Unit of Study Descriptions

CAPSTONE UNIT

SURG5100 Surgical Professionalism and Leadership

Credit Points: 6 **Availability**: Semester 2 Online with one day workshop **Course coordinator**: Dr Anthony Glover **Description:** Surgeons are expected to be effective leaders and have a detailed understanding of the attributes of professionalism in their discipline. In the modern health care setting being an effective leader and adhering to high standards of ethics and professionalism can be challenging, involving responsibilities to our patients, peers, institutions, community and society. Many recent challenges to surgical practice are related to the quality and style of leadership and professional skills and attitudes. In this capstone unit we will examine in detail the knowledge and skills required to be an effective leader. The unit will feature leading members of the Australian surgical and medical community and examine how we can identify and respond to challenges in surgical practice. Leadership will be examined across a range of scenarios from every-day clinical practice to international health advocacy campaigns. Changes in surgical practice stemming from quality improvement and new technology as well as relationships with industry will be explored to provide a framework for effective leadership and professionalism. This unit will equip surgeons at any stage of training with approaches to evaluate and improve the practice of surgery in Australia. **Classes:** Online learning and discussion forums; online group case presentation; 1 day face to face workshop (compulsory). **Assessment:** Workshop group case presentation (25%), discussion boards (15%), written assessment (60%) **Textbooks:** Readings include papers from the scientific literature and selected textbook chapters for each module. **Co-requisites:** CEPI5100 or SURG5035 or PUBH5018 plus 18 credit points of surgery selective units of study

RESEARCH METHOD SELECTIVE UNITS

SURG5035 Surgical Research and Evaluation

Credit Points: 6 **Availability:** Semester 1 Online **Coordinator:** Associate Professor Kerry Hitos **Classes:** Weekly online lectures and tutorial discussion board over 10 weeks **Description:** The objective of this unit is to provide candidates with an understanding of key methodological concepts of level one evidence based studies needed to conduct high quality surgical research. It will cover basic concepts on how to identify when is surgery research, principles of good clinical research practice and provide the necessary skills on how to measure the quality of care. Key topics focus on how to identify, appraise, select and synthesise a systematic review and meta-analysis. The use of databases and registries and how to best present statistical analysis and summarise data. This unit will provide candidates with the skills to measure the quality of surgical care as well as evaluate surgical performance and measures of effects. Candidates will be able to critically appraise published statistics and learn to identify publication bias before applying the findings to their own clinical practice. **Assessment:** On-line short answer questions cover the knowledge acquired. Each set of questions must be completed and submitted by the due date and before students proceed to the next module. Answers to each module will contribute (30%) to the final score of the unit. A written assignment will also contribute (70%). **Textbook:** Notes will be linked to online teaching material. **Additional Info:** Limit S1 – 50 places

CEPI5100 Introduction to Clinical Epidemiology

Credit Points: 6 Coordinator: Dr Fiona Stanaway **Prohibition**: PUBH5010 **Offered**: Semester 1, Semester 2 **Classes:** offered online or face-to-face (daytime tutorials). **Assessment**: Completion of online quizzes (15%), tutorial participation (10%), assignment 1 (15%), assignment 2 (60%) **Overview:** This unit introduces the concept of clinical epidemiology and provides students with core skills in clinical epidemiology at an introductory level. Topics covered include asking and answering clinical questions; basic and accessible

literature searching techniques; study designs used in clinical epidemiological research; confounding and effect modification; sources of bias; interpretation of results including odds ratios, relative risks, confidence intervals and p values; applicability of results to individual patients; critical appraisal of clinical epidemiological research literature used to answer questions of therapy (RCTs and systematic reviews), harm, prognosis, diagnosis, screening and clinical guidelines; and translating research into practice. **Textbooks:** Online readings and other learning resources will be provided.

PUBH5018 Introductory Biostatistics

Credit points: 6 **Teacher/Coordinator**: Dr Kevin McGeechan, Dr Erin Cvejic **Session**: Semester 1 Classes: 2 x 2hr lecture, 10 x 1hr lectures, 11 x 2hr tutorials, 2 x 1hr and 8 x 0.5hr statistical computing self-directed learning tasks over 12 weeks - lectures and tutorials may be completed online **Assessment**: Weekly quizzes (10%), 1x4 page assignment (20%), 1 x 1hr online test (20%) and 1x1.5hr open-book exam (50%). For distance students it may be possible to complete the exam externally with the approval of the course coordinator. **Mode of delivery**: Normal (lecture/lab/tutorial) day, Normal (lecture/lab/tutorial) evening, Online **Description**: This unit aims to provide students with an introduction to statistical concepts, their use and relevance in public health. This unit covers descriptive analyses to summarise and display data; concepts underlying statistical inference; basic statistical methods for the analysis of continuous and binary data; and statistical aspects of study design. Specific topics include: sampling; probability distributions; sampling distribution of the mean; confidence interval and significance tests for one-sample, two paired samples and two independent samples for continuous data and also binary data; correlation and simple linear regression; distribution-free methods for two paired samples, two independent samples and correlation; power and sample size estimation for simple studies; statistical aspects of study design and analysis. Students will be required to perform analyses using a calculator and will also be required to conduct analyses using statistical software (SPSS). It is expected that students spend an additional 2 hours per week preparing for their tutorials. Computing tasks are self-directed. **Textbooks** Course notes are provided.

SURGERY SELECTIVE UNITS

SURG5003 Scientific Communication for Surgeons

Credit Points: 6 **Coordinator:** Assoc. Prof Kerry Hitos **Availability:** Semester 1 and 2 online **Description:** This unit is designed to promote academic surgery pari passu with the objectives of the Section of Academic Surgery (SAS) of the Royal Australasian College of Surgeons (RACS). Candidates will develop the skills and art of delivering powerful professional presentations. They will learn how to craft a suitable abstract for a scientific paper or conference using their research findings in a format acceptable for adjudication as an oral presentation at a meeting of a Surgical Research Society or the Annual Scientific Congress of the RACS and its subspecialties. This includes critical steps to successful abstract preparation, visual presentation, content, structure, coherent design and delivery. Key topics include the formation of an effective argument and focus point, style of delivery, avoiding critical errors, including analysing, understanding and handling the audience. On completion, candidates will be confident and have the core skills to present findings of their research effectively in a way that is engaging, persuasive and will maximise impact. This unit is strongly recommended for all undertaking Dissertation A (SURG 5007) and B (SURG 5008) for the Masters of Surgery. As part of their assessment, candidates will be provided with the opportunity to either present online or at the John Loewenthal Society which is an integral component of the Discipline of Surgery that promotes the development and organisation of academic surgery and participate in a live interactive research seminar. This unit is delivered online and with weekly lectures and discussions. The John Loewenthal Society will be held for one day in Sydney for those candidates that select this presentation option. **Assessment:** Compulsory participation and assessment of 6 online modules (30%), research presentation component either online or at the John Loewenthal Society (70%).

SURG5050 Dissertation A

Credit Points: 6 **Availability:** Semester 1 or 2 **Coordinator:** Professor Pierre Chapuis **Description:** The dissertation is a formal piece of writing relevant to the subject area of the masters degree. Candidates will work on a specified research project under appropriate supervision. At least one of the project supervisors must be an academic staff member of the University. The dissertation is in Parts A and B, both of which will be completed in a minimum of one year of full time study or two years of part time study **Coordinator:** Clinical Professor Pierre Chapuis **Classes:** 6hrs per week of self directed research with regular consultation with supervisor
Assessment: Candidates will be required to submit the dissertation in the form of a paper dealing with research on a specific topic. It should be the equivalent of one paper which would be acceptable for publication in a peer reviewed scientific, academic or professional journal. In keeping with Academic Board policy there is an option to submit published work based on research undertaken while enrolled for this degree. Such publications should include additional information such as:
(i) An introduction with more information on previous work by others
(ii) More detail on Methodology including figures
(iii) Insert paper at this point
(iv) Commentary on the significance of the findings.

SURG5051 Dissertation B

Credit Points: 6 **Availability:** Semester 1 or 2 **Coordinator:** Professor Pierre Chapuis **Description:** The dissertation is a formal piece of writing relevant to the subject area of the masters degree. Candidates will work on a specified research project (10,000 words) under appropriate supervision. At least one of the project supervisors must be an academic staff member of the University. The dissertation is in Parts A and B, both of which will be completed in a minimum of one year of full time study or two years of part time study.
Coordinator: Clinical Professor Pierre Chapuis **Classes:** 6hrs per week of self directed research with regular consultation with supervisor
Assessment: Candidates will be required to submit the dissertation in the form of a paper dealing with research on a specific topic. It should be the equivalent of one paper which would be acceptable for publication in a peer reviewed scientific, academic or professional journal. In keeping with Academic Board policy there is an option to submit published work based on research undertaken while enrolled for this degree. Such publications should include additional information such as:
(i) An introduction with more information on previous work by others
(ii) More detail on Methodology including figures
(iii) Insert paper at this point
(iv) Commentary on the significance of the findings.

SURG5011 Imaging Surgical Patients

Credit Points: 6 **Coordinator:** Professor Stuart Grieve **Availability:** Semester 2 **Description:** This unit of study aims to introduce imaging relevant to the practice of surgery. Students will learn the underlying physical and technological principles upon which imaging relies and the indications for use and complications of imaging. On completion of the unit students will understand the scientific basis of the various imaging modalities and the indications for their use and appreciate the importance of protection of patients and personnel from the harmful effects of imaging. Imaging types covered in this unit include: B mode, spectral analysis and duplex ultrasound; computerised tomography; magnetic resonance; positron emission tomography; radio isotope imaging; angiography; and imaging guided therapeutic techniques. **Classes:** Online lectures, case-based discussion boards and/or webinars **Assessment:** online quizzes (20%), case based assignments (25%), participation in online case discussion forums (15%), final online examination (40%)

SURG5012 Surgical Metabolism

Credit Points: 6 **Availability:** Semester 2 online **Classes:** Online **Coordinator:** Dr Michael Suen **Description:** The aims of the unit are for the student to acquire knowledge of nutrition in surgery and to understand adaptive response of the body to stress, trauma and sepsis. By the end of the unit the student will become competent in providing enteral and parenteral nutritional therapy to metabolically compromised patients. Content includes Nutrition assessment, Surgical Complications in Malnourished, Enteral and Parenteral Nutrition, Complications in Obese, Obesity and Surgery, Short Bowel Syndrome and Enterocutaneous fistula. **Assessment** Compulsory participation in 6 online modules x 5% (30%) Complete a 2000-5000 word assignment (70%) **Textbooks** Reading materials will be posted online prior to the sessions

SURG5016 Vascular and Endovascular Surgery

Credit points: 6 **Teacher/Coordinator**: Associate Professor Anthony Freeman, Dr Robert Tang **Session:** Semester 2 **Description:** This unit of study aims to provide students with a greater understanding of the anatomy, pathophysiology and treatment options for vascular surgical disorders by open or endovascular means. It will introduce students to key areas of vascular anatomy, pathology and imaging at an advanced level. On completion of the unit, students will be conversant with the academic basis for contemporary vascular surgery. **Classes:** online modules, compulsory 1 day face to face skills session (limit 12 students) **Assessment:** online quizzes (10%), participation in generation and peer review of assessment items (10%), 6x 300 word assignments and participation in discussion forums (30%), 1800 word written assignment (30%), skills session attendance and assessment (20%) **Textbook:** McMinn RMH. Last's Anatomy: Regional and Applied. 12th edition. Churchill Livingstone, 2011; Wind GG and Valentine JR. Anatomical Exposures in Vascular Surgery, 3rd edition, Lippincott Williams and Wilkins, 2013; Fitridge R and Thompson M. Mechanisms Of Vascular Disease: A Reference Book for Vascular Specialists. University of Adelaide Press, 2011; Hallett JW. Comprehensive Vascular and Endovascular Surgery. Mosby. 2nd Edition 2009; Pellerito J and Polak JF. Introduction to Vascular Ultrasonography. 6th edition. 2012; Inter-Society Consensus for the Management of Peripheral Arterial Disease (TASC II). Norgren L; Hiatt WR; Dormandy JA; Nehler MR; Harris KA; Fowkes FG; TASC II Working Group. Journal of Vascular Surgery. 45 Suppl S:S5-67, 2007 Jan; Management of Chronic Venous Disease: Clinical Practice Guidelines of the European Society for Vascular Surgery (ESVS). Wittens C et.al. European Journal of Vascular and Endovascular Surgery. 49(6):678-737, 2015 Jun; Rutherford RB (Ed) Vascular Surgery, 8th Edition 2014.
Additional Info: Limit 12 students per semester. Departmental permission required.

SURG5017 Microsurgery

Credit Points: 6 **Availability:** Semester 1 or 2 **Coordinator:** Clinical Senior Lecturer Bernard Schick **Classes:** 6x 2 hour labs/tutorials, plus 3 x 2.5hr (Saturday) labs (limit 10 students) **Description:** The course will deliver focused sessions on applied Microsurgical anatomy, and practical training in Microsurgery - Micro vascular and micro neural techniques. Real time demonstrations, Video, other visual and printed material will be used to aid teaching and to supplement the 'eyes on scope' sessions. Sessions will comprise of brief lecture, demonstration of techniques to be developed in the class, followed by supervised Microsurgical practice with set objectives and standards. Students will keep a detailed log book and present a discussion paper on an element of Microsurgery they find challenging or stimulating. **Classes:** 6x 2 hour labs/tutorials, plus 3 x 2.5hr (Saturday) labs (limit 10 students) **Assessment:** Presentation of logbook and attendance at each tutorial/lab session (40%), technical competence (40%), assignment (20%) **Textbook:** Notes will be distributed prior to the course commencing. **Additional Info:** Waitlist: Due to the limitation of students, please contact the Discipline of Surgery office to be waitlisted for this course.

SURG5021 Surgical Immunology

Credit Points: 6 **Availability:** S1 **Coordinator:** Associate Professor Alexandra Sharland & Dr Jerome Laurence **Classes:** Online The unit is delivered online and will require approximately 10 hours study per week. **Description:** Inflammation and immunopathology are encountered frequently in surgical practice, in settings such as acute pancreatitis, inflammatory bowel disease and rejection of organ transplants.

Manipulation of the immune system through treatment with checkpoint inhibitors and other forms of immunotherapy is assuming increasing importance in the treatment of malignant melanoma and various other cancers. This unit of study will introduce students to the fundamental aspects of innate and cognate immune responses and their relationship to the clinical manifestations of some common surgical conditions. The unit comprises 6 learning modules, each containing 4-6 short lecturettes, additional online resources such as podcasts and links to recommended reading, followed by a structured clinical case and online discussion. **Textbooks:** Abbas, Lichtman and Pillai, Cellular and Molecular Immunology, 9th edition, Elsevier. Current literature - linked to online teaching materials.

SURG5025 Hepatobiliary and Pancreatic Surgery

Credit Points: 6 **Availability:** Semester 1 pm online **Coordinator:** Prof Henry Pleass
Classes: online plus one day workshop **Description:** The objective of this unit of study is for participants to develop a greater understanding of the operative anatomy, pathophysiology and treatment options for a variety of hepatobiliary and pancreatic diseases treated either by laparoscopic or open means. This unit of study will introduce participants to key areas of operative regional anatomy, pathology, imaging and surgical techniques. By the end of the course, participants will have developed the ability to critically appraise contemporary hepatobiliary and pancreatic surgical practice. **Classes** Online lectures and tutorials; compulsory face to face 1 day workshop with simulation training
Assessment: Attendance (20%), 2000-5000 word assignment (60%), online quizzes (4 x 5% = 20%)
Textbook: Reading Materials will be posted online prior to the sessions.

SURG5031 Surgical Skills and Practical Professionalism

Credit Points: 6 **Availability:** Semester 1 **Coordinator**: Dr Anthony Glover **Description:** Junior doctors applying for surgical training positions are expected to have gained skills and experience through their work in hospitals and need to be able to demonstrate these abilities when they become surgical trainees. However, junior doctor hospital experience is inconsistent across locations and institutions, and consequently, skill acquisition is variable. This unit focuses on the surgical skills required for junior doctors to apply for positions and work as a junior surgical trainee. This unit also provides a foundation for many of the core competencies that are expected to be mastered by surgeons during their training and career. By completing this subject, students will become familiar with current standard of treatment for surgical patients with regards to hospital care and technical skills. Students will also gain experience in the practical application of the concepts of ethics, scholarship, professionalism, teaching, management and leadership that is expected from junior medical doctors planning to pursue a surgical career. **Classes:** The course is taught online and with a two-day face to face workshop. Five modules are covered; Care of the Surgical Patient, Ethics and Surgery, Scholarship and Teaching, Management and Leadership and Technical Skills. Online lectures feature local, national and international leaders in Surgery and Ethics with associated readings. The face to face workshop features one day of non-technical skills with a communication workshop run in conjunction with the Pam McLean Centre and a Preparation for Surgical Training workshop. The second day of the workshop teaches technical skills including knot tying, wound closure, surgical dissection, anastomoses and basic laparoscopic skills. **Assessment:** Mix of online discussions, best answer quizzes, short answer questions and essays along with assessment of technical skills. **Textbooks**: Readings include papers from the scientific literature and selected textbook chapters for each module. **Additional Information:** places are limited, please contact Jayne Seward in the Discipline of Surgery office to be placed on the waitlist at jayne.seward@sydney.edu.au
Assumed knowledge Final year medical student knowledge of physiology, pathology and anatomy is assumed.

SURG5032 Physiology and Pharmacology for Surgeons

Credit Points: 6 **Availability:** Semester 2 online **Coordinator:** Dr Miguel Iglesias **Description:** This unit of study covers most of the basic and advanced physiology, pharmacology and some Pathophysiology that training surgeons need to have at their fingertips. With a focus on the

cardiovascular, respiratory, gastrointestinal and urinary systems, the systems and concepts studied confer a deep understanding of those at play during surgery. It provides students with a solid basis for the preparation of the GSSE exam of the Royal Australian College of Surgeons. **Classes:** Online lectures will provide an overview of topics to supplement Ganong and other resources. Webinars with topic experts will provide opportunity for interaction. **Assessment:** Online module quizzes 30%, participation in online activities 20%, final examination 50% **Textbook:** Ganong's Review of Medical Physiology, 24th Edition. Lange basic Sciences

SURG5034 Surgical Anatomy based on GSSE

Credit points: 6 **Teacher/Coordinator:** Adjunct Professor Lindsay Wing, Adjunct Associate Professor Allan Meares and Clinical Professor Pierre Chapuis **Session:** Semester 1, Semester 2 Classes: 8 x alternate Saturday/ tutorials and practical classes with exercises, face to face on campus. Attendance dates available from the Discipline of Surgery timetable **Overview:** The aim of the course is to assist students in the preparation of the Anatomy component of GSSE conducted by the Royal Australasian College of Surgeons (RACS). These modules comprise: upper limb, lower limb, head and neck thorax, abdomen, and pelvis. Each module has three components: a) Identification and SCORPIOS of anatomical structures on wet prosections of the anatomical area for the session. b) Multiple Choice Question (MCQ) exercises c) 'Spot' questions on anatomical prosection photographs. **Assessment:** will be based on both attendance and participation in weekly classes. self directed study is required before each of the sessions of approximately 10 hours per session as a minimum. A 90% attendance is required for the course, and a satisfactory pass mark in classwork. There will be a final compulsory trial GSSE exam of 80 MCQs and 20 Spots (held on the final day of the course). **Textbooks** Color Atlas of Anatomy, Rohen, Yokochi, Lutjen-Drecoll Last's Anatomy 9th Edition, Editor: McMinn , Cunninghams Manual of Practical Anatomy

SURG5036 Surgical Research: Translation and Innovation

Credit Points: 6 **Availability:** Semester 2 online **Coordinator:** Associate Professor Kerry Hitos **Classes:** 1x1 hr lect and 1x1 hr tut/wk over 10 weeks **Description:** The objective of this unit is to introduce candidates to the basic concepts of innovation. Participants will be able to identify and evaluate surgical innovation as well as focus on the methodological and practical challenges to rigorous surgical research. Candidates will be have the skills to design and complete level one evidence based research in surgery with a key focus on randomised and non-randomised controlled trials. The course will evaluate the complexity of surgical innovation and how to identify related factors influencing outcome. Candidates should be able to identify challenges facing the surgical research community when performing an evaluation of a therapeutic, procedure-based intervention. How to pinpoint the issues and deconstruct these into constituent methodological parts such that several important areas will be targeted for developing a systematic process that would guide appropriate, evidence based surgical practice. Ethical aspects in research and innovation will be addressed and the process of translational research will be reviewed. Other broad topics will focus on surgical oncology and survival analysis; evaluating performance when measuring the value of surgical research and the key concepts in diagnostic tests and accuracy in surgery. **Assessment:** On-line short answer questions cover the knowledge acquired. Each set of questions must be completed and submitted by the due date and before students proceed to the next module. Answers to each module will contribute (40%) to the final score of the unit. A written assignment will also contribute (60%). **Textbook:** Notes will be linked to online teaching material. **Additional Info:** Limit 50 places

SURG5041 Surgical Oncology: Principles and Practice

Credit Points: 6 **Availability:** Online semester 1 or 2 **Description:** The course runs over 13 weeks with the final week confined to assessment by face-to-face participation in an OSCE style format using a number of multidisciplinary team (MDT) meeting scenarios. The emphasis is on multimodality patient care which offers the best chance for a favourable outcome for a variety of common tumour types including breast, colorectal,

prostate, gastro-oesophageal junction and melanoma. The unit is designed to address each cancer type with an overview highlighting those issues of importance when discussing management at an MDT meeting including: Pathology, ,Staging and Reporting, advances in Molecular Biology, Imaging, Surgery, Radiation and Medical oncology, new biologic therapies and the place of palliation of advanced disease. The emphasis is largely on self- directed learning with on-line lectures and reading material provided by a Faculty of clinicians drawn from various metropolitan teaching hospitals. Specific Learning objectives: 1) to develop the skills to advocate evidence-based management for the individual needs of a patient in an MDT meeting and to understand the contribution of each clinical discipline in the decision making process 2) to demonstrate an adequate back ground knowledge of the natural history and classification of common tumours 3) to formulate a cancer specific management plan based on standardised reporting of the extent of tumour burden 4) to understand the influence of evidence-based, independent prognostic factors on outcomes and evolving concepts in cancer biology. **Coordinator:** Clinical Professor Pierre Chapuis, Associate Professor Brett Hambly **Classes:** Online lectures, videos, tutorials and formative assessment **Assessment:** 1) one online MDT scenario 30% 2) critical review of a tumour-specific, current publication of your choice from the primary literature (max: 1,000 words, excluding references) 20%
3) weekly quizzes 50% **Textbook:** Due to the contemporary nature of the course an extensive bibliography of current reading material will be provided. These will be accessible electronically through the library. **Additional Info:** May apply via special permission for advanced surgical trainees **Prerequisites:** Prerequisites: PATH5000 **Assumed Knowledge:** Assumed knowledge: Candidates are expected generally to be undertaking advanced surgical training or similar

SURG5042 Urological Oncology

Credit points: 6 **Teacher/Coordinator:** Associate Professor Manish Patel **Session**: Semester 1
Description: Urological oncology comprises a substantial proportion of clinical urology. The management of urological cancers requires a thorough knowledge and understanding of the pathological basis, imaging and diagnosis as well as treatment options for all stages. This unit of study aims to prepare the training surgeon interested in urology or surgical oncology for a career managing urological cancers. The unit will include cancers of the prostate, bladder, kidney, testis, penile cancer and other rarer cancers. By the end of the unit, a deep understanding of uro-oncology will be gained and students will have a sound understanding of how to effectively manage patients with urological cancers in the ward and clinic. This includes diagnosis, staging, and management of localised and advanced cancers. Not only will students have a thorough understanding of the role and outcomes of surgery in the management of these cancers, but also the role of radiotherapy, medical oncology and importance of imaging and pathology. **Coordinator:** Assoc Prof Manish Patel **Classes:** Compulsory 1 day face to face workshop, online discussion forums **Assessment:** 4x 600 word case-based discussion board assignments (40%); workshop participation (20%); participation in the generation and peer review of assessment items (20%); online quizzes (20%)
Textbook: Fast Facts Prostate Cancer, 9th Edition. Published 2017. Health Press

SURG5043 Surgical Endoscopy

Credit points: 6 **Teacher/Coordinator:** Dr James Symons **Session**: Semester 2 **Description:** Endoscopy has rapidly become the mainstay of modern, minimally invasive surgery, and includes both diagnostic and therapeutic procedures. This unit of study provides an introduction to endoscopy, it's current and potential future surgical application. Students will develop a deeper understanding of the principles of endoscopy, its history, safety considerations and general troubleshooting, along with an overview of its uses in multiple subspecialties. Students will receive practical experience at a compulsory simulation workshop. **Classes:** Online lectures and tutorials; compulsory face to face 1 day workshop with simulation training **Assessment:** Simulation assessment (30%); 1,000 word critical appraisal (20%); weekly online quizzes (10 x 5% = 50%)
Assumed Knowledge: Candidates are advised to have completed a surgical internship or similar, with some prior exposure to endoscopy

PATH5000 Surgical Pathology

Credit Points: 6 **Availability:** Semester 1 or 2 online **Description:** The Surgical Pathology Unit of Study course in an online course available in Semester 1 or 2. It is based on examination of macroscopic pathology specimens (bottles) located in the Pathology Museum collection and examination of microscopic slides of relevant pathological processes. The course runs over 13 weeks and covers 12 topics. Each week several streamed videos, corresponding Powerpoint presentations and additional reading, are provided to students. This material will take approximately 2-3 hours to complete. Following viewing of the teaching media, students complete an online quiz, which contributes to the final assessment. Additionally, students will prepare an in-dept, semi structured assignment on a pathological process, where possible of relevant to their particular interests. An optional weekend in-house practical session at the University of Sydney will be offered to students late in the semester (May or October), where students will be provided with practical tutorials covering many of the topics within the course. The practicals will involve viewing relevant bottles and slides. Participation is not compulsory. Topics that will be covered in the course will include basic pathological processes (eg immunology, inflammation, neoplasia etc) and systems pathology (eg cardiovascular, respiratory, gastroenterology, neurology, genitourinary, orthopaedic etc). **Coordinator:** Assoc. Prof Brett Hambly **Classes:** 2x1hr video streamed tutorials/week. **Assessment:** 1. participation weekly tutorials (20%) 2. 1x3000wd essay (30%) 3. 13x15min weekly quizzes (20%) 4. 1x1hr final exam (30%)
Textbook: Robbins & Cotran Pathologic Basis of Disease 8th Ed (Kumar, Abbas, Fausto, Aster) Saunders Elsevier, online version available from University Library following enrolment, plus course materials.

HAEM5001 Thrombosis and Haemostasis in Acute Care

Healthcare is now one of the largest employers and sectors in the Australian economy. Approximately two thirds of its funding comes from government, while two thirds of services are provided by the private sector. This unit explores this complex mix, building an understanding of the inter-relationships among the players in the industry, public and private. The course will explore the financial and regulatory environment in which providers operate and identify the main business models used by different players in the industry, including service providers, private insurers, employers, and government regulators. The unit draws on expert lecturers, international comparisons and case studies to give an understanding of the incentives and constraints that shape strategies to create value in health care. By the end of the unit students will: Have an understanding of the 'eco-system' of health care; Be able to navigate the regulatory and technological aspects of business in the health sector; Be able to identify and evaluate public and private business strategies in the main health care sectors. **Classes** block/intensive mode - 5 days, 9am-5pm with preliminary online readings. **Assessment** workshop tutorial assessments and presentation (20%); 1x2000wd report (30%); 1x3000 wd essay (50%) **Textbooks** Required and recommended readings and reference lists will be available through eLearning. **Additional information** Students who do not meet the recommended co-requisites may be granted entry if they have at least one year's work experience in a related field. **Co-requisites** HPOL5000 or SMBA6001 – Please apply departmental permission for exemption

ELECTIVE UNITS

CEPI5315 Introduction to Systematic Reviews

Credit points: 6 **Teacher/Coordinator**: Dr Sharon Reid **Session**: Semester 1 **Classes**: all students will work through four online-modules and participate asynchronously in weekly online tutorials or in-campus tutorials (depending on mode enrolled) over 12 weeks **Corequisites**: CEPI5100 or PUBH5010 **Prohibitions**: CEPI5203 or CEPI5102 or CEPI5314 Assessment: module assessment tasks (30%) and 1 x 4500 word assignment (70%) after the modules are completed **Mode of delivery:** Normal (lecture/lab/tutorial) day, Online In this unit of study, we aim to introduce you to systematic reviews and meta-analyses of relevance to healthcare with a particular focus on systematic reviews of randomized controlled trials. Students can choose to learn in online or normal day (on-campus) mode. All students will work through four online modules, delivered over twelve weeks, addressing the following topics at an introductory level: What and why systematic reviews (and meta-analysis); How to formulate answerable healthcare questions and searching for systematic reviews; How a systematic review is conducted and understanding the principles of meta-analysis; and How to appraise, interpret and apply the results of systematic reviews (and meta-analyses). Students will have the opportunity to discuss unit of study learning materials in online tutorials or via weekly (on-campus) tutorials. Readings and other learning materials will be available via eLearning. **Textbooks** Readings and access to other learning resources are available through the unit's elearning site

CRIT5016 Major Trauma Management

Credit points: 6 **Teacher/Coordinator:** Dr Gerard Moynihan **Session**: Semester 1 **Classes:** Online lectures and podcasts, online discussion plus reading 2 x days face to face workshop (compulsory) **Description:** Trauma is a major cause of mortality and morbidly. Critical care practitioners asses and manage trauma patients in both the initial stabilisation phase and during their stay in hospital. This unit is designed to provide students with a solid grounding in the basic concepts of trauma resuscitation and management. It addresses numerous key aspects of trauma including trauma systems and epidemiology. It covers the identification and management of injuries specific to each organ system and gives an overview of how to treat the sick trauma patient holistically. **Assessment:** Online quizzes (10%); generation and peer review of assessment items (20%); short answer questions (30%); final exam (40%)

HPOL5006 Business of Health

Credit points: 6 **Teacher/Coordinator**: A/Prof James Gillespie, Prof John Buchanan **Session:** Intensive July Classes: block/intensive mode - 5 days, 9am-5pm with preliminary online readings. Corequisites: HPOL5001 or SMBA6001 or one-year experience in related health field. **Assessment:** workshop tutorial assessments and presentation (20%); 1x2000wd report (30%); 1x3000 wd essay (50%) Mode of delivery: Block mode
Note: Department permission required for enrolment
Note: Students who do not meet the recommended co-requisites may be granted entry if they have at least one year's work experience in a related field.
Healthcare is now one of the largest employers and sectors in the Australian economy. Approximately two thirds of its funding comes from government, while two thirds of services are provided by the private sector. This unit explores this complex mix, building an understanding of the inter-relationships among the players in the industry, public and private. The course will explore the financial and regulatory environment in which providers operate and identify the main business models used by different players in the industry, including service providers, private insurers, employers, and government regulators. The unit draws on expert lecturers, international comparisons and case studies to give an understanding of the incentives and constraints that shape strategies to create value in health care. By the end of the unit students will: Have an understanding of the 'eco-system' of health care; Be able to navigate the regulatory and technological aspects of business in the health sector; Be able to identify and evaluate public and private business strategies in the main health care sectors. **Textbooks** Required and recommended readings and reference lists will be available through eLearning.

MBHT5001 Diabetes Management

Credit points: 6 **Teacher/Coordinator**: Dr Victoria Rudland **Session:** Semester 1 **Classes:** Weekly online lectures and podcasts. Practical on campus half day workshop and 3x90 minute online webinars. It is compulsory that all of these sessions be attended/viewed live or by download. Attendance at the workshop is strongly encouraged. All students are required to complete a compulsory learning activity that related to the workshop.. **Assessment:** 3 x clinical case study tasks of 500 words (3 x 10%), 1 x 1500 word assignment (20%), online exam (30%), online quizzes (10%), participation in online discussion boards (10%) **Mode of delivery:** Distance education/intensive on campus **Description:** Students in this unit of study will learn how to effectively manage diabetes mellitus. Current data and concepts in epidemiology and classification, pathogenesis, and screening for diabetes and its complications will be addressed. This will be followed by an intensive focus on patient centred management of diabetes, including patient engagement, lifestyle interventions, bariatric surgery, medication options and regimens, new technology and monitoring. Type 1 and type 2 diabetes as well as prediabetes and diabetes in pregnancy will each be explored with a personalised, case-based approach. Differing health care delivery methods in diabetes and team based approaches to care will be discussed. Learning will be enhanced by individual and group online methods plus a practical on campus half-day workshop. **Textbooks** Endocrinology Expert Group. Therapeutic Guidelines: Endocrinology. Version 5. Melbourne: Therapeutic Guidelines Limited; 2014.ISBN9780980825374; additional required reading: Standards of Medical Care in Diabetes. Diabetes Care January 2018 vol. 41 no. Supplement 1 S1-S159; NHMRC Clinical Care Guidelines in Diabetes, especially: Craig ME, Twigg SM, Donaghue KC, Cheung NW, Cameron FJ, Conn J, Jenkins AJ, Silink M, for the Australian Type 1 Diabetes Guidelines Expert Advisory Group. National evidence-based clinical care guidelines for type 1 diabetes in children, adolescents and adults, Australian Government Department of Health and Ageing, Canberra 2011. The Royal Australian College of General Practitioners. General practice management of type 2 diabetes: 2016-2018. East Melbourne, Vic: RACGP, 2016.

PUBH5224 Advanced Epidemiology

Credit points: 6 **Teacher/Coordinator**: Professor Tim Driscoll Session: Semester 2 **Classes**: Weekly classes (combined lectures and tutorials) for 13 weeks. **Prerequisites:** (PUBH5010 or CEPI5100) and PUBH5018 Assessment: 1x 1500 word assignment or equivalent class presentation (30%); 1x 4000 word assignment (or equivalent answers to specific methodological questions) (70%) Mode of delivery: Normal (lecture/lab/tutorial) day **Description:** This unit of study is intended for students who have completed Epidemiology Methods and Uses (or an equivalent unit of study) at a credit or higher level. It is designed to extend students' practical and theoretical knowledge of epidemiology beyond basic principles, provide students with an opportunity to consolidate critical appraisal skills and to acquire some of the practical knowledge and skills needed to design epidemiological research.

GMED5001 Genomics in Clinical Practice

Credit Points: 6 **Availability:** Semester 1 online **Description:** Recent major advances in understanding of the human genome and the relationship between genetic variation and disease have changed clinical practice. This unit provides contemporary knowledge of genetic disease, diagnosis, genomic testing, prognosis, management, inheritance and impact across a range of chromosomal, single gene and heterogeneous genetic conditions. You will study common conditions, such as intellectual disability, inherited cancer, and paediatric and adult-onset disorders, as well as genomic mechanisms and genetic variations which lead to human disease. A case based approach will be used to develop skills in interpretation of clinical, family history and genomic test results to formulate an appropriate diagnosis and accurate genetic risk information. Ethical issues in genomic medicine will also be considered. Advances in treatments for genetic diseases will be explored, along with possible uses and limitations of new technologies, including genome editing approaches. The RACP Clinical Genetics Advanced Training Committee has approved this unit to fulfill the Genetics University Course Requirement for advanced training in Clinical Genetics. It is suitable for all practitioners who require a working knowledge of genomics in clinical practice. **Coordinator:** Dr Ingrid Sinnerbrink **Classes:** online lectures and case discussions **Assessment:** online quizzes (10%), 4 x 400 – 500 word case-based discussion forums (30%), generation and peer review of assessment items (20%), final exam (40%) **Textbook:** Strachan, T and Read, A. Human Molecular Genetics (4th Edition). Garland Science.

SURGICAL ANATOMY DISSECTING UNITS *(must be enrolled in the Graduate Certificate of Advanced Clinical Skills to complete).*

On completion can be credited to the Master of Surgery (without graduating from the Grad Cert).

SURG5027 Surgical Anatomy of the Head and Neck by Dissection

Credit Points: 6 **Availability:** Semester 2 **Coordinator:** Professor Lindsay Wing, A/Prof Allan Meares **Classes:** Please refer to the timetable on the Discipline of Surgery website **Description:** Candidates dissect in supervised groups of 6, according to a strict daily dissection schedule, utilising team-based learning (TBL) methods. This is a proven technique for teaching clinical topographical anatomy to surgical trainees. Throughout this course there is a strong emphasis on applied clinical and surgical anatomy. Supervision is by surgeons. Self-directed study is required before each of the sessions of approximately 10 hours per session as a minimum. The student is expected to have read and learnt the appropriate texts, before coming to class. The areas covered by the dissection include skull, cranial nerves, face, special senses, gross neuroanatomy, superficial neck, salivary glands, infratemporal fossa, pterygopalatine fossa, deep neck, suboccipital triangle, mouth, pharynx, larynx, thyroid, parathyroids, root of neck, vertebral canal and spinal cord. **Assessment:** At the completion of each region assessment is conducted by spot tests during the module. Attendance is compulsory without a signed medical certificate within 5 days. You must attend 90% of the course. Textbook: Cunninghams (16th ed) Last's Anatomy Regional and Applied, ed McMinn RHM, 9th ed, 1994 (Churchill Livingstone). **Assumed Knowledge**: This is an advanced course and it is recommended for advanced trainees who are preparing for the GSSE or for a SET program. It is also available if you have completed other Anatomy courses/training.

SURG5028 Surgical Anatomy of the Thorax, Back, Spinal Cord by Dissection

Credit Points: 6 **Availability:** Semester 1 **Description:** Candidates dissect in supervised groups of 6, according to a strict daily dissection schedule, utilising team-based learning (TBL) methods. This is a proven technique for teaching clinical topographical anatomy to surgical trainees. Throughout this course there is a strong emphasis on applied clinical and surgical anatomy. Supervision is by surgeons. All candidates are given allotted tasks to prepare for presentation to the class prior to dissection. Self-directed study is required before each of the sessions of approximately 10 hours per session as a minimum. The student is expected to have read and learnt *the appropriate texts, before coming to class. There are ongoing SCORPIOs carried out during the dissection. The dissection covers all aspects of the thorax, including body wall, thoracic wall, diaphragm, thoracic cavity, superior, anterior, middle and posterior mediastinum, pleura, lungs, heart, oesophagus, and osteology of thorax.* **The Graduate Certificate in Advanced Surgical Skills (Surgical Anatomy Stream) acts as an embedded course within the Master's program and units completed can be rolled over towards the MS. **Assessment:** At the completion of each region assessment is conducted by spot tests during the module. Attendance is compulsory without a signed medical certificate within 5 days. You must attend 90% of the course. Textbook: Cunninghams (16th ed) Last's Anatomy Regional and Applied, ed McMinn RHM, 9th ed, 1994 (Churchill Livingstone). **Assumed Knowledge**: This is an advanced course and it is recommended for advanced trainees who are preparing for the GSSE or for a SET program. It is also available if you have completed other Anatomy courses/training.

SURG5029 Surgical Anatomy of the Upper and Lower Extremities by Dissection

Credit Points: 6 **Availability:** Semester 1 **Description:** Candidates dissect in supervised groups of 6, according to a strict daily dissection schedule, utilising team-based learning (TBL) methods. This is a proven technique for teaching clinical topographical anatomy to surgical trainees. Throughout this course there is a strong emphasis on applied clinical and surgical anatomy. Supervision is by surgeons. All candidates are given allotted tasks to prepare for presentation to the class prior to dissection. Self-directed study is required before each of the sessions of approximately 10 hours per session as a minimum. The

student is expected to have read and learnt the appropriate texts, before coming to class. There are ongoing SCORPIOs carried out during the dissection. The dissection course covers anterior compartment of the thigh, medial compartment of the thigh, gluteal region and hip joint, posterior compartment of thigh, popliteal fossa and knee joint, anterior compartment of the leg, dorsum of foot, lateral compartment of the leg, posterior compartment of the leg, sole of foot, ankle and foot joints, osteology of lower limb. **The Graduate Certificate in Advanced Surgical Skills (Surgical Anatomy Stream) acts as an embedded course within the Master's program and units completed can be rolled over towards the MS. **Assessment:** At the completion of each region assessment is conducted by spot tests during the module. Attendance is compulsory without a signed medical certificate within 5 days. You must attend 90% of the course. Textbook: Cunninghams (16th ed) Last's Anatomy Regional and Applied, ed McMinn RHM, 9th ed, 1994 (Churchill Livingstone). **Assumed Knowledge**: This is an advanced course and it is recommended for advanced trainees who are preparing for the GSSE or for a SET program. It is also available if you have completed other Anatomy courses/training.

SURG5030 Surgical Anatomy of the Abdomen and Pelvis by Dissection

Credit Points: 6 **Availability:** Semester 1 **Description:** Candidates dissect in supervised groups of 6, according to a strict daily dissection schedule, utilising team-based learning (TBL) methods. This is a proven technique for teaching clinical topographical anatomy to surgical trainees. Throughout this course there is a strong emphasis on applied clinical and surgical anatomy. Supervision is by surgeons. All candidates are given allotted tasks to prepare for presentation to the class prior to dissection. Self-directed study is required before each of the sessions of approximately 10 hours per session as a minimum. The student is expected to have read and learnt the appropriate texts, before coming to class. There are ongoing SCORPIOs carried out during the dissection. The course covers the anterior abdominal wall, abdominal cavity, peritoneum, vessels and nerves of the gut, gastro and intestinal tract, liver and biliary tract, pancreas, spleen, posterior abdominal wall, kidneys, ureters, and suprarenal glands, rectum, urinary bladder and ureters is in the pelvis, male internal genital organs, female internal genital organs and urethra, pelvic peritoneum, vessels and nerves, perineum, male urogenital region, female urogenital region, pelvic joints and ligaments, lumbosacral plexus. **The Graduate Certificate in Advanced Surgical Skills (Surgical Anatomy Stream) acts as an embedded course within the Master's program and units completed can be rolled over towards the MS. **Assessment:** At the completion of each region assessment is conducted by spot tests during the module. Attendance is compulsory without a signed medical certificate within 5 days. You must attend 90% of the course. Textbook: Cunninghams (16th ed) Last's Anatomy Regional and Applied, ed McMinn RHM, 9th ed, 1994 (Churchill Livingstone). **Assumed Knowledge**: This is an advanced course and it is recommended for advanced trainees who are preparing for the GSSE or for a SET program. It is also available if you have completed other Anatomy courses/training.