coli Fimbriae

S Aureus



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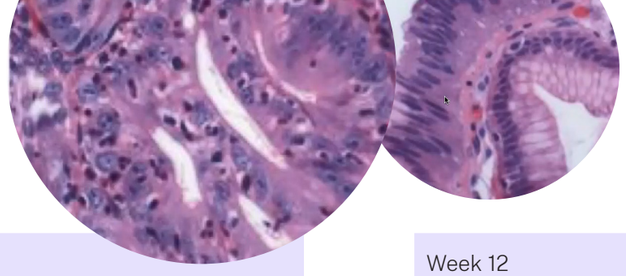


GI Tract histology

Week 8			
Respiratory Physiology 1: Overview of respiratory function (Includes: brief review of metabolism & also important physiological indices & how to derive them)			
Respiratory Physiology 2: Respiratory mechanics: Equilibrium of the thorax; lung volumes; compliance, resistance & gas flow	Blair Munford	8	Mon 20/7
Respiratory Physiology 3: Gas exchange in the lungs: Alveolar gas equation; diffusion; pulmonary blood flow & V/Q matching; shunt & dead space			
Practical Pharmacology			
Week 9			
Revision/Catch Up Week The Revision/Catch Up Weeks have been incorporated into the program to facilitate your timely progression through the SSIC. As busy clinicians it is important that you have sufficient time to review the SME lectures and demonstrations, as well as to complete recommended readings. This time should also be used to study the anatomy learning outcomes as you progress though the Anatomy Library.	SSIC Participants	9	Mon 27/7
Week 10			
Respiratory Physiology 4: Gas transport & acid-base physiology: 02 & CO2 transport; classification & pathophysiology of hypoxia; acid-base balance & disorders	Blair Munford		
Respiratory Physiology 5: Control of ventilation & respiratory pathophysiology: Control of ventilation in health & abnormal/disease states; principles of mechanical ventilation.	Blair Munford	10	Mon 3/8
Immunology 1	Connie Katelaris		
Immunology 2 (Immunological responses/diagnostic immunology/transplantation immunology)	Connie Katelaris		
Week 11			
Anatomy of the Gastrointestinal Tract	David Storey		
Gastrointestinal Tract Physiology 1	David Storey		
Gastrointestinal Tract Physiology 2	David Storey	11	Mon 10/8
Gastrointestinal Tract Histology	Robert Rae		
Metabolism, Nutrition and Surgery	David Storey		

Week 12			
Revision/Catch Up Week The Revision/Catch Up Weeks have been incorporated into the program to facilitate your timely progression through the SSIC. As busy clinicians it is important that you have sufficient time to review the SME lectures and demonstrations, as well as to complete recommended readings. This time should also be used to study the anatomy learning outcomes as you progress though the Anatomy Library.	SSIC Participants	12	Mon 17/8
Week 13			
Anatomy, Histology and Function of the Kidney	Robert Rae		
Liver Segments	Robert Rae		
Radiology 1 (Cancer)	Noel Young	13	Mon 24/8
Radiology 2 (Trauma)	Noel Young		
Haematology 1	Zaid Househ		
Week 14			
Haematology 2	Zaid Househ		
Pharmacology 1	Gerald Muench		
Pharmacology 2	Gerald Muench	14	Mon 31/8
Endocrine Histology and Physiology	Robert Rae		
Embryology	Tristan Rutland		
Week 15			
Virtual Anatomy Weekend Workshop	**Subject Matter Expert Surgeons and Anatomists**	**15**	Sat 12/9 - Sun 13/9
Week 16			
Revision Week for Exit Exam	**SSIC Participants**		Mon 14/9
Exit Examination (Online - Time limited - 3 hours) Anatomy, Physiology and Pathology	**HETI Administration**	**16**	Sat 19/9

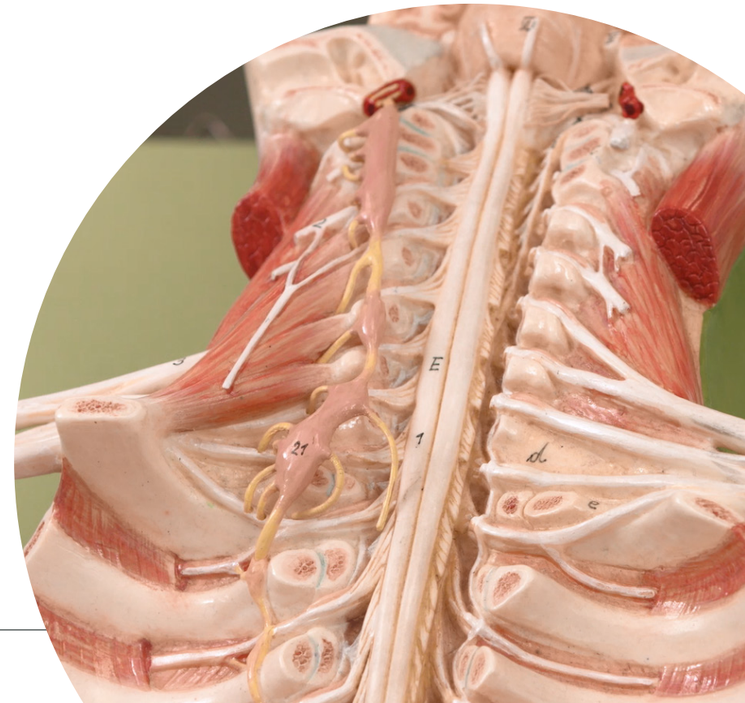
Online Anatomy Library

	Demonstrator	Review Weeks
Neuroanatomy		
Brain, cerebellum, cranial nerves-origin and course, blood vessels, circle of Willis. Clinical Assessment	Erica Jacobsen	1-15
Brain histology, optic tracts, pituitary hypothalamus, ventricles	John Morley	
Chest		
Chest wall, lungs, diaphragm	Robert Rae	1-15
Trans-thoracic plane (Sternal Plane)	Robert Rae	
Heart and lungs	Bruce French	
Chest – Anatomy and Radiology	Robert Rae	
Abdomen		
Oesophagus and stomach	David Storey	1-15
Liver Segments	Robert Rae	
Kidneys and ureters	Robert Rae	
Colon, rectum, anus and pelvis/pelvic floor	Scott MacKenzie	
Pancreas, biliary tree	David Storey	
Aorta and IVC – branches and veins	Cherylea Browne	
Neck		
Skull foramina, vertebrae and cartilages	Cherylea Browne	1-15
Thyroid, parathyroids, nerves tracheotomy, cricothyroidectomy	Peter Campbell	
Root of Neck: Blood vessels, penetrating injuries, surgical approaches	Robert Rae	
Upper Limb		
Brachial plexus, nerves	Cherylea Browne	1-15
Bones, joints, muscles of the hand	James Powell	
Lower limb		
Blood vessels	Ellen Hardy	1-15
Bones, joints, muscles of the foot	James Powell	
Neurovascular continuities in and out of the pelvis	David Storey	
Femoral Triangle	Cherylea Browne	
Popliteal Fossa	Cherylea Browne	
Nerves of the Lower Limb Part I	Cherylea Browne	
Nerves of the Lower Limb Part II	Cherylea Browne	

Virtual Anatomy Workshop Complex Anatomical Regions

Saturday and Sunday, 12 and 13 September 2026

Anatomical regions demonstrated by University Biomedical Sciences Anatomists		Week
Neuroanatomy-CNS Head and Neck Thorax Heart Abdomen I Abdomen II Upper Limb Lower Limb	Clinical consequences commentary and discussion provided by Subject Matter Expert Surgeons	15



Brachial plexus

NSW GOVERNMENT

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