



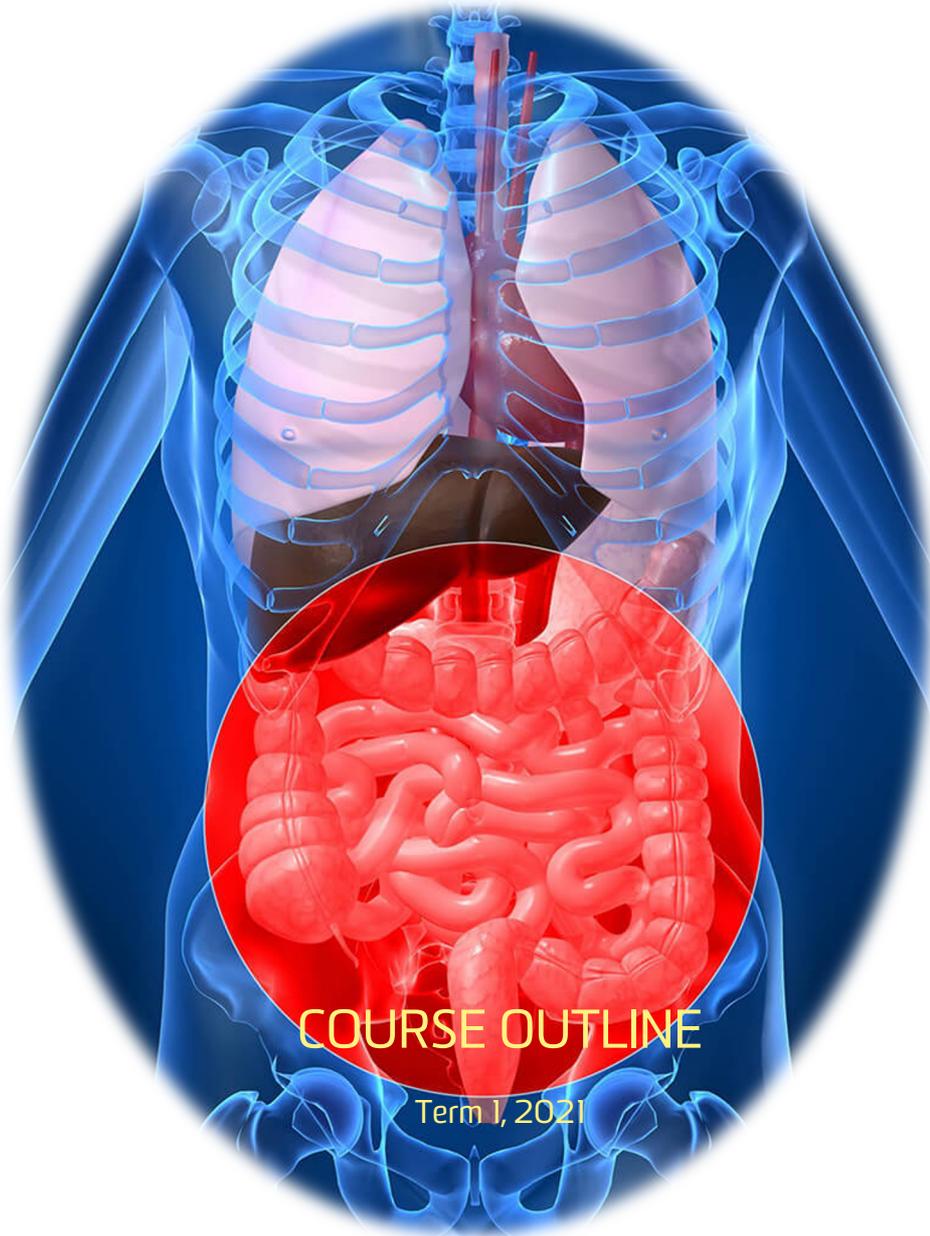
**UNSW**  
SYDNEY

Australia's  
Global  
University

Faculty of Medicine and Health  
School of Medical Sciences

# ANAT3121

## VISCERAL ANATOMY



**COURSE OUTLINE**

Term 1, 2021

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Please read this manual/outline in conjunction with the following pages on the [School of Medical Sciences website](#):

- [Advice for Students](#)
- [Learning Resources](#)

(or see "STUDENTS" tab at [medicalsciences.med.unsw.edu.au](http://medicalsciences.med.unsw.edu.au) )

# Staff Contact Details

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Appointments with specific academic staff should be arranged **via email**. The course email address is [VisceralAnatomy@unsw.edu.au](mailto:VisceralAnatomy@unsw.edu.au)

Please email from your **official UNSW student account**, include your **student number, course code** and state the **reason for your email** clearly. **Except for questions of private/personal context, all questions/queries preferably should be posted in Teams.**

# Course Details

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ANAT3121 Visceral Anatomy is a 6 UOC Level III course for Science, Medical Science, and students intending to study medicine and health sciences. The course builds on prior introductory to anatomy courses (such as ANAT1521, ANAT2111 and ANAT2511) and complements the level III anatomy courses offered the Department of Anatomy (ANAT3131, ANAT3141 and ANAT3411).

This course aims to provide you with a sound understanding of the functional and clinical anatomy of the viscera (organs) in the human body from both a regional and systems perspective. The focus is on the organ systems in the thorax, abdomen and pelvis (respiratory, cardiovascular, gastrointestinal, urinary, reproductive, lymphatic and autonomic nervous systems) and their functional integration with each other. Through the course activities, you will construct a 3-dimensional understanding of the human body and be able to apply this to cross-sectional, imaging and clinical anatomy.

Students build their knowledge in these systems via studying prosected wet and plastinated cadaveric specimens, models and bones as well by using the latest available technology. The course incorporates topographical, radiological and cross-sectional anatomy of the respective regions through the study of medical imaging and cadaveric sections. Relevant clinical and functional anatomy is discussed as applicable in seminars and practical sessions, and are the focus of special tutorial sessions designed to allow students to apply the course content via clinical scenarios.

The course was well-received in 2020 in spite of it being delivered remotely due to COVID regulations. Student feedback and suggestions are always valued and the course is modified based on these. The following modifications have been made to the course for 2021:

- The course will be delivered in a blended hybrid mode in 2021. Laboratory experiences will resume as an integral component of the course (NSW Health regulations permitting).
- The course content has been divided into 3 modules to assist students with consolidate, review and receive feedback as they progress through the content.
- The interactive practical session will be delivered as 2 2-hour lab sessions per week (replacing the one 3-hour lab session per week). This is to allow students to learn and review the content with more time to consolidate the information.
- Tutorials were very well received in 2020. Like last year, there will continue to be a focus on developing problem solving skills relevant to clinical and medical imaging applications.
- Seminars and tutorials will be delivered remotely through Teams. This was well received in 2020 and will continue to enable students to have flexibility and to minimise travel time to campus.

## Learning Outcomes

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ANAT3121 will develop the attributes identified by the Faculty of Science as important for a science graduate to attain. These include the skills, qualities, understanding and attitudes that promote lifelong learning that students should acquire during their university experience.

At the completion of the course the student should be able to:

1. demonstrate a sound knowledge of the anatomy of the organ systems of the body, including the musculoskeletal framework, the autonomic nervous system and the lymphatic system.
2. apply knowledge of the anatomy of the organ systems to construct a 3-dimensional perspective of the human body and apply this to interpreting cross-sectional anatomy and radiological images.
3. deduce the anatomy that underpins relevant clinical problems, and where applicable, their solutions.
4. research and critically evaluate literature and media, and reflect on its content through self-directed learning, teamwork and health advocacy.

## Course Structure and attendance:

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The weekly format is as follows:

1. Interactive Seminar: Monday 11am-1pm; Venue: Remotely delivered via MS TEAMS
2. Laboratory Session 1: Wednesdays 2-4pm; Venue Lab 08, 1<sup>st</sup> floor, Biosciences Building
3. Laboratory Session 2: Thursdays 9-11am; Venue Lab 08, 1<sup>st</sup> floor, Biosciences Building
4. Tutorial: Fridays 11am-1pm; Remotely delivered via MS TEAMS
5. Pre-recorded Videos: Available from the start of the week via Moodle
6. Self Directed Learning Activity: Completed by start of the week via Moodle

Please note that the course integrates the use of Moodle and MS Teams. It is suggested that you download the MS Teams app available via UNSW IT before the course commences.

**Any changes to the timetable will be communicated via the course Moodle and Teams.**

While it is expected that the seminars will be recorded please note that this cannot be guaranteed. **It is strongly recommended that students attend all seminars as they form the basis for the practical content for the week, and the weekly quiz taken during the lab session. Attendance is required**

at all laboratory and tutorial sessions. The laboratory sessions as well as some tutorials have assessable components.

### What to do if you feel ill?

- **Before class. Do not attend. Let your convenor know.** You only need to lodge a special consideration if an assessment is related to the missed class. You do not need documentary evidence to support absences from any classes missed because of COVID-19 public health measures such as isolation.
- **During class.** In case you need to blow your nose, sneeze or cough, please move away from others and use tissues. Discard tissue in the bins provided. Clean and re-sanitise your hands.  
If you feel unwell notify a demonstrator or tutor. They will direct you what to do.

**PLEASE NOTE THAT LAB COATS, CLOSED SHOES AND MASKS ARE REQUIRED FOR ALL LABORATORY SESSIONS.**

### What feedback will you receive before the Census Date?

Students will be provided by feedback before census date each week after the weekly quiz and at the end of Module 1 and its integrated assessment.

The University has a [Safe Return to Campus FAQ page here](#)

## Teaching Rationale and Strategies

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### Seminars

The seminars are designed to provide conceptual information and an overview of the content that will be the focus of the week's laboratory. It is advisable that students attend all seminars to achieve better learning outcomes and academic success.

In some cases (including 0 week) there is pre-class work (some of which is online) to assist in preparation for tutorials or labs, and/or post-class work to help consolidate content covered.

### Laboratory/Practical classes

The laboratory classes complement the seminars, and involve active learning in a small group situation. There is much research to indicate that this is the best method for the learning of anatomy and these sessions will give you a window into the wonder of the human body. In laboratory sessions, you will be required to study human bones, models, wet and plastinated prosected specimens as well as cross-sectional and radiological imaging. Every student is required to be involved in inquiry and take an active participation in the learning process.

**It is strongly advised that students come well prepared in order to make the best use of their time in the laboratory. Each lab session links to content covered in preceding seminars and videos.**

Surface anatomy and cross-sectional anatomy is included in most seminars, practicals and tutorials. Surface and cross-sectional anatomy as well as radiological imaging is examinable via specimens and images during practical exams and in the theory exams.

## **Tutorials**

These are aimed to be interactive sessions focussing on clinical anatomy and solving of clinical problems and include medical imaging and cross-sectional anatomy. Some tutorials will focus on clarifying difficult anatomical concepts. The tutorial in week 10 will be dedicated to presentation and peer review of student assignments.

## **Moodle & Teams**

This course uses Moodle and MS Teams as its learning platforms. On both of these platforms, you will find links to lecture notes, online videos and activities, assessment, announcements and discussions. More information regarding instructions and requirements will appear on on both platforms as announcements. Please ensure that you set these applications to receive notifications immediately.

The weekly seminars and tutorials will be accessed via MS Teams.

Students are encouraged to use the discussion forums in Teams (accessed directly through Teams or via a link on Moodle) for questions and discussion related to this course. Please engage in this discussion by answering and commenting on the discussion. The course conveners will also respond to questions here.

# Assessment

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The assessment in this course integrates the learnings from theory and practical components and is shown in the table below.

1. Continuous Assessment	10%
2. Integrated Assessments	40%
3. Assignment	10%
4. End of Course Assessment	40%

**Content taught in all activity types can be tested in any of the assessments. Feedback is provided to help students learn in all assessments except the end of course assessment.**

## Continuous Assessment:

Weekly online quizzes are based on the related seminars and videos to encourage students to be adequately prepared for each laboratory session. These are usually completed at the beginning of each Wednesday laboratory session and usually comprises five multiple choice questions (MCQs). The five best quiz marks contribute 10% to the final course mark.

You will need to bring a mobile device (phone/tablet/laptop) able to access the course Moodle site for this assessment.

Feedback process: Students will receive automated feedback on the day of the assessment.

## Integrated Assessments

The two integrated assessments during the term assess the content of Modules 1 and 2 respectively. Module 3 will be assessed as part of the end of course assessment. These assessments have a practical component that requires identifying structures on specimens as well as relating this to theoretical concepts and medical imaging.

*NB: COVID regulations permitting, the assessments that require attendance in person on campus and will be held:*

Monday 8 March 11am (Week 4)

Wednesday 7 April 2pm (Week 8)

Feedback process: Performance outcomes as well as generalised feedback regarding questions will be provided once the marks are finalised.

## Assignment:

Students will work in groups to research a topic related to clinical application of anatomical concepts. As part of the assessment, each group is required to negotiate their topic and assessment criteria with the course convenors. The format of the final submission will be decided by the cohort.

Feedback process: Students will receive feedback from peers and academics at the time of presentation.

## End of Course Assessment:

The End of Session Assessment will have two papers. This includes a one-hour lab assessment on Module 3, and a two-hour comprehensive assessment covering the entire course. The break down weighting of these papers is:

1. End of Course Assessment	40%
a. Integrated Assessment (Module 3)	15%

- b. Comprehensive Assessment paper 25%  
This paper is delivered online and completed remotely.

Feedback process: Performance outcome will serve as feedback

The pass mark for this course is **50%**. **It is compulsory to attempt all assessment activities.**

**Content taught in seminars, practicals, tutorials or via Moodle activities can be tested in any of the assessments.**

**The final exam period for Term 1, 2021 is Friday, 30 April to Thursday, 13 May.  
Supplementary exam period for Term 1, 2021 is Monday, 24 May to Friday, 28 May**

**A special consideration application must be submitted for all missed assessment activities. Please note that there is no supplementary for missed weekly quizzes as only the best five performance items contributes to the final course mark.**

For a missed assessment, a supplementary assessment will only be granted in the event of an application for special consideration is approved.

See [Special Consideration | UNSW Current Students](#) for further details.

# Student Resources

Students in this course are expected to have an anatomy textbook and an atlas. Online versions of the texts are accessible via UNSW Library. You are encouraged to bring an atlas with you to the laboratory classes.

## Recommended Textbooks (any one)

Moore KL, Dalley AF, Agur AM. *Clinically Oriented Anatomy*, 8<sup>th</sup> edition, Lippincott Williams & Wilkins  
**or**

Drake RL, Vogl W, Mitchell AWM, *Gray's Anatomy for Students*, 3<sup>rd</sup> edition, Elsevier Churchill Livingstone (available online via the library)

## Recommended Atlas (any one)

Rohen JW, Yokochi C, Lutjen-Drecoll. *Color Atlas of Anatomy*, Lippincott Williams & Wilkins, 8<sup>th</sup> edition

Netter FH. *Atlas of Human Anatomy*, Novartis, 6<sup>th</sup> edition

Agur AMR, Lee MJ. *Grant's Atlas of Anatomy*, Lippincott Williams & Wilkins, 13<sup>th</sup> edition

Abrahams PH, Boon JM, Spratt JD. *McMinn's Clinical Atlas of Human Anatomy*, Mosby Elsevier, 7<sup>th</sup> edition

## Reference Books

Dean D and Herbener TE, "Cross Sectional Human Anatomy: Including images from the National Library of Medicine's Visible Human Project", 2007, Lippincott Williams & Wilkins.

Hull, Lippincott Williams and Wilkins, *Colouring atlas of the human body*.

Marieb, EN & Hoehn K, *Human Anatomy and Physiology + CD* 9<sup>th</sup> edition, Pearson Benjamin cunnings.

Martini FH, *Fundamentals of Anatomy and Physiology*, 10<sup>th</sup> edition, Pearson Benjamin cunnings.

Robert D. Acland, *Acland's Cross-Sectional Navigator*, Lippincott Williams And Wilkins.

## Library Resources

See [Learning Resources](#) on the SoMS Website Student pages.

- Library Subject Guide for Anatomy [SUBJECTGUIDES.LIBRARY.UNSW.EDU.AU/MEDICINE/ANATOMY](http://SUBJECTGUIDES.LIBRARY.UNSW.EDU.AU/MEDICINE/ANATOMY)
- Primal Pictures: 3D interactive anatomy database
- Acland's Video Atlas
- Gray's Anatomy for Students

The Library holds a variety of 3D anatomical models for students: These are housed in My Course Reserve, level 2.

# Anatomy lab student risk assessment

Medicine and Science  
Teaching Laboratory



UNSW  
SYDNEY

Anatomy Practical Classes for  
Medical and Science Students

Student Risk Assessment

Bioscience Building Level 1 LAB08A/07

Hazards	Risks	Controls
<b>Physical</b> Cold temperature (16°C) Sharp bone/plastic  <b>Biological</b> Fungi, bacteria (tetanus), hepatitis B and C  <b>Chemical</b> Formaldehyde Methylated spirits 2-phenoxyethanol	Cold  Penetrating wound of foot  Infection  Corrosive/Flammable Flammable Irritant	<ul style="list-style-type: none"> <li>Wear laboratory coat over appropriate warm clothing</li> <li>Wear enclosed shoes with full coverage of the dorsum of the foot</li> <li>Wear protective eyewear</li> <li>Wear face mask (if required)</li> <li>Have appropriate immunisation</li> <li>Do not eat, drink or smoke in the Anatomy Lab</li> <li>Do not place anything (e.g. pens, pencils) into your mouth</li> <li>Use disposable gloves when handling wet specimens and do not cross-contaminate models or bones with wet specimens</li> <li>Use disinfectant and wipes for cleaning models</li> <li>Always wash hands with liquid soap and dry thoroughly with disposable paper towel before leaving (hand sanitisers also available)</li> <li>Low concentrations of chemicals used</li> <li>Chemicals used in well ventilated area</li> <li>Safety Data Sheets for chemicals available</li> </ul>

## Personal Protective Equipment required



Lab. Coat



Closed in footwear



Safety Glasses



Gloves



Mask

## Emergency Procedures

In the event of an alarm sounding, stop the practical class and wait for confirmation to evacuate from demonstrators. Then wash your hands and pack up your bags. Follow the instructions of the demonstrators (and/or fire wardens) regarding exits and assembly points.

## Clean up and waste disposal

- Cover wet specimens with the towels provided. Make sure that towels do not hang over the edge of the table, because this allows fluid to drip onto the floor. Fluids on the floor are a major safety hazard and should be reported to staff immediately.
- Replace stools under the tables in your cubicle (if applicable).
- Remove your gloves and dispose in the biowaste bins provided.
- Wash your hands and instruments thoroughly with the soap and dry your hands with paper towel.
- Remove your laboratory coat when you leave the dissecting room.

## Ethics Approval

This type of practical has been previously considered and approved by the UNSW Human Research Ethics Advisory Panel (HC180115).

## Declaration

I have read and understand the safety requirements for this practical class, and I will observe these requirements.

Signature: ..... Date: .....  
Student number: .....

## Ethical Behaviour and human remains

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The learning in this course is centred around study of prosected (professionally dissected) human anatomical specimens which have been preserved and prepared from people who have donated their bodies to UNSW via a Bequeathal Program so that you and your peers can study the human body. This is an extraordinary, generous act of these donors and their families and is a special privilege. Treating these remains with the utmost care and respect is mandatory and our responsibility. It is good ethical practice and is mandated by law. The University operates the Bequeathal Program under the Code of Practice noted below, which all students are required to adhere to.

### **UNSW Department of Anatomy Code of Practice:**

The University recognises the magnitude of the contribution made by those who donate their bodies for the teaching of anatomy and it is committed to treating the human remains entrusted to its care with the utmost respect and professionalism. In keeping with this commitment, the University requires its employees and students to uphold all legal, public health, and ethical standards associated with the handling of bodies and human tissue samples.

Any activity which undermines its ability to meet UNSW's legislative obligations, or which devalues the contribution made by those who donate their bodies for the purposes of the teaching of anatomy to students will be in breach of this policy and subject to further action

## Administrative and Student Support Services

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Staff in SoMS student administration are available to help with problems with enrolment and scheduling and should be the first point of contact for administrative problems.

They are contacted via the UNSW Student Portal Web forms <http://unsw.to/webforms>

Please also note that there are important resources to support your success here

- Transitioning to Online Learning <https://www.covid19studyonline.unsw.edu.au>
- Guide to Online Study <https://student.unsw.edu.au/online-study>
- UNSW Student Life Hub <https://student.unsw.edu.au/hub#main-content>
- Equitable Learning Services <https://student.unsw.edu.au/els>

## ANAT3121 | VISCERAL ANATOMY AND IMAGING

WEEK		MICROSOFT TEAMS		ANATOMY LABORATORY (LAB 07)		MATHEWS 101/104	SELF-DIRECTED ACTIVITY	
		SEMINAR   MONDAYS 11-1PM		LAB 1   WEDNESDAY 2-4PM	LAB 2   THURSDAY 9-11AM	TUTORIAL   FRIDAY 9-11AM	Suggest complete by the start of the week	
Module 1 - Thorax	1	15/02 - 21/02	S1  Thoracic Wall & Diaphragm	S2 Thoracic Cavity: Pleura & Lungs	L1  Thoracic wall & Diaphragm	L2  Pleura, Lungs and Trachea	Mechanics of Respiration, Breast <i>Clinical Cases &amp; Imaging: The Chest Xray</i>	Pre-recorded 1  The Thoracic Wall - Parts 1-3 Pre-recorded 2  The Breast
	2	22/02 - 28/02	S3  Mediastinum: Middle - Part 1	S4 Mediastinum: Middle - Part 2	L3  Middle Mediastinum - Part 1	L4  Middle Mediastinum - Part 2	Anatomy of the Coronary Vessels <i>Clinical Cases &amp; Imaging: Heart &amp; thoracic CS</i>	Pre-recorded 3  Introduction to Lymphatic System - Part 1-2
	3	01/03 - 07/03	S5 Mediastinum: Superior	S6 Mediastinum: Anterior & Posterior	L5  Superior Mediastinum	L6  Anterior & Posterior Mediastinum	Autonomic Innervation of the Thorax <i>Clinical cases: Respiratory tract, Oesophagus</i>	Pre-recorded 4  The abdominal wall & inguinal canal
Module 2 - Abdomen	4	08/03 - 14/03	Integrated Assessment (Module 1)		L7  Abdominal wall & Inguinal Canal	L8  Peritoneal Cavity & Peritoneum	Autonomic Innervation of the Abdomen <i>Clinical Cases &amp; Imaging: Hernias</i>	Pre-recorded 5  Abdominal Wall: Nerves Pre-recorded 6  Peritoneal Cavity & Peritoneum
	5	15/03 - 21/03	S7 Foregut & associated organs - Part 1	S8 Foregut & associated organs - Part 2	L9  Foregut & associated organs - Part 1	L10  Foregut & associated organs - Part 2	GIT: Blood Supply and Drainage <i>Clinical Cases &amp; Imaging: Cross Sections</i>	Pre-recorded 7  Abdomen: The intestines
	6	22/03 - 28/03	FLEXIWEEK					Pre-recorded 8  Suprarenal Glands, Kidneys & Ureters
	7	29/03 - 04/04	S9 Abdomen: Neurovascular Structures	S10 Bony Pelvis & Pelvic Walls	L11  Intestines & Blood Supply	L12  Posterior Abdominal Wall, Suprarenal, Renal, Ureters	<b>GOOD FRIDAY</b>	Pre-recorded 9  Urinary Bladder & Urethra
Module 3 - Pelvis & Perineum	8	05/04 - 11/04	<b>EASTER MONDAY</b>		Integrated Assessment (Module 2)	L13  Bony Pelvis & Pelvic Walls	Peritoneal relations and pelvic pouches <i>Clinical Cases &amp; Imaging</i>	Pre-recorded 10  Anal Region
	9	12/04 - 18/04	S11 Internal Genitalia: Male	S12 Internal Genitalia: Female	L14  Male Pelvis & Internal Genitalia	L15  Female Pelvis & Internal Genitalia	Pelvic Landmarks <i>Clinical cases &amp; imaging: pelvis and perineum</i>	Pre-recorded 11  Spermatic Cord & Testes
	10	19/04 - 23/04	S13 Perineum	S14 Pelvis: Neurovascular Structures	L16  Perineum	L17  Pelvic Nerves, Vessels & Lymphatics	Team Presentations & Review	Pre-recorded 12  Lymphatic Drainage of Abdomen and Pelvis
Exam Period		<b>Assessments: 1 x 1hr Integrated Assessment (Module 3); 1 x 2hour Comprehensive Course Assessment</b>						



