



Clinical Epidemiology Student Guide 2019

Sydney School of Public Health



THE UNIVERSITY OF
SYDNEY

A group of five people (three men and two women) are standing in front of the entrance to the School of Public Health and Tropical Medicine. The entrance is a dark wooden door set within a stone frame. Above the door, the text 'SCHOOL OF PUBLIC HEALTH AND TROPICAL MEDICINE' is carved into the stone. The group consists of a man in a dark suit and glasses on the far left, a woman in a bright green dress, a man in a white lab coat over a blue shirt, a woman in a black cap and a green patterned dress, and a woman in a black sleeveless top and a black and white patterned skirt on the far right.

SCHOOL OF
PUBLIC HEALTH AND
TROPICAL MEDICINE

Clinical epidemiology is the science of locating, evaluating and generating the best research evidence in order to apply it to patient care, thereby improving the health care of individual patients.

CLEMENT LOY, FIONA STANAWAY, KENJI FUJITA, SHARON REID, KAROLINA KULCZYNSKA-LE BRETON

Contents

01 IMPORTANT DATES FOR 2019	09 Student Services and Amenities Fee (SSA) Fee & SA-HELP	16 PLANNING YOUR STUDY
02 CLINICAL EPIDEMIOLOGY	09 Austudy	16 Elective Units
02 Why is Clinical Epidemiology important?		16 Units of Study – Core, Capstones and Electives
02 Who is our Program for?		
03 WHAT DO STUDENTS LEARN?	10 SCHOOL OF PUBLIC HEALTH CLINICAL EPIDEMIOLOGY SCHOLARSHIPS	17 UNIT OF STUDY TABLE
04 WHY STUDY AT THE UNIVERSITY OF SYDNEY'S SCHOOL OF PUBLIC HEALTH?	11 MASTER OF MEDICINE (CLINICAL EPIDEMIOLOGY) IN CONJUNCTION WITH SYDNEY MEDICAL PROGRAM	18 EXAMPLES OF COURSE STRUCTURES
04 Clinical Epidemiology in the School		20 OTHER COURSE PLANNING CONSIDERATIONS
04 Flexibility		21 UNIT OF STUDY OUTLINES
05 RELEVANCE	12 APPLICATIONS	34 USEFUL RESOURCES DURING YOUR CANDIDATURE
05 Excellence	12 Admission Requirements	
05 Career Prospects	12 How to Apply	
06 COURSE STRUCTURE & TIME COMMITMENTS	13 ENROLMENT	36 GENERAL INFORMATION AND SUPPORT SERVICES
06 Course Structure	13 New Students	
06 Time Commitment	13 Continuing Students	
	13 Need enrolment help?	
07 INTERNATIONAL STUDENTS	14 CHANGING YOUR ENROLMENT	38 MEET THE CLINICAL EPIDEMIOLOGY TEAM
08 DISTANCE LEARNING	14 Sydney Student	
08 Accreditation	14 Unit of study variations	41 FURTHER INFORMATION
	14 Suspending Your Candidature	41 Clinical Epidemiology Program Contacts
09 FEES AND SCHOLARSHIPS		
09 Full-fee places & FEE-HELP	15 Withdrawing From Your Degree Program	
09 Commonwealth Supported Places (CSP's) & HECS-HELP	15 Transferring Your Candidature to Another Degree	

Important dates for 2019

SEMESTER ONE	SEMESTER TWO	PUBLIC HOLIDAYS
25 FEBRUARY LECTURES BEGIN	5 AUGUST LECTURES BEGIN	28 JANUARY AUSTRALIA DAY HOLIDAY
31 MARCH HECS CENSUS DATE	31 AUGUST HECS CENSUS DATE	19 APRIL GOOD FRIDAY
19 APRIL – 22 APRIL EASTER BREAK	30 SEPTEMBER – 4 OCTOBER MID-SEMESTER BREAK	22 APRIL EASTER MONDAY
22 – 26 APRIL MID-SEMESTER BREAK	11 NOVEMBER – 15 NOVEMBER STUDY VACATION	25 APRIL ANZAC DAY
3 JUNE – 7 JUNE STUDY VACATION	18 NOVEMBER – 30 NOVEMBER EXAMINATION PERIOD	10 JUNE QUEEN'S BIRTHDAY
10 JUNE – 22 JUNE EXAMINATION PERIOD	30 NOVEMBER SEMESTER ENDS	7 OCTOBER LABOUR DAY
22 JUNE SEMESTER ENDS		25 DECEMBER CHRISTMAS DAY
		26 DECEMBER BOXING DAY

Clinical epidemiology



“My Clinical Epidemiology degree provided the ideal foundation for my career. I developed the knowledge base and skills required to design, conduct, report and appraise clinical research studies. Many wonderful opportunities have arisen thanks to my decision to study Clinical Epidemiology at the University of Sydney.”

PHILIP
MASTER OF MEDICINE
(CLINICAL EPIDEMIOLOGY)

Why is clinical epidemiology important?

In day-to-day clinical practice, patients and clinicians need health care solutions that are founded on the highest-quality research evidence. In order to generate the best research evidence, clinical researchers require the skills to undertake and disseminate high-quality clinical research. Subsequently, to apply these findings, health practitioners need the skills to locate, evaluate and apply best research evidence to patient care.

The Clinical Epidemiology program is designed to develop both clinical researchers and practitioners by teaching the skills needed to generate high-quality clinical research, as well as the skills to locate, appraise, interpret and apply the best research evidence to patient care.

Who is our program for?

Our courses are designed to meet the needs of both the ‘users’ of clinical epidemiology (those who want their clinical decision making to be based on the best available evidence), and the ‘doers’ of clinical epidemiology (those who want to learn the skills required to do high quality clinical research). People generally apply for our courses because their prior vocational clinical training and/or tertiary education have not fully equipped them for what they want to do.

Some of our students want to be able to tell potential employers or specialty training programs that they have clinical research skills as well as core competencies. Others want to improve their interpretation of research and to

perform clinical research of a higher calibre. Our alumni surveys consistently show that we provide these skills, thereby equipping our graduates with the abilities needed to succeed at the top of their chosen fields.

The program is designed for people with clinical experience. Our students come from various clinical research and health professions including doctors, nurses, physiotherapists and pharmacists.



What do students learn?

In the Clinical Epidemiology program clinicians and researchers will learn the principles of clinical epidemiology – the science of finding and applying best evidence in clinical practice.

Our program explains theory through patient-based examples to ensure that clinical epidemiology skills can be readily integrated into the day-to-day work of students.

Students have the opportunity to develop expertise across a variety of clinical research methods including studies of interventions, diagnostic tests, patient outcomes, health economic evaluations, genetic epidemiology and systematic reviews. This includes learning analysis methods and biostatistics.

Why study at the University of Sydney's School of Public Health?

The School of Public Health is renowned for excellence in a number of areas including epidemiology, biostatistics, health economics, evidence-based health care, health promotion and health advocacy, as well as for its first-class research program and publication record.

Currently the largest and longest running school of its type in Australia, the Sydney School of Public Health was established in 1930 as the Commonwealth School of Public Health and Tropical Medicine, and in 1987 was incorporated into the Sydney Medical School. Today, the School is a vibrant, multidisciplinary network of individuals and centres that provides a range of exceptional and internationally recognised educational opportunities, and fosters a dynamic and collaborative study environment.

Clinical epidemiology in the school

The University of Sydney has offered courses in Clinical Epidemiology since 1994, with enrolments growing steadily each year.

The program is taught by practicing clinicians who are renowned as leaders in their fields, ensuring that the coursework remains firmly grounded in the current clinical reality.

Alongside their work with the program, staff are also sought out to develop and run

professional development short courses tailored to particular groups that include medical colleges, medical journal editors and non-governmental organisations involved in healthcare evaluation and improvement.

Our Clinical Epidemiology program is characterised by three core features: flexibility of delivery, relevance to clinicians and clinical researchers, and standards of excellence.

Flexibility

Recognising that work and family commitments affect our students in different ways, the Sydney School of Public Health has developed a range of courses in Clinical Epidemiology to suit all student needs. Our Graduate Certificate, Graduate Diploma, and Master's degree courses offer students an internationally recognised qualification in clinical epidemiology within an engaging and stimulating program.

For those wanting to upgrade their skills in a specific area it is also possible to undertake certain units of study as non-award professional development courses. If a student later decides to undertake a graduate certificate, graduate diploma or master's degree, units undertaken as non-award can then be credited towards the new qualification.



With a wide range of units of study to choose from, full-time and part-time modes of study, and online, project based, and face-to-face unit delivery formats, our degrees are designed to allow you to tailor the pace and mode in which you study to your particular needs as a busy practitioner or researcher.

Relevance

With academic staff that includes both practising clinicians and clinical researchers, our program is focused on teaching clinical epidemiological skills and concepts in a manner that is both relevant and applicable to students' day-to-day employment.

Our units of study have been developed based upon their relevance to the clinical and clinical research environments – examples include Quality and Safety in Health Care, Introduction to Systematic Reviews, and Diagnostic and Screening Tests. Our units of study are constantly revised and updated with new methodology and clinical content, to ensure that what you learn is relevant and current.

We explain theoretical concepts through clinical examples, and achieve further relevance within our units by encouraging students to apply clinical epidemiological principles to examples from their own practice.

Excellence

Our degrees are designed to produce graduates who have the skills to locate and critically appraise evidence in order to deliver the highest-quality patient healthcare, as well as graduates who possess the skills to conduct clinical research that attains a standard of excellence. As such we encourage our students to think and learn independently, and to consider their own clinical experiences in their understanding of theory and examples.

At a teaching level we annually improve and renew our units to ensure that our program remains at the forefront of clinical epidemiology teaching around the world.

Career prospects

A Clinical Epidemiology degree from the Sydney School of Public Health will not only improve your clinical practice, but also teach you the skills to conduct high-quality clinical research, giving you an edge in any future clinical and research endeavours.

Previous students have gone on to undertake PhDs in epidemiology, teach epidemiology to undergraduates and postgraduates, become members of the Cochrane Collaboration, be awarded NHMRC grants, and take on clinical leadership roles in their fields.

Course structure and time commitments

Course structure

COURSE	STRUCTURE	TOTAL CPS	CANDIDATURE LENGTH
Graduate Certificate in Clinical Epidemiology	2 core units (12 credit points) Electives (12 credit points)	24	0.5 year full time* 1-3 years part time
Graduate Diploma in Clinical Epidemiology	2 core units (12 credit points) Electives (24 credit points)	36	1-2 years full time 1-3 years part time
Master of Medicine (Clinical Epidemiology)	2 core units (12 credit points) Electives** (36 credit points)	48	1-3 years full time 2-4 years part time
Master of Science in Medicine (Clinical Epidemiology)	2 core units (12 credit points) Electives** (36 credit points)	48	1-3 years full time 2-4 years part time

*Available Semester One only

** Master's degree students **must** take 6 credit points of capstone units of study within their electives

The Master of Medicine (Clinical Epidemiology) and the Master of Science in Medicine (Clinical Epidemiology) are the same degree but are awarded depending on a student's prior qualifications. The Master of Medicine is for those with medicine degrees, whilst the Master of Science in Medicine is for all other graduates.

Students who are enrolled in the graduate certificate, graduate diploma or masters course must undertake the following two core units of study, which account for 12 credit points:

- **CEPI5100 - Introduction to Clinical Epidemiology**
- **PUBH5018 - Introductory Biostatistics**

In addition to the core units, students complete their degree by undertaking elective units of study from within the Clinical Epidemiology units of study table, which can be viewed on page 17. For rules about elective units of study, please see page 16. For examples of how units of study can be combined depending on your requirements, please see page 18.

Time commitment

As a rough guide, each credit point of study equates to 1 ½ - 2 hours of student effort per week for the duration of the 13 week semester. This time comprises of face-to-face teaching, online activity, reading, preparation for tutorials and/or completion of assessments.

For example, for a unit of study worth 6 credit points, students should expect to spend nine to twelve hours studying per week, for each week of the semester. If the 6 credit point unit of study runs for only half of a semester then students should expect to spend eighteen to twenty-four hours of study time per week for six to seven weeks. If students have a particularly busy clinical workload they might consider extending the duration of their study program. Please note that 18 credit points or more per semester is regarded as full-time study for local students. For international students, 24 credit points per semester is the required full-time load to maintain a student visa.

Students are also responsible for withdrawing from units of study before the census date in order to prevent incurring fees and receiving a fail grade on the transcript. Census dates for all sessions in 2019 can be found via this link: sydney.edu.au/study/study-dates.html

International students



(L-R)
SHARON REID, ARDITYA
(STUDENT), FIONA
STANAWAY

The Master of Medicine (Clinical Epidemiology), the Master of Science in Medicine (Clinical Epidemiology), the Graduate Diploma in Clinical Epidemiology and the Graduate Certificate in Clinical Epidemiology are available on a full-time basis for international students who hold an Australian student visa.

The Australian academic calendar is made up of two semesters. Semester One begins in late February and concludes in June. Semester Two commences in early August and concludes in November.

International or domestic students intending to study full time are only eligible to commence their degree in semester one. This is because there are insufficient elective units available in semester 2 that do not require the prior completion of pre-requisites in semester 1.

International students are responsible for making sure that they fulfil their visa requirements for full time study and face-to-face attendance. International students studying full-time on a student visa can only study a maximum of 25 per cent of their course by online and/or distance learning. If you have any questions about your visa requirements, please contact a member of the international office compliance team: student.compliance@sydney.edu.au

For more information about Australian Student Visas please see the Department of Immigration and Citizenship at immi.homeaffairs.gov.au/

[visas/getting-a-visa/visa-finder/study](#), and the University of Sydney's International Students support website - sydney.edu.au/study/academic-support/support-for-international-students.html

People who are not Australian or Australian permanent residents, but who are in Australia working full time on a non-student visa, are also classified as international students, but may be able to study part time for the duration of their non-student visa. An example of this situation might be a person working in healthcare in Australia, who may be able to study in the evenings concurrent with their clinical role. If this situation applies to you, you are advised to seek advice from us (sph.cepi@sydney.edu.au) and our compliance officers (student.compliance@sydney.edu.au).

International students may also chose to study "off-shore" outside of Australia, in their home country by distance learning. See page 8 for more details about this option.

The Sydney School of Public Health welcomes postgraduate students funded by the Australian Government's Australia Awards Scholarships programme. The Australia Awards Unit at the University of Sydney looks after around 230 Australia Awards scholarship holders from more than 30 countries. To check if you qualify for an Australia Awards Scholarship, please contact the Australia Awards Unit:

australiaawards@sydney.edu.au | sydney.edu.au/study/finances-fees-costs/scholarships/australia-awards.html



Distance learning

In order to ensure maximum flexibility for our students, it is possible to complete every clinical epidemiology degree by distance through our range of online and project-based units of study.

In addition to clinical epidemiology units, other degree programs within the Sydney School of Public Health also offer units of study in online and/or intensive formats that may be of interest to clinical epidemiology students. Please note, however, that clinical epidemiology students who wish to undertake non-prescribed units of study as electives must first obtain permission and consider the credit point limits that apply for non-prescribed electives.

Accreditation

The Clinical Epidemiology program is accredited by the Royal Australasian College of Surgeons (RACS).



Clinical epidemiology alumni may be eligible to apply for CPD/CME points with medical colleges in which they are completing their training.

Fees and scholarships

The Clinical Epidemiology graduate certificate, graduate diploma and master's degree courses are all full-fee paying and incur standard Sydney School of Public Health postgraduate coursework fees. Fees are payable in advance in semester instalments and differ between domestic and international students. A domestic student is a student who is a citizen or permanent resident of Australia. Domestic students who are Australian citizens may choose to paythrough FEE-HELP, and fees may be tax deductible.

International and Domestic student fees can be found on the Sydney Courses website by searching for 'clinical epidemiology' - sydney.edu.au/courses/

Full-Fee places and FEE-HELP

Full-fee places are unsubsidised and as such the student bears the full cost of the degree. FEE-HELP is a loan scheme whereby the Australian Government pays all or part of a student's tuition fees upfront, and the student pays the loan back later through either the taxation system or voluntary contributions. Domestic students may be eligible to defer their fees to FEE-HELP at the time of commencement.

For more information about FEE-HELP please see the Australian Government Study Assist website - studyassist.gov.au/help-loans/fee-help

Commonwealth supported places (CSPs) and HECS-HELP

Commonwealth Supported Places (CSPs) are those places that are subsidised by the Australian Commonwealth Government. Please note that CSPs are not available to Clinical Epidemiology Students.

For more information about Commonwealth Supported Places and government assistance please see the Australian Government Study Assist website - studyassist.gov.au/help-loans

Student Services and amenities fee (SSA) and SA-HELP

In addition to the postgraduate tuition fees, all students at the University of Sydney will be charged the SSA fee. Students will be required to pay this fee upfront each semester or obtain a SA-HELP loan, if eligible, prior to the SSA fee payable date. SA-HELP is a loan scheme whereby the payment of the SSA fee is deferred whilst studying and repaid later through either the taxation system or voluntary contributions.

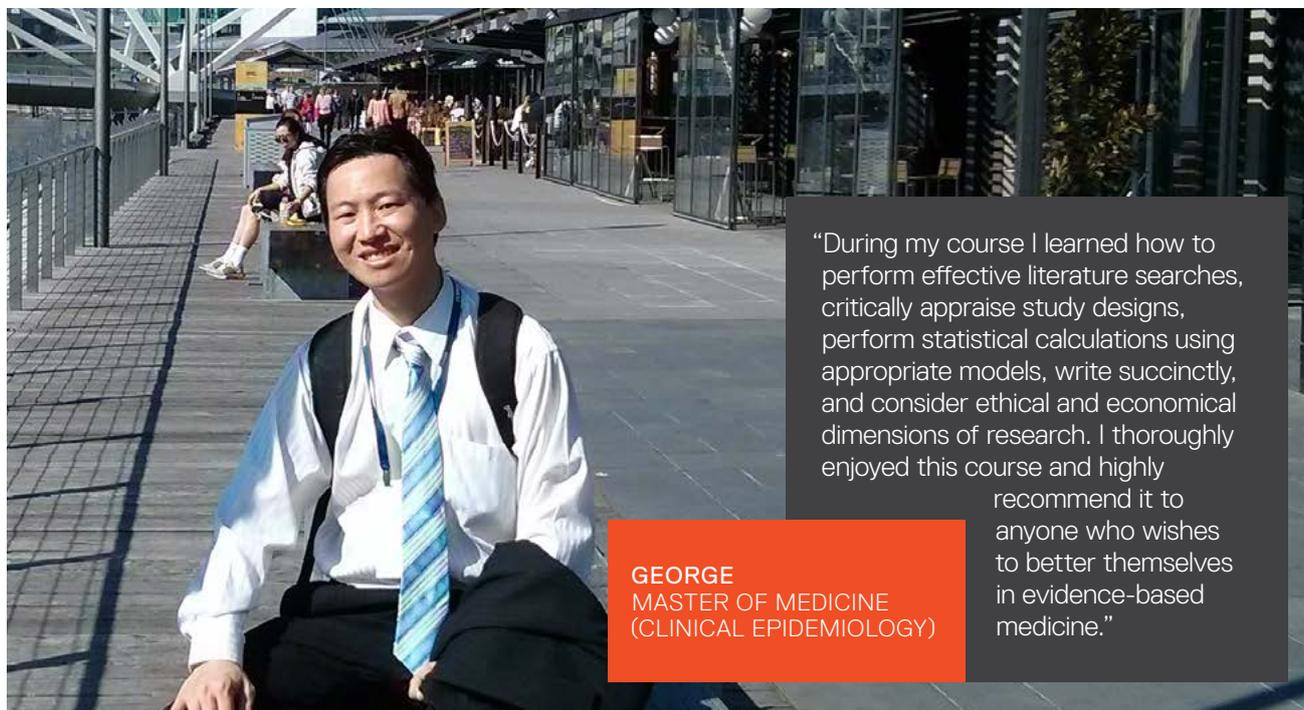
For more information on the SSA and SA-HELP please see the following websites:

- University of Sydney - sydney.edu.au/students/ssaf.html
- Australian Government Study Assist - studyassist.gov.au/help-loans/sa-help

Austudy

Some students may be eligible for government financial help in the form of Austudy during their studies. To be eligible you must be at least 25 years of age, be enrolled full-time, be an Australian resident, and meet income and assets test requirements.

humanservices.gov.au/individuals/services/centrelink/austudy



GEORGE
MASTER OF MEDICINE
(CLINICAL EPIDEMIOLOGY)

“During my course I learned how to perform effective literature searches, critically appraise study designs, perform statistical calculations using appropriate models, write succinctly, and consider ethical and economical dimensions of research. I thoroughly enjoyed this course and highly recommend it to anyone who wishes to better themselves in evidence-based medicine.”

Sydney School of Public Health Clinical Epidemiology scholarship

Scholarships are available for Master's degree students in Clinical Epidemiology. These scholarships are only available to domestic students.

The scholarships are awarded competitively on the basis of academic merit and achievement relative to opportunity, are to a value of \$10,000 per student over the duration of the Master's degree, and are paid on a pro rata basis depending on a student's credit point load.

For more information, contact scholarships.office@sydney.edu.au or visit the Scholarships webpage. sydney.edu.au/scholarships/postgraduate/faculty/pubhealth.shtml

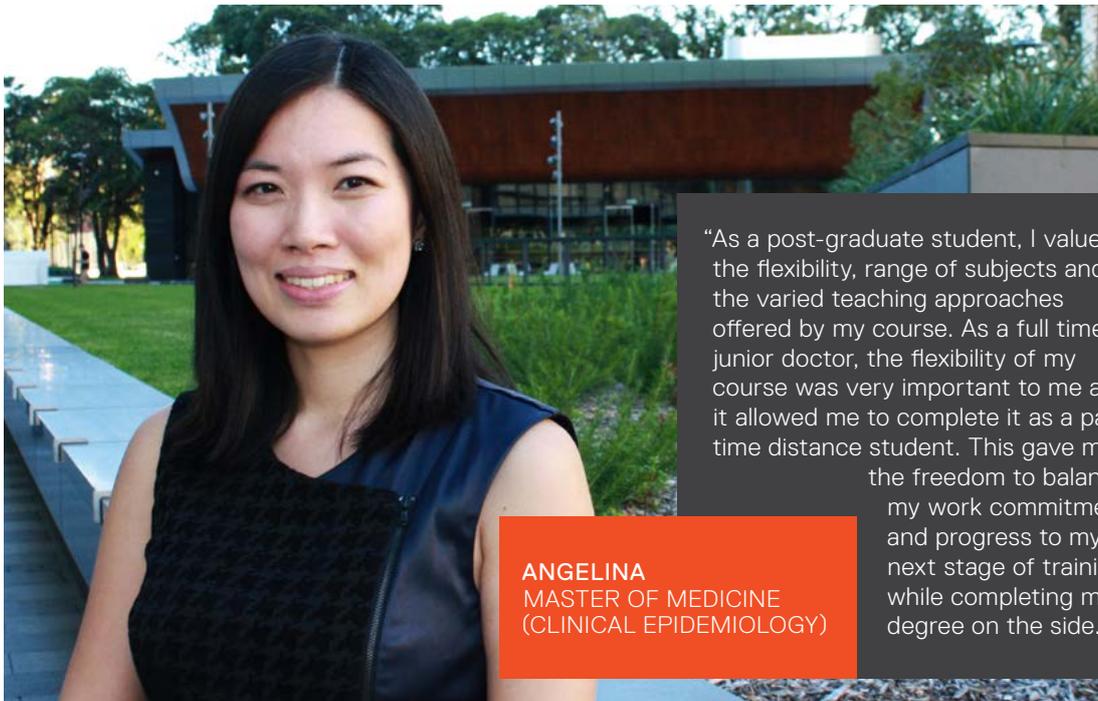
Other options?

As a prospective student you may also want to explore other avenues for funding your degree. Information on scholarships administered by the University can be found on the Scholarships Office website - sydney.edu.au/scholarships/prospective/

In the past, some students have secured external funding through their employers or other external organisations.

More information on scholarships can be found at the Australian Government Study Assist website - studyassist.gov.au/sites/StudyAssist/ScholarshipsAndAwards

Master of Medicine (Clinical Epidemiology) in conjunction with Sydney Medical Program



ANGELINA
MASTER OF MEDICINE
(CLINICAL EPIDEMIOLOGY)

“As a post-graduate student, I valued the flexibility, range of subjects and the varied teaching approaches offered by my course. As a full time junior doctor, the flexibility of my course was very important to me as it allowed me to complete it as a part-time distance student. This gave me the freedom to balance my work commitments and progress to my next stage of training while completing my degree on the side.”

From 2012 Sydney Medical School has offered Medical Program students the opportunity to complete a Master of Medicine (Clinical Epidemiology) in conjunction with the Sydney Medical Program (SMP). These programs are designed for SMP students who have a good academic track record and a special interest in Clinical Epidemiology. The MMed (Clin Epi) can be undertaken on a part-time basis and can be completed within two years, with the intention that students graduate with two degrees (MBBS/MD and MMed) in the period taken to complete the SMP.

Current Sydney Medical School students who are interested in applying for the Master of Medicine (Clinical Epidemiology) should first discuss their intention with the Sydney Medical Program.

If approved, Sydney Medical School students would initially need to apply for the Master of Science in Medicine (Clin Epi) then, once they have completed their medical degree, transfer across to the MMed (Clin Epi).

Applications

Admission requirements

Applicants are required to meet the following:

- A Medical degree (MD/MBBS) and/or
- A Bachelor's degree in a health discipline with first or second class honours.

Applicants who do not meet these requirements may be admitted on the basis of having completed equivalent work or by having substantial relevant work experience in a related field.

All students entering the program are expected to have some clinical experience. Please contact the course coordinator for advice (naomi.noguchi@sydney.edu.au) if you are interested in the program but do not have clinical experience.

APPLICATION CLOSING DATES

SEMESTER ONE

LOCAL:
11 February

INTERNATIONAL:
30 January

SEMESTER TWO

LOCAL:
30 June

INTERNATIONAL:
30 June

How to apply

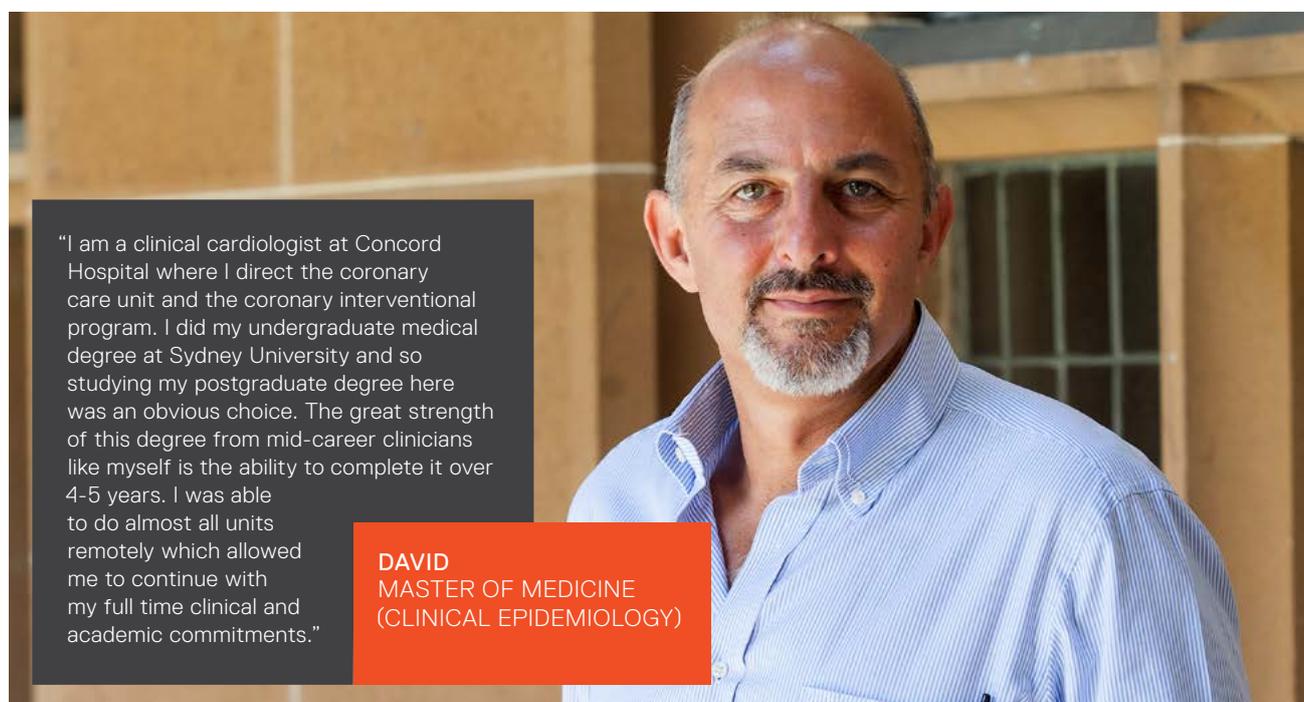
All applications to the Clinical Epidemiology program must be submitted to the University through the online Sydney Student portal. For details about how to apply, including documentation requirements and English language requirements, please see the links at 'course options' at:

sydney.edu.au/medicine/public-health/study/study-program/coursework-degrees/clinical-epidemiology.php

Please Note: applicants are required to submit a '**Letter of Intent**' and a full **Curriculum Vitae** with their application. These should be uploaded in the 'Supporting Documents' section of the online application form. Email the Admissions Office (admissions.purpleteam@sydney.edu.au) if you have any problems submitting these documents.

Once you have been accepted into the Sydney School of Public Health's Clinical Epidemiology program, you will be emailed instructions about how to accept your offer. You will then want to plan your study. The following pages provide enrolment tips as well as advice on how to plan your degree, including what units you may study, when you can study them, and in what modes they are offered. We also provide advice on units of study that might fit into specific areas of interest you may have, as well as unit of study outlines.

Enrolment



"I am a clinical cardiologist at Concord Hospital where I direct the coronary care unit and the coronary interventional program. I did my undergraduate medical degree at Sydney University and so studying my postgraduate degree here was an obvious choice. The great strength of this degree from mid-career clinicians like myself is the ability to complete it over 4-5 years. I was able to do almost all units remotely which allowed me to continue with my full time clinical and academic commitments."

DAVID
MASTER OF MEDICINE
(CLINICAL EPIDEMIOLOGY)

New students

Once you have accepted your offer of admission, you will then be required to enrol in your course prior to commencement. Detailed enrolment instructions will be sent by Student Services in advance of the enrolment day.

To complete enrolment, you will need to choose the units of study that you will be undertaking during the year. In choosing your units of study you should take account of the pre-/co-requisites, prohibitions and timetabling. A helpful starting place is the 'Planning your study' section on page 16, where you will find the course rules, the Clinical Epidemiology Units of Study Table, which outlines all core and elective units available, and also some examples of how different units can be combined in different ways depending on how you wish to study.

Continuing students

You must re-enrol every year that you remain a candidate for a degree. Before the commencement of each semester you will be sent an email reminding you about the enrolment task and providing you with instructions on how to complete it. You will be able to enrol via the Sydney Student system, accessible through the MyUni portal. Following successful enrolment you will be able to see your Financial Statements in Sydney Student.

Need enrolment help?

For questions about enrolment please see **Enrolment and Course Planning** or contact sph.cepi@sydney.edu.au for additional enrolment support.

Changing your enrolment



“Studying Clinical Epidemiology helped me become a better clinician, as I learned a lot about how to critically appraise the evidence which is required in clinical practice, and about the methodology of research, which will help me produce high quality research in the future. I also really enjoyed the program as the learning environment and the staff were very supportive of us!”

DARA
MASTER OF MEDICINE
(CLINICAL EPIDEMIOLOGY)

Sydney Student

Sydney Student is the University’s online student self-administration service. It is your own secure and private portal in which you will manage most of the admin relating to your studies.

Sydney Student means you will have:

- one central, University-wide student administration system
- consistent administration processes across all faculties and schools
- reliable and secure 24/7 online access to self-manage your candidature
- improved access to online information and services
- user-friendly administrative support
- less paperwork
- the ability to make requests, as well as track progress from submission to approval.

You can access **Sydney Student** through MyUni and you can find out more about student administration here: sydney.edu.au/students/

Download a guide to selecting units of study in **Sydney Student** (PDF 311KB)

Unit of study variations

You can add, withdraw and discontinue from units of study online through Sydney Student by the relevant deadline. Please note discontinuation from a subject after the census incurs a financial liability and the unit will remain on your transcript, possibly with a fail grade.

If you are thinking of making changes to your enrolment, for example dropping subjects or withdrawing from your program, please be sure to do so before the relevant Census Date. To find out what the census dates are for each session, please look at ‘Session dates - for coursework students’ at sydney.edu.au/study/study-dates.html

Suspending your candidature

If you have to interrupt your candidature at any time after you have commenced your degree then you must apply to suspend your candidature. Suspensions applied for in advance, through Sydney Student are automatically approved for the first suspension of up to 2 semesters. Any further suspensions require approval and clear justification for the request in



KENJI
 MASTER OF SCIENCE
 IN MEDICINE (CLINICAL
 EPIDEMIOLOGY)

“The Master of Clinical Epidemiology has equipped me with the necessary research skills required for my PhD project, such as designing a research project, conducting systematic reviews, analysing quantitative and qualitative data, writing scientific papers, and grant applications. I believe that my PhD research will help improve the responsible use and primary healthcare more generally.”

the application, made via **Sydney Student**. Please note that it is only possible to suspend up to four semesters during the course of your degree.

All students wishing to suspend their candidature should read the policy, check here sydney.edu.au/students/suspend-your-studies.html, and apply via **Sydney Student**.

Please note that if you fail to enrol and do not make an application to suspend, your candidature will be regarded as having lapsed, and you will be required to re-apply for admission to candidature if you wish to continue your studies.

Students returning from suspension will be contacted by Student Services with information regarding their enrolment. Following this, they will be required to follow the enrolment process outlined on page 14.

Withdrawing from your degree program

If your circumstances are such that you are unable to anticipate when you will be able to resume your candidature you should seek to withdraw from your candidature. Should you be able to resume at a later date you

would have to re-apply for admission. Some credit might then be given for work that you had completed prior to your withdrawal, but you would, in effect, be commencing a new candidature. All students wishing to withdraw their candidature should read the policy, and check here: sydney.edu.au/students/discontinue-your-course.html

Transferring your candidature to another degree

In some cases it is possible to transfer from one degree program to another and obtain credit for work already completed. The Clinical Epidemiology program is regarded as an embedded program, which means that, subject to satisfactory progress and approval, it is possible to upgrade to a higher degree level while retaining credit for units of study already completed. Conversely, if you are unable to fulfil all requirements for a higher degree it is also possible to downgrade to a lower degree. All students wishing to transfer their candidature should read the policy, and check here sydney.edu.au/students/change-your-course/allowable-transfers-and-upgrades-downgrades.html

Planning your study

Course requirements

The **Graduate Certificate in Clinical Epidemiology** requires the successful completion of **24 credit points** of units of study including:

- ✓ 12 credit points of core units of study; and
- ✓ 12 credit points of elective units of study from Part A Electives.

The Graduate Diploma in Clinical Epidemiology requires the successful completion of 36 credit points of units of study including:

- ✓ 12 credit points of core units of study; and
- ✓ 24 credit points of elective units of study, consisting of:
 - a minimum of 18 credit points from Part A Electives; and
 - a maximum of 6 credit points from Part B Electives.

The **Master of Medicine (Clinical Epidemiology)** and the **Master of Science in Medicine (Clinical Epidemiology)** require the successful completion of **48 credit points** of units of study including:

- ✓ 12 credit points of core units of study; and
- ✓ a minimum of 6 credit points of capstone units of study; and
- ✓ 30 credit points of additional elective units of study, consisting of:
 - a minimum of 18 credit points from Part A Electives; and
 - a maximum of 12 credit points from Part B Electives.

Units of Study – Core, Capstones and Electives

The Clinical Epidemiology Units of Study Table on pages 17-18 details all core, capstone and elective units of study that you may take as part of your course (within the rules outlined above). Should you wish to study outside of the official Clinical Epidemiology Unit of Study Table, you must:

1. Not exceed the maximum number of credit points from non-clinical epidemiology electives; that is, 6 credit points for the master's degree or graduate diploma. No non-clinical epidemiology electives are permitted for students undertaking the Graduate Certificate. Please also note that any non-listed electives undertaken as part of the Graduate Diploma or Master's degree cannot be counted towards the minimum credit points of Part A Electives required for degree completion. Therefore, Graduate Diploma students who have already undertaken 6 credit points of Part B Electives, and Master's degree students who have already undertaken 12 credit points of Part B electives, cannot undertake any non-clinical epidemiology electives
2. Obtain written permission from the CEPI Course Coordinator: email the Course Coordinator at naomi.noguchi@sydney.edu.au explaining why the unit is relevant to your clinical epidemiology studies and retain her response.
3. Submit a special permission request addressed to the unit coordinator via Sydney Student in order to obtain permission to enrol in the non-clinical epidemiology elective. Attach the course coordinator's permission email to the application.

Please note: some units of study may be subject to quotas or other limitations of enrolment, or have pre- or co-requisite units. In these circumstances students should contact the unit coordinator for advice about enrolling in the unit.

Clinical Epidemiology Units of Study Table

UNIT CODE	UNIT NAME	CREDIT POINTS	DELIVERY MODE	
Core units				
<i>All students must take these two units</i>				
Offered in semester 1 only				
PUBH 5018	Introductory Biostatistics	6	F, O	
Offered in semester 1 and 2				
CEPI 5100	Introduction to Clinical Epidemiology	6	F, O	
Capstone Units (these units are also found in Part A Electives)				
<i>Students taking a Master award course must take a minimum of 6 credit points of capstone units.</i>				
Offered in semester 1 only				
CEPI 5207	Teaching Clinical Epidemiology	6	P	
CEPI 5300	Health and Medical Research Grants: Theory and Practice	6	F, O	
CEPI 5507	Clinical Epidemiology Project	6	P	
Offered in semesters 1 and 2				
CEPI 5205	Doing a Systematic Review	6	P	
CEPI 5215	Writing and Reviewing Medical Papers	6	O, BM	
Part A Electives				
<i>Graduate Certificate students must select 12 credit points from Part A. Graduate Diploma students must select a minimum of 18 credit points from Part A. Master's degree students must select a minimum of 18 credit points from Part A, in addition to their 6 credit points of capstone units.</i>				
Offered in semester 1 only				
CEPI 5200	Quality and Safety in Health Care	6	O	
CEPI 5207	Teaching Clinical Epidemiology	6	P	
CEPI 5300	Health and Medical Research Grants: Theory and Practice	6	F, O	
CEPI 5305	Translating Research Into Practice	<i>Not available in 2019</i>	2	BM
CEPI 5308	Patient-Reported Outcomes Measurement	2	O	
CEPI 5310	Advanced Statistical Modelling	4	F, O	
CEPI 5314*	Introduction to Systematic Reviews (TAV)	4	F, O	
CEPI 5315	Introduction to Systematic Reviews	6	F, O	
PUBH5006	Advanced Qualitative Analysis and Writing	6	BM	
Offered in semester 2 only				
CEPI 5204	Advanced Systematic Reviews	<i>Not available in 2019</i>	2	F
CEPI 5211	Introduction to Genetic Epidemiology	<i>Not available in 2019</i>	2	F
CEPI 5306	Clinical Practice Guidelines	2	O	
CEPI 5311	Diagnostic and Screening Tests (Part 1)	2	F, O	
CEPI 5312	Diagnostic and Screening Tests (Parts 1 and 2)	6	F, O	
CEPI 5555	Making Decisions in Clinical Practice (TBC)	6	TBC	
INFO 9003	Information Technology for Health Professionals	6	BM	
PUBH 5005	Qualitative Research in Health	6	BM, O	
PUBH 5212	Categorical Data Analysis (TAV)**	2	F, O	
PUBH 5213	Survival Analysis (TAV)**	2	F, O	
PUBH 5216	Controlled Clinical Trials	6	F, O	
PUBH 5217	Regression Modelling in Biostatistics	6	BM, O	
PUBH 5224	Advanced Epidemiology	6	F	
PUBH 5312	Health Economic Evaluation	6	BM	
PUBH 5317	Decision Modelling for Economic Evaluation	6	BM	
Offered in semester 1 and 2				
CEPI 5205	Doing a Systematic Review	6	P	
CEPI 5215	Writing and Reviewing Medical Papers	6	O, BM	
PUBH 5215	Introductory Analysis of Linked Data	6	BM	

Part B Electives

Graduate Certificate students may not select any units of study from Part B. Graduate Diploma students can select up to a maximum 6 credit points from Part B. Master's degree students can select up to a maximum of 12 credit points from Part B.

Offered in semester 1 only				
PUBH 5020	Chronic Disease Prevention and Control	6	O	
BETH 5204	Clinical Ethics	6	BM, O	
HPOL 5000	Introduction to Health Policy	6	BM & O	
HPOL 5006	Business of Health	6	BM	
Offered in semester 2 only				
PUBH 5019	Cancer Prevention and Control	6	O	
PUBH 5120	Aboriginal/Torres Strait Islander Health	6	BM, O	
PUBH 5422	Health and Risk Communication	6	BM	
BETH 5202	Human and Animal Research Ethics	6	BM, O	
BETH 5203	Ethics and Public Health	6	BM, O	
BETH 5208	Introduction to Human Research Ethics	2	BM, O	
BETH 5209	Medicines Policy, Economics and Ethics	6	O	

Unit Delivery Modes

BM: Block Mode – involves weekend & occasionally weekday workshops

F: Face-to-face – face-to-face only

O: Online - online only (but may involve fixed-time webinars)

P: Project – involves face-to-face/telephone/Skype meetings with a supervisor + individual student project work

*For pre-2018 students only

**For pre-2018 students who have taken PUBH5211 only

Note: you must check each unit of study's pre-/co-requisites and prohibitions carefully when planning your degree. See the unit of study outlines on page 21 for further details, and/or check the **Handbook**.

Examples of course structures

The following table are examples of how units can be combined in particular circumstances, such as for distance learning, and for particular learning preferences. Please note, before enrolling, students should check each individual unit of study's co- and pre-requisites to be sure they meet enrolment criteria, and unit of study timetables to ensure there are no scheduling clashes. Please refer to the relevant semester timetable available on the SPH website: sydney.edu.au/medicine/public-health/study/learning-and-teaching/timetable.php

Combining units to meet learning interests

UNIT CODE	UNIT NAME	cp*	DELIVERY MODE**	SEMESTER OFFERED
All students study core units				
CEPI 5100	Introduction to Clinical Epidemiology	6	F, O	1 & 2
PUBH 5018	Introductory Biostatistics	6	F, O	1
For students interested in biostatistics and learning skills for quantitative analysis				
CEPI 5204	Advanced Systematic Reviews (not available in 2019)	2	F	2
CEPI 5205	Doing a Systematic Review	6	P	1 & 2
CEPI 5215	Writing and Reviewing Medical Papers	6	O, BM	1 & 2

CEPI 5310	Advanced Statistical Modelling	4	F, O	1
CEPI 5311	Diagnostic and Screening Tests (Part 1)	2	F, O	2
CEPI 5312	Diagnostic and Screening Tests (Parts 1 & 2)	6	F, O	2
CEPI 5315	Introduction to Systematic Reviews	6	F, O	1
PUBH 5206	Controlled Trials	2	BM, O	2
PUBH 5212	Categorical Data Analysis	2	F, O	2
PUBH 5213	Survival Analysis	2	F, O	2
PUBH 5215	Introductory Analysis of Linked Data	6	BM	1 & 2
PUBH 5216	Controlled Clinical Trials	6	F, O	2
PUBH 5217	Regression Modelling in Biostatistics	6	F	2
For students wanting to gain qualitative skills				
CEPI 5200	Quality and Safety in Health Care	6	O	1
CEPI 5215	Writing and Reviewing Medical Papers	6	O, BM	1 & 2
CEPI 5306	Clinical Practice Guidelines	2	O	2
CEPI 5308	Patient-Reported Outcomes Measurement	2	O	1
CEPI 5315	Introduction to Systematic Reviews	6	F, O	1
PUBH 5005	Qualitative Research in Health	6	BM, O	2
PUBH 5006	Qualitative Analysis in Writing	6	BM	1
BETH 5203	Ethics and Public Health	6	BM, O	2
BETH 5204	Clinical Ethics	6	BM, O	1
For students interested in health economics and policy				
CEPI 5200	Quality and Safety in Health Care	6	O	1
CEPI 5215	Writing and Reviewing Medical Papers	6	O, BM	1 & 2
CEPI 5305	Translating Research into Practice	2	BM	1
CEPI 5306	Clinical Practice Guidelines	2	O	2
CEPI 5308	Patient-Reported Outcomes Measurement	2	O	1
CEPI 5315	Introduction to Systematic Reviews	6	F, O	1
HPOL 5000	Introduction to Health Policy and Health Economics	6	BM, O	2
PUBH 5312	Health Economic Evaluation	6	BM	2
PUBH 5317	Decision Modelling for Economic Evaluation	6	BM	2
For students interested in understanding and using evidence in clinical practice				
CEPI 5200	Quality and Safety in Health Care	6	O	1
CEPI 5305	Translating Research into Practice	2	BM	1
CEPI 5306	Clinical Practice Guidelines	2	O	2
CEPI 5311	Diagnostic and Screening Test (Part 1)	2	F, O	2
CEPI 5312	Diagnostic and Screening Test (Part 1 & 2)	6	F, O	2
CEPI 5315	Introduction to Systematic Reviews	6	F, O	1
PUBH 5216	Controlled Clinical Trials	6	BM, O	2

* cp - Credit Points

** Unit Delivery Modes - BM: Block Mode, F: Face-to-face, O: Online, P: Project

Other Course Planning Considerations

Full-time versus part-time study

It is possible to study all of our courses full-time, and complete the Master's degree in 2 semesters, but only if you are commencing in semester 1. The vast majority of our students complete their course part-time whilst working, or studying a different program concurrently, and certainly doing so allows for the most flexibility in unit of study choice. For example, there are some units of study in semester 1, such as CEPI5310 Advanced Statistical Modelling, that you will not be able to take if you study full-time in one year as you need to complete PUBH5018 Introductory Biostatistics, and either PUBH5217 Regression Modelling in Biostatistics or both PUBH5211 Multiple Regression and Stats Computing and PUBH5212 Categorical Data Analysis over semesters 1 and 2 as pre-requisites.

When should I study the core units?

It is important to note that the vast majority of our elective units have the two core units as pre-requisites, and we therefore recommend completing them as soon as possible. If you are commencing in semester 2, you can study CEPI5100 Introduction to Clinical Epidemiology straight away, but will have to wait until the following semester to complete PUBH5018 Introductory Biostatistics. Part-time students starting in semester 1 may take both core units in their first semester; however, if they want to take a lighter load, it is also possible to take PUBH5018 in semester 1 and then CEPI5100 in semester 2.

Pre-/Co-requisites and Prohibitions

Pre-/co-requisites and prohibitions are in place for a reason, and when planning your degree you'll need to take these into careful consideration. Only under exceptional circumstances are these waived, and to do so you will need to submit an application for Special Permission via your Sydney Student portal. Special Permission requests are sent directly to the unit of study coordinator for assessment, and you will then be notified of the outcome.

Big Picture Course planning

We recommend, where possible, planning your degree out in full from the outset. This will include looking at what advanced units you would like to take, and then working backwards to ensure that you complete any necessary pre-requisites, and avoid any prohibitions. In doing so we strongly recommend reading the using the tables and unit of study outlines found herein, consulting the **Handbook** and our **course structure website** (with associated links), and contacting any relevant unit of study coordinators should you have specific unit of study questions.

The Clinical Epidemiology team is here to help you, so please do not hesitate to get in touch, as follows:

- Dr Naomi Noguchi, Course Coordinator - naomi.noguchi@sydney.edu.au
- Program Administrator – sph.cepi@sydney.edu.au

Unit of study outlines

CORE UNITS

CEPI5100 Introduction to Clinical Epidemiology

6 Credit Points

Dr Fiona Stanaway

Session: Semester 1, Semester 2 **Classes:** Offered online and face-to-face (daytime tutorials) **Prohibitions:** PUBH5010 **Assessment:** Completion of online quizzes (15%), tutorial participation (10%), assignment 1 (15%), assignment 2 (60%)

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.

Textbooks: Online readings and resources to be provided on the eLearning website.

PUBH5018 Introductory Biostatistics

6 Credit Points

Dr Kevin McGeechan **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%) and 1x2.5hr open-book exam (70%). For distance students it may be possible to complete the exam externally with the approval of the coordinator.

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.

PART A ELECTIVES

CEPI5200 Quality and Safety in Health Care

6 Credit Points

Professor Merrilyn Walton

Session: Semester 1 **Classes:** offered online **Assumed knowledge:** clinical experience strongly recommended **Assessment:** online participation (20%); 4x1500 word assignments (80%) **Additional Info:** People working in health care will benefit from this course

This course is specifically designed for health professionals who are working in health care. It will equip participants with underpinning knowledge about patient safety. The course modules cover quality and safety principles, professionalism and ethics, risk management and risk information, complexity theory, clinical governance and the impact of adverse events, methods to measure and make improvements in health care. The modules, tools and the discussions are designed to enable participants to change behaviours by understanding the main causes of adverse events- poor team work, busyness, hierarchies. The course provides foundation knowledge about quality and safety; governments around the world are concerned to address unsafe care. The course will better prepare health professionals to understand the complexity of health care and take steps to minimise the opportunities for errors and address vulnerabilities in the system.

Textbooks: Runciman, Bill, Merry A Walton M Safety and Ethics in Healthcare: A Guide to Getting it Right. 2007 Ashgate Publisher

CEPI5204 Advanced Systematic Reviews

This unit of study is not available in 2019

2 Credit Points

A/Professor Lisa Askie

Session: Semester 2b **Classes:** (face to face) 1x2hr seminar/week for 6 weeks **Prerequisites:** PUBH5211 **Corequisites:** CEPI5203 or CEPI5314 or CEPI5315 **Assessment:** critical appraisal assignment (50%), data analysis assignment (50%) **Practical Work:** Two sessions are conducted in the computer lab

The aim of this unit is to critically appraise and apply, at an advanced level, the best evidence on systematic reviews. This unit extends beyond the 'Introduction to Systematic Reviews' unit by exploring in-depth important issues around systematic reviews. At the end of the unit, students should be able to understand the advantages of individual participant data meta-analyses; critically appraise a review of observational studies; understand differences in systematic review of observational studies compared with randomized trials; understand the potential pitfalls of meta-regression; perform and interpret a sub-group and meta-regression analysis; analyse continuous data and understand the methods by which missing data can be imputed; and understand the common problems in meta-analysis of continuous data. The seminar sessions are interactive and based on discussion of reading material. Two sessions are based in the computer lab.

Textbooks: Course notes are provided.

CEPI5205 Doing a Systematic Review

6 Credit Points

Adjunct Professor Giovanni Strippoli

Session: Semester 1, Semester 2 **Classes:** student project under supervision (can be studied by distance) **Prerequisites:** CEPI5203 or CEPI5314 or CEPI5315 **Assumed knowledge:** (CEPI5100 or PUBH5010) and PUBH5018 **Assessment:** 1 x 3000 word systematic review (100%)

Note: Please speak to the Unit Coordinator if you have not successfully completed the assumed knowledge units prior to enrolling in CEPI5205

This project unit provides an opportunity to apply skills learnt in other units and further develop knowledge and skills by undertaking a systematic review (ideally including a meta analysis) in a topic area nominated by the student. The student will be supported by a supervisor allocated to them, but the project will be student-driven. The assessment task is to undertake a systematic review and present the review in the form of a paper suitable for submission to a peer reviewed scientific, academic or professional journal.

Textbooks: There are no essential readings for this unit.

CEPI5207 Teaching Clinical Epidemiology

6 Credit Points

Dr Sharon Reid

Session: Semester 1 only **Classes:** student project under supervision. **Prerequisites:** CEPI5100 or PUBH5010 **Corequisites:** (CEPI5311 or CEPI5312) and (CEPI5203 or CEPI5314 or CEPI5315) **Assessment:** Project report (75%) Participation (25%)

This unit aims to further participants knowledge and skills in teaching clinical epidemiology. Participants undertake a project where they will develop a teaching and learning resource based upon the teaching and learning they have been exposed to in the Clinical Epidemiology Program at the University of Sydney. There is no additional face-to-face teaching. Participants are expected to develop, teach and evaluate a clinical epidemiology teaching and learning resource of at least 9 hours-equivalent face-to-face teaching time. By the end of this unit participants will have developed, delivered and evaluated a teaching and learning resource in Clinical Epidemiology by: developing materials about clinical epidemiology relevant to the target audience and setting; developing an approach to teaching and learning which is relevant to the target audience and setting; developing and using an assessment tool appropriate for the teaching and learning resource; developing and using a method of evaluation appropriate for the teaching and learning resource; and reflecting on their own learning in this unit of study.

Textbooks: Recommended: Straus SE, Glasziou P, Richardson WS, Haynes RB. Evidence-base medicine. How to practice and teach EBM. 4th Edition, Churchill Livingstone, Edinburgh.

CEPI5211 Introduction to Genetic Epidemiology

This unit of study is not available in 2019

2 Credit Points

A/Professor Clement Loy, Dr Gabrielle Williams

Session: Semester 2a **Classes:** offered face-to-face **Assessment:** 1x2000 wd assignment (70%) and class quizzes/presentations (30%)

This unit introduces the concepts and methodology used in genetic epidemiology. It begins with a refresher on molecular biology and genetics, followed by a survey of commonly used study designs. Practical implementation and statistical analysis of these studies will then be discussed. The unit concludes by exploring potential clinical and societal ramifications. By the end of this unit students will be able to critically appraise genetic epidemiological studies and act as informed research collaborators.

CEPI5215 Writing and Reviewing Medical Papers

6 Credit Points

Professor Angela Webster

Session: Semester 1, Semester 2 **Classes:** 9 self-paced modules each comprising: course notes, lecture, demonstrations, exercises, quizzes **Prerequisites:** PUBH5010 or CEPI5100 **Prohibitions:** CEPI5214 **Assessment:** quizzes (30%), assignment 1 (20%), assignment 2 (50%) **Additional Info:** Students without the pre-requisites are encouraged to contact the unit coordinator to discuss their motivation and experience. **Recommended Co-requisites:** PUBH5018. **Assumed Knowledge:** Some basic knowledge of summary statistics is assumed

Students will work at their own pace through 9 modules covering research integrity, medical style, abstracts, presentations and posters, constructing a paper, data visualisation, manuscript submission, responding to reviewers comments, publication dissemination, and reviewing a paper. This unit aims to teach students the principles of research integrity in writing for medical journals, typical issues they may face, and link to resources to help them maintain integrity through their publishing careers. It will guide them to reliable evidence based resources to improve their conference abstract, presentation and poster design, and manuscript style and writing. Students will learn about reporting guidelines, common pitfalls in writing and presenting research, choosing a journal, keywords, improving tables and figures for manuscripts through open source software, copyright, writing cover letters and response letters to reviewers. Students will learn about measuring research impact and ways to improve your research reach, dealing with the media and press releases, using social media in dissemination, digital archiving and basic skills needed to act as a quality peer-reviewer. This is an online unit, but those needing to study in block mode will do online study as well as a workshop.

Textbooks: No mandatory text book-readings available online.

CEPI5300 Research Grants: theory and practice

6 Credit Points

A/Professor Germaine Wong

Session: Semester 1 **Classes:** 12 online or face-to-face sessions and 1 face-to-face workshop (June) **Prerequisites:** (PUBH5010 or CEPI5100) and PUBH5018 **Prohibitions:** CEPI5505 **Assessment:** 1 x written research proposal (40%); online class presentations (30%); peer assessment (30%)

In this unit of study, the student will develop his/her own research proposal, to a standard suitable for a peer-reviewed granting body. Each section of a grant proposal (Aims, Background/Significance, Methods,

Analysis) will be discussed, with the student presenting and refining the corresponding section of his/her own proposal in a synchronous online workshop setting. This will then be complemented by online presentations from experienced researchers on the practical aspects of clinical research, followed by synchronous online class discussion. Topics include: observational studies, randomized controlled trials, diagnostic test evaluation, qualitative studies, funding application, ethical approval, publication strategies and grant administration. The unit will conclude with a one-day, face-to-face, mandatory workshop- where students will learn about budgeting, peer review of research grants, and present their completed research proposal.

CEPI5305 Translating Research Into Practice

This unit of study is not available in 2019

2 Credit Points

A/Professor Clement Loy

Session: Intensive May **Classes:** Block mode (2x 1day) **Prerequisites:** (CEPI5100 or PUBH5010) and PUBH5018 **Assessment:** class presentations (15%) and 1x essay (85%)

Generally speaking, implementation of research evidence into clinical practice is slow and incomplete. For instance, about 30% of patients do not receive treatment of proven effectiveness, while 20% receive treatments which are unnecessary or potentially harmful. This unit of study aims to help you translate research findings into clinical practice in your workplace. Before the first workshop, you will be asked to identify an evidence-practice gap in your area of clinical practice. In the workshop we will provide you with a theoretical framework for implementing change in clinical practice, and work through barriers to, and enablers for change. We will then review effective strategies for change implementation, and look at some real life examples. We will discuss methods for measuring the effectiveness of change implementation, and for identifying problems during implementation. By the end of this unit of study, you will be able to plan and carry out a knowledge implementation project. NB. Students enrolled in this unit of study should have had some work experience in the health care setting.

Textbooks: Grol R, Wensing M, Eccles M. Improving patient care: the implementation of change in clinical practice. Elsevier, Edinburgh 2005.

CEPI5306 Clinical Practice Guidelines

2 Credit Points

Dr Martin Howell

Session: Semester 2a **Classes:** offered online **Assumed knowledge:** clinical experience strongly recommended **Assessment:** 1 x 4-page critical appraisal and barriers

assessment (50%), online discussions and quizzes (50%)

During this unit students will evaluate guideline development; critical appraisal of guidelines; introduction to implementation and evaluation of guidelines; involvement of consumers in guidelines; examination of hospital-based and community-based guidelines. Group and individual critical appraisal work is required.

Textbooks: Online readings and other learning resources will be provided.

CEPI5308 Patient-Reported Outcomes Measurement

2 Credit Points

Prof. Martin Stockler

Session: Semester 1b **Classes:** online learning, expected student effort: 6-8 hours per week including 1.5 hour online lecture, readings and quizzes each week for six weeks **Assessment:** completion of online quizzes (25%), 1x3300 word assignment (75%)

The aim of this unit is to enable students to appraise patient-reported outcome measures (PROM) and incorporate them into clinical research. PROMs include: symptoms, side-effects, health-related quality of life, satisfaction and preferences. Topics include: definitions, structure and functions of PROMs; item-generation and selection; questionnaire design; assessing validity, reliability and responsiveness to clinically important change; utilities and preferences; developing and appraising studies using PROMs. The online sessions comprise six lectures outlining the principles, with illustrative examples (approx 60 minutes per lecture), plus a series of 5 related quizzes (approx 30 minutes). The written assignment (3300 word limit) is an appraisal of the application of an existing PROM as an outcome in a clinical study.

Textbooks: Streiner DL, Norman GR. Health Measurement Scales: a practical guide to their development and use. Oxford University Press. 3rd, 4th or 5th Editions all suitable.

CEPI5310 Advanced Statistical Modelling

4 Credit Points

A/Professor Patrick Kelly

Session: Semester 1 **Classes:** 2hr lec/tut/week x 12 weeks, also offered fully online. **Prerequisites:** PUBH5212 **Assessment:** 2 x data analysis report (2x50%)

This unit covers statistical analysis techniques that are commonly required for analysing data that arise from clinical or epidemiological studies. Students will gain hands on experience applying model-building strategies

and fitting advanced statistical models. In particular, students will learn a statistical software package called Stata, how to handle non-linear continuous variables, and how to analyse correlated data. Correlated data arise from clustered or longitudinal study designs, such as, cross-over studies, matched case-control studies, cluster randomised trials and studies involving repeated measurements. Statistical models that will be covered include fixed effects models, marginal models using Generalised Estimating Equations (GEE), and mixed effects models (also known as hierarchical or multilevel models). This unit of study focuses on data analyses using Stata and the interpretation of results.

Textbooks: No mandatory text books. Course notes are provided.

CEPI5311 Diagnostic and Screening Tests (Part 1)

2 Credit Points

Dr Katy Bell

Session: Semester 2 **Classes:** 1x2hr seminar/week for 6 weeks **Prerequisites:** PUBH5010 or CEPI5100 **Prohibitions:** PUBH5208 or CEPI5202 or CEPI5312 **Assessment:** Class discussion/presentations (40%), written assignment (60%)

This unit of study introduces the student to basic concepts behind diagnostic and screening tests, including: test accuracy, sources of bias in test evaluation, critical appraisal of test evaluation studies, principles and use of evidence in making decisions about population screening. After completing this unit of study, the student should have a basic understanding of contemporary issues and the methodology underlying, diagnostic and screening test evaluation and application.

Textbooks: Course notes will be provided.

CEPI5312 Diagnostic and Screening Tests (1 and 2)

6 Credit Points

Dr Katy Bell

Session: Semester 2 **Classes:** 1x2hr seminar/week for 12 weeks **Prerequisites:** PUBH5010 or CEPI5100 **Prohibitions:** PUBH5208 or CEPI5202 or CEPI5311 **Assessment:** Class discussion/presentations (40%) and two written assignment (60%)

This unit of study introduces the student to basic concepts behind diagnostic and screening tests, including: test accuracy, sources of bias in test evaluation, critical appraisal of test evaluation studies, principles and use of evidence in making decisions about population screening. It will then move to more advanced topics including: application of test results to individual patients, place of tests in diagnostic pathways, impact of tests on patient outcome, tests with continuous

outcome, receiver-operator characteristic curves, systematic review of diagnostic tests, predictive models, monitoring, diagnostic tests in the health system, and over-diagnosis. After completing this unit of study, the student should have a comprehensive understanding of contemporary issues and the methodology underlying, diagnostic and screening test evaluation and application.

Textbooks: Course notes will be provided

CEPI5314 Introduction to Systematic Reviews (TAV)

4 Credit Points

Dr Sharon Reid

Session: Semester 1 **Classes:** all students will work through three online-modules and participate in weekly tutorials (online or on-campus depending on mode enrolled) over 12 weeks **Prerequisites:** CEPI5102 **Corequisites:** CEPI5100 or PUBH5010 **Prohibitions:** CEPI5203, CEPI5315 **Assessment:** module assessment tasks (30%) and 1 x 3500 word assignment (70%) after the modules are completed

Note: For pre-2017 students only

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. This is a TAV (Transitional Arrangement Version) of CEPI5315 for the cohort of students who enrolled before 2017 AND have completed CEPI5102 Literature searching. Students can choose to learn in online or normal day (on-campus) mode. All students will work through three online modules, delivered over twelve weeks, addressing the following topics at an introductory level: What and why systematic reviews (and meta-analysis); 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.

CEPI5315 Introduction to Systematic Reviews

6 Credit Points

Dr Sharon Reid

Session: Semester 1 **Classes:** all students will work through four online-modules and participate in weekly tutorials (online or on-campus 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 4000 word assignment (70%) after the modules are completed

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.

CEPI5507 Clinical Epidemiology Project

6 Credit Points

Dr Katy Bell

Session: Semester 1 **Classes:** Student project under supervision – three meetings with supervisor (face to face or distance) **Prerequisites:** (CEPI5100 or PUBH5010) and PUBH5018 **Corequisites:** CEPI5300 or CEPI5505 **Assessment:** 1 x 4000word assignment and project planning (90% study proposal and 10% project management)

The aim of this unit is to conduct a clinical epidemiology project and write a report on the project in the form of a paper suitable for publication. The project will involve: refining the project proposal; data collection; data analysis; and produce a report suitable for publication. At the end of the unit, the student will be proficient in conducting and writing a report of a clinical epidemiology project. The report should be suitable for publication in a peer reviewed journal. This project unit is a capstone unit and student driven. It is the responsibility of the student to identify a suitable project, in consultation with a local clinical supervisor and the unit coordinator, based upon area of interest to the student and local capacity to provide support to the student. Feasibility is a critical criteria for selection of the topic given the tight time frame. Supervision is flexible but will include face to face meetings, email and telephone support. A minimum of two meetings are required, to be organised by the student, coinciding with the development of the project, a draft proposal and a near-final proposal, one at the beginning and one at the end of semester.

Textbooks: There are no essential readings for this unit.

INFO9003 IT for Health Professionals

6 Credit Points

Session: Semester 2 **Classes:** Lectures, Laboratories, Project Work - own time **Prohibitions:** INFO5003 **Assessment:** Through semester assessment (100%)

Information technologies (IT) and systems have emerged as the primary platform to support communication, collaboration, research, decision making, and problem solving in contemporary health organisations. The essential necessity for students to acquire the fundamental knowledge and skills for applying IT effectively for a wide range of tasks is widely recognised. This is an introductory unit of study which prepares students in the Health discipline to develop the necessary knowledge, skills and abilities to be competent in the use of information technology for solving a variety of problems. The main focus of this unit is on modelling and problem solving through the effective use of using IT. Students will learn how to navigate independently to solve their problems on their own, and to be capable of fully applying the power of IT tools in the service of their goals in their own health domains while not losing sight of the fundamental concepts of computing. Students are taught core skills related to general purpose computing involving a range of software tools such as spreadsheets, database management systems, internet search engine. Students will undertake practical tasks including scripting languages and building a small scale application for managing information. In addition, the course will address the issues arising from the widespread use of information technology in a variety of Health area.

PUBH5005 Qualitative Research in Health

6 Credit Points

Dr Julie Mooney-Somers

Session: Semester 2 **Classes:** Block Mode: 2 x 2 full day workshop + 1 x 1 full day workshop; **Online:** 12 x weekly online lectures + activities **Prohibitions:** PUBH5500, QUAL5005, QUAL5006 **Assessment:** 1 x interviewing activity(35%); 1 x 2000-word essay (35%); multiple choice quizzes (20%); 12 x participation activities (10%)

This unit of study introduces you to qualitative research in health, providing you with core concepts and skills. It is designed for beginners and people who want an advancedlevel introduction. Over the course of the unit we will address: What is qualitative research? How is it different from quantitative research? What is its history? What research problems can it address? How do I design a qualitative study? What are the different (and best) ways to generate data? How do you analyse qualitative data? Is methodology different to method? What are ontology and epistemology? What is reflexivity (and aren't qualitative researchers biased)? What are

the ethical issues? What is good quality qualitative research? How can I use qualitative evidence in policy or practice? You will get practical experience and skills through carrying out an observation, participating in a focus group, conducting an interview, analysing data, arguing for qualitative research in health, and appraising the quality of published literature. You will hear from working qualitative researchers about how they use qualitative methods in their work. This unit will give you the skills and confidence to begin conducting and using qualitative research.

PUBH5212 Categorical Data Analysis

2 Credit Points

Associate Professor Patrick Kelly

Session: Semester 2b **Classes:** Online - students must have regular access to a reliable internet connection capable of streaming or downloading video recorded lectures. **Prerequisites:** PUBH5018 **Corequisites:** PUBH5211 **Assessment:** 1x 3 page report (30%) and 1x 8 page report (70%)

Note: For pre-2018 students who have taken PUBH5211 only

In this unit the biostatistical concepts covered in earlier units are extended to cover analysis of epidemiological studies where the outcome variable is categorical. Topics of study include: testing for trend in a 2 x r contingency table; the Mantel-Haenszel test for the combination of several 2 x 2 tables, with estimation of the combined odds ratio and confidence limits; multiple logistic regression; Poisson regression; modelling strategy. The assignments will involve practical analysis and interpretation of categorical data. Data analyses will be conducted using statistical software (SAS).

Textbooks: Course notes are provided.

PUBH5213 Survival Analysis

2 Credit Points

Associate Professor Patrick Kelly

Session: Semester 2b **Classes:** Online - students must have regular access to a reliable internet connection capable of streaming or downloading video recorded lectures. **Corequisites:** PUBH5211 **Assessment:** 1x 3 page assignment (20%) and 1x 10 page assignment (80%)

Note: For pre-2018 students who have taken PUBH5211 only

During this unit, students learn to analyse data from studies in which individuals are followed up until a particular event occurs (e.g. death, cure, relapse), also making use of follow-up data for those who do

not experience the event of interest. This unit covers: Kaplan-Meier life tables; logrank test to compare two or more groups; Cox's proportional hazards regression model; checking the proportional hazards assumption; and sample size calculations for survival studies. For each topic, participants are given materials to read beforehand. This is followed by a lecture, then participants are given a small number of exercises to do for the following week. These exercises are discussed in the tutorial at the next session before moving on to the next topic. That is, in most weeks the first hour is a tutorial, followed by the lecture given in the second hour. Participants are expected to run SAS programs in their own time. Preparation time for each session is 2-3 hours. The assignments both involve use of SAS to analyse survival data sets.

Textbooks: Course notes are provided, along with links to additional readings through the library.

PUBH5215 Introductory Analysis of Linked Data

6 Credit Points

Associate Professor Patrick Kelly

Session: 17-21 June, 18-22 November **Classes:** block/intensive mode 5 days 9am-5pm **Corequisites:** (PUBH5010 or BSTA5011 or CEPI5100) and (PUBH5211 or BSTA5004) **Assessment:** Reflective journal (30%) and 1x assignment (70%)

This unit introduces the topic of linked health data analysis. It will usually run in late June and late November. The topic is a very specialised one and will not be relevant to most MPH students. The modular structure of the unit provides students with a theoretical grounding in the classroom on each topic, followed by hands-on practical exercises in the computing lab using de-identified linked NSW data files. The computing component assumes a basic familiarity with SAS computing syntax and methods of basic statistical analysis of fixed-format data files. Contents include: an overview of the theory of data linkage methods and features of comprehensive data linkage systems, sufficient to know the sources and limitations of linked health data sets; design of linked data studies using epidemiological principles; construction of numerators and denominators used for the analysis of disease trends and health care utilisation and outcomes; assessment of the accuracy and reliability of data sources; data linkage checking and quality assurance of the study process; basic statistical analyses of linked longitudinal health data; manipulation of large linked data files; writing syntax to prepare linked data files for analysis, derive exposure and outcome variables, relate numerators and denominators and produce results from statistical procedures at an introductory to intermediate level. The main assignment involves the analysis of NSW linked data, which can be done only in the Sydney (School of Public Health) Computer Lab, and is due 10 days after the end of the unit.

Textbooks: Notes will be distributed in class.

PUBH5216 Controlled Clinical Trials

6 Credit Points

Chris Brown (Research Fellow), A/Prof Andrew Martin

Session: Semester 2 **Classes:** face to face: 12x 1hr lec and 12x1hr tutorial, or online: 12x 1hr lec and 12x1hr tutorial (asynchronous) **Prerequisites:** PUBH5018 **Prohibitions:** PUBH5206 - Controlled trials (2CP) **Assessment:** 1x2.5hr open-book exam (60%) 1x1500 word assignment (30%) 6x online quizzes (10%) **Mode of delivery:** Online, Normal (lecture/lab/tutorial) day

This unit introduces the principles underpinning the design and conduct of high quality controlled clinical trials to generate good evidence for health care decision making. The topics include clinical trial design, randomisation, sample size, measures of treatment effect, methodological issues, trial protocols, and ethical principles.

Textbooks: Reading materials are provided

PUBH5217 Regression Modelling in Biostatistics

6 Credit Points

Dr Erin Cvejic, Dr Kevin McGeechan

Session: Semester 2 **Classes:** 1x1hr lecture and 2hrs tutorials / practicals per wk for 13wks **Prerequisites:** PUBH5018 **Prohibitions:** (PUBH5211 or PUBH5212 or PUBH5213) **Assessment:** 1x 4pg data analysis assignment (equivalent to 1200wds) (25%) and 10x online quizzes (15%) and 1x 10pg data analysis assignment (equivalent to 3000wds) (60%) **Mode of delivery:** Normal (lecture/lab/tutorial) day, Online

Note: The statistical software package used in this unit is web-based. There is no cost/fee to use this software. Course notes will be provided, along with links to additional readings through the library.

In this unit, you will learn how to select and apply the appropriate regression modelling techniques for continuous, categorical, and time-to-event outcome data. Building on the skills developed in PUBH5018 Introductory Biostatistics, this unit will teach you how to compare two or more groups, incorporate several explanatory variables into a regression model, identify and adjust for confounders, test for effect modification, calculate adjusted effect estimates, conduct appropriate model checking, build the 'best' regression model, and interpret the results of a model. You will gain practical experience in fitting multiple linear regression, logistic regression, and proportional hazards (survival) models using the statistical software package SAS. This unit serves as a prerequisite for an advanced unit of study in biostatistics (CEPI5310 Advanced Statistical Modelling).

Textbooks: Course notes are provided, along with links to additional readings through the library.

PUBH5224 Advanced Epidemiology

6 Credit Points

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%)

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.

PUBH5312 Health Economic Evaluation

6 Credit Points

A/Professor Alison Hayes, Dr Martin Howell, Professor Kirsten Howard

Classes: Online components and 4 non-consecutive workshop days. **Prerequisites:** HPOL5000 and (PUBH5010 or CEPI5100) and PUBH5018. **Prohibitions:** PUBH5302. **Assessment:** Online quiz (5%), in class presentation (5%), short answer questions and calculations (1000 words 20%), 2000 words critical appraisal (30%), 2000 words protocol report (40%)

The overall aim of the course is to develop students' knowledge and skills of economic evaluation as an aid to priority setting in health care. Students will be introduced to the principles of economic evaluation and develop skills in the application of those principles to resource allocation choices. Emphasis will be placed on learning by case study analysis and problem solving in small groups. This unit covers: principles and different types of economic evaluation; critical appraisal guidelines; measuring and valuing benefits; methods of costing; modeling in economic evaluation, the role of the PBAC, introduction to advanced methods including use of patient-level data and data linkage. The workshops consist of interactive lectures, class exercises and quizzes.

Textbooks: Recommended book: Michael F. Drummond, Mark J. Sculpher, George W. Torrance, Bernie J. O'Brien, Greg L. Stoddart. *Methods for the Economic Evaluation of Health Care Programmes* (Paperback), Oxford University Press, 2005. Essential chapters available on-line.

PUBH5317 Decision Modelling for Economic Evaluation

6 Credit Points

Professor Kirsten Howard and A/Prof Andrew Martin

Session: Semester 2 **Classes:** 3 x 1 day workshops plus 1 x 2 day workshop **Prerequisites:** (PUBH5010 or CEPI5100) and PUBH5018 **Corequisites:** PUBH5312 **Prohibitions:** PUBH5205 PUBH5307 **Assessment:** completion of in class practicals (10%) 2 x in-class quizzes (30%) 2 x assignments (60% - 2 x 30%) (2 x 2000 word written assignments) **Mode of delivery:** Block mode

Note: Department permission required for enrolment

This unit combines decision theory and more advanced health economic concepts to provide students with hands-on skills in specialised analysis methods, and modelling techniques, for evaluating healthcare options and reaching recommendations in the face of uncertainty. Students will calculate and analyse data from clinical studies, extrapolate clinical study results to other settings, and construct models that synthesise evidence (and expert opinion) from multiple sources. Specific topics of study include: decision trees; expected utility theory; sensitivity and threshold analysis; the value of information (including screening and diagnostic tests); the calculation and analysis of costs and quality-adjusted survival using individual patient data (including bootstrapping techniques); Markov processes and micro-simulation; and presenting and interpreting the results of (health economic) evaluations. Lectures are accompanied by practical exercises and readings. Students gain experience applying the methods presented in lectures via computer practicals using Excel and decision analysis software (TreeAge).

Textbooks: Reading materials are provided.

PART B ELECTIVES

PUBH5019 Cancer Prevention and Control

This unit of study is not available in 2019

6 Credit Points

Professor Jane Young

Session: Semester 2 **Classes:** 10 x online modules (each comprising online lectures, readings, quiz), approx. 4 hours per week x 10 weeks, 4 x online group interactions (1 x peer assessment and 3 x online discussions) approx. 2 hours per session for preparation and posting. **Prerequisites:** PUBH5010 or CEPI5100 **Assessment:** 10 x online quizzes (10%); 1 x 1200-word individual written assignment + critical appraisal task (20%); 1 x peer assessment exercise (5%); 1 x 400-word written assignment + anonymous peer assessment of each other's work based on pre-determined criteria. Final mark will be the median of all the peer marks. (10%);



“I have now acquired the skills to rapidly appraise published research for validity, and this is important to help me decide which research could be applied to my patients. I have also learned the skills to undertake a systematic review, and plan to do more of these in the future..”

SUZANNE
MASTER OF MEDICINE
(CLINICAL EPIDEMIOLOGY)

participation in 3 x online discussions (15%); 1 x 2500 word individual written assignment (40%)

Note: Department permission required for enrolment

This unit aims to provide students with specific information on the concepts, methods and applications underpinning cancer prevention and control at population level. It is designed to address specific educational needs of students in various programs within the School of Public Health and to offer a broad-based perspective on cancer control, ranging from primary prevention, screening and early intervention, tertiary prevention and palliative care. Emphasis will be given to cancers with the greatest impact at population level and where evidence demonstrates that policies and interventions are capable of reducing cancer incidence, mortality, prolonging survival and improving quality of life. Although focusing on specific Australian conditions, the information will be presented in the context of regional and global cancer control efforts. At the completion of the unit, students will be equipped with the basic tools to design, plan, implement and evaluate cancer control programs in Australia or other countries.

Textbooks: Elwood JM, Sutcliffe SB (Eds). Cancer Control. New York: Oxford University Press, 2010 (pp1-469).

PUBH5020 Chronic Disease Prevention and Control

6 Credit Points

Professor Adrian Bauman

Session: Semester 1 **Classes:** 20 hrs online lectures; 16 hours online discussions **Assessment:** 1000 word assignment (20%), 2000 word assignment (40%), on-line discussions and participation (40%) **Assumed Knowledge:** PUBH5033, PUBH5010 or CEPI5100 or equivalent

Note: Department permission required for enrolment

This course offers a public health approach to examining the global issue of chronic diseases (e.g. cardiovascular disease, type 2 diabetes, cancer, chronic lung disease) and their prevention. The course examines why chronic disease is a global problem, and describes WHO frameworks for chronic disease prevention. It also reviews the epidemiology of specific chronic diseases including trends in and surveillance of these conditions, and the global (and country level) burden of disease. Teaching will focus on clinical prevention, in particular, the role of primary care, other clinicians and allied health professionals in providing lifestyle advice for people with chronic disease (tertiary prevention) and for people without chronic disease (primary prevention). Students will be involved in evaluating the effectiveness of different prevention strategies and will examine the role of health policy and strategic planning in developing effective and sustainable chronic disease management programs and health services in different settings (in Australia and the region).

Textbooks: Readings for this unit will be available on the eLearning site.

PUBH5422 Health and Risk Communication

This unit of study is not available in 2019

6 Credit Points

Dr Claire Hooker, Associate Professor Julie Leask, Professor Phyllis Butow

Session: Semester 2 **Classes:** Block/intensive 2 blocks of 2 x 9-5 full days; please check with the coordinator for scheduling **Assessment:** Assignment 1: 1 x 2500 word (35%), Assignment 2: 1 x 2500 words or equivalent (35%), online activities (30%). Attendance at intensives is compulsory and 80% attendance is required to pass the unit of study.

In this unit, students learn how to communicate effectively with respect to health risks, both to individuals with health concerns, and with respect to risks to the public. The first part of the unit covers individual health risk communication in clinical settings, including: theories of health communication, patient centered care and shared decision making; evidence-based communication skills; research paradigms including interaction analysis; cross-cultural communication in health care; discussing prognosis; and informed consent. The second half explores risk communication for public health, including: how to effectively manage outbreak or other crisis situations; how to communicate about issues where the risk is low but public concern is high (such as with respect to the fluoridation of water); and how to best manage controversies. We teach theories of risk perception and communication with particular application to public health incident responses. We give practical guides to media messages, risk message framing, public engagement, traditional and social media, and the ethical aspects of public communication. The unit offers students the opportunity to learn from outstanding guest lecturers who work in these areas and interactive opportunities for students to try their skills in risk communication and decision making.

Textbooks: Students are provided with a list of readings (in digital format). Most supplementary readings can be accessed through the library or online.

BETH5202 Human and Animal Research Ethics

6 Credit Points

TBC

Session: Semester 2 **Classes:** 4x8hr intensive or Distance Education (online). Attendance is compulsory if enrolled in face-to-face mode **Prohibitions:** BETH5208 **Assessment:** Continuous assessment (short weekly tasks) (10%); 2x400wd short tasks (10%); 1x1500wd essay (30%); 1x2500wd essay (50%)

This unit of study critically examines research ethics in its wider context, from how research is structured to its dissemination. It explores the ethical underpinnings of a variety of research methods and their uses in humans and non-human animals including the justifications for engaging in research, key concepts in research ethics and research integrity. The unit also briefly examines the history of research and the impact of research abuse on participants, both human and non-human animal.

Note: If an insufficient number of students opt to attend seminars on campus, the co-ordinator may choose to teach this Unit of Study in online mode only. Students will be contacted if this occurs.

Textbooks: All readings are made available via eLearning.

BETH5203 Ethics and Public Health

6 Credit Points

TBC

Session: Semester 2 **Classes:** 5x7hour intensives; or Distance Education (online). **Prohibitions:** BETH5206 **Assessment:** 5xOnline Quiz (50%); 1x2500wd essay (50%)

This unit provides students with an overview of the ethical and political issues that underlie public health and public health research. The unit begins with some fundamentals: the nature of ethics, of public health (and how it might be different to clinical medicine) and of public health ethics. It introduces key concepts in public health ethics including liberty, utility, justice, solidarity and reciprocity, and introduces students to different ways of reasoning about the ethics of public health. A range of practical public health problems and issues will be considered, including ethical dimensions of communicable and non-communicable diseases in populations, and the ethical challenges of public health research. Throughout, the emphasis is on learning to make sound arguments about the ethical aspects of public health policy, practice and research. Most learning occurs in the context of five teaching intensives, which are highly interactive and focus on the development and application of reasoning skills.

Textbooks: Students are provided with a list of readings (in digital format).

BETH5204 Clinical Ethics

6 Credit Points

TBC

Session: Semester 1 **Classes:** 4x8hr Intensives or Distance Education (online). Attendance is compulsory if enrolled in face-to-face mode **Assessment:** 1x1500wd case study (30%); 1x2500wd essay (50%); continuous assessment (short weekly tasks) (10%); 2x400wd Short Tasks (10%)

This unit will facilitate students to critically review the ethical issues that underlie the delivery of healthcare. Students will explore: major conceptual models for ethical reasoning in the clinical context; key ethical concepts in the clinical encounter (such as consent, professionalism and confidentiality); major contexts in which ethical issues arise in clinical practice; and the role of clinical ethics consultation. The unit will also consider specific issues and populations within clinical practice, such as ethical aspects of healthcare at the beginning and end of life.

Note: If an insufficient number of students opt to attend seminars on campus, the co-ordinator may choose to teach this Unit of Study in online mode only. Students will be contacted if this occurs.

Textbooks: All readings are accessed online via eLearning.

BETH5208 Introduction to Human Research Ethics

2 Credit Points

A/Professor Ainsley Newson

Session: Semester 2a **Classes:** Block mode (1.5 days) or online **Prohibitions:** BETH5202 **Compulsory Co-requisites:** GENC5020 **Assessment:** 1x1500wd essay (80%); 1x 400wd task (10%); participation in class/online (10%) **Additional Info:** If an insufficient number of students opt to attend seminars on campus, the coordinator may choose to teach this Unit of Study in online mode only. Students will be contacted if this occurs.

This unit of study introduces students to human research ethics in its wider context. It explores the ethical underpinnings of the research endeavour including the justifications for engaging in research and research integrity. The unit also briefly reviews the history of research and the impact of research abuse on human participants.

Textbooks: All readings are accessed online via eLearning

BETH5209 Medicines Policy, Economics and Ethics

6 Credit Points

Dr Wendy Lipworth, Narcyz Ghinea

Session: Semester 2 **Classes:** Fully online **Assessment:** Online work (15%) 1x minor essay (35%) 1x major essay (50%) **Assumed Knowledge:** A degree in science; medicine; pharmacy; nursing; allied health; philosophy/ethics; sociology/anthropology; history; law; communications; public policy; business; economics; commerce; organisation studies; or other relevant field; or by special permission.

Medicines save lives but they can be costly and can have serious adverse effects. Value-laden decisions

are continuously being made at individual, institutional, national and international levels regarding the medicines we need, want and can afford. In this unit of study, we will explore and critique global and national policies and processes related to medicines, examining how research and development agendas are set; how medicines are assessed and evaluated; and how new technologies are translated into practice. We will also explore broader trends such as globalisation, commercialisation and changing consumer expectations. By the end of the course, students will understand the forces shaping the development, regulation, funding and uptake of medicines both nationally and internationally, and the political, ethical, legal and economic issues that are at stake. This course is designed to appeal to a wide range of students from ethics, law, public health, health care, policy, communications, economics, business, politics, administration, and biomedical science. Students will be encouraged to focus on issues of most relevance to their own area of study or work.

Textbooks: Readings will be provided

HPOL5000 Health Policy and Health Economics

6 Credit Points

Dr Anne Marie Thow, A/Prof Alison Hayes

Session: Semester 1 **Classes:** Online students: week by week online activities including online lectures and/or videos, 6 interactive tutorials with online content via discussion boards, interactive reading (approx 10 hours per week); block mode students: 2 x 1 day workshops plus 6 interactive tutorials (either face to face or online) with online lectures and/or videos (approx 10 hours per week) **Prohibitions:** PUBH5032 **Assessment:** assessable tutorials (30%) multiple choice online exam, 2 hr, open book (30%) 6 short reports (300-500 words each) on health policy and health economic evaluation, submitted online (40%) **Mode of delivery:** Block mode, Online

This unit aims to develop a critical and comparative understanding of the history, theory and practice of health policy as well as provide students with an understanding of the main concepts and analytical methods of health economics and political economy. It gives an overview of the political choices and frameworks that shape decision making in health. By the end of this unit students will be able to: Define the boundaries and key features of health policy; Identify policy instruments and how they function; Understand the main frameworks used for analysing health policy, and different approaches and perspectives regarding

setting priorities in health policy; Apply methods and principles of health economics e.g. resource scarcity, opportunity cost, efficiency and equity to practical real-life examples; Critically analyse the role of economic evidence in informing policy decisions in health decision-making in Australia.

Textbooks: Recommended: Buse, K, Mays, N and Walt, G. Making Health Policy (2nd Ed). Open University Press, 2012. Copies of the text are available in the University of Sydney library. Readings are available on the unit's eLearning site

HPOL5006 Business of Health

Note: Department permission required for enrolment. Students need to demonstrate at least one year's work experience in a related field. A waiver would be granted for students enrolled in MHPOL or MBA as this is already a course requirement of these programs.

6 Credit Points

A/Prof James Gillespie, Prof John Buchanan

Session: July Intensive **Classes:** Block/intensive mode – 5 days **Assessment:** Tutorial assessments and presentations (20%), 1x2000wd report (30%), 1x3000wd essay (50%)

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 will draw on expert lecturers and case studies to give an understanding of the incentives, constraints that shape strategies to create value in Australian healthcare.

Students' outcomes will include an understanding of the 'eco-system' of Australian healthcare and a capacity to identify and evaluate public and private business strategies in the main healthcare sectors.

Textbooks: Required and recommended readings and reference lists will be available through eLearning.



WINNIE
MASTER OF MEDICINE
(CLINICAL
EPIDEMIOLOGY)

Useful resources during your candidature

Throughout your studies the University will communicate with you via your University email account, MyUni and eLearning site. It is your responsibility to ensure that the University has the correct contact details for you. You will be able to update your details in one of the following ways:



“Apart from thoroughly enjoying the course, it has been the perfect springboard resulting in many wonderful opportunities in research and teaching that I could never have imagined.”

MARISA
MASTER OF SCIENCE
IN MEDICINE (CLINICAL
EPIDEMIOLOGY)

Online

Go to MyUni (sydney.edu.au/myuni) and log into your Sydney Student account.

In person

Student Centre
Darlington Campus
Level 3, Jane Foss
Russell Building

By mail

Student Centre
Jane Foss Russell
Building, G02
The University of Sydney
NSW 2006

UniKey

When you enrol at the University you are provided with an eight character UniKey account username and password. This account is the key to accessing the University's services and resources. For more information about your UniKey please see sydney.edu.au/students/student-it.html.

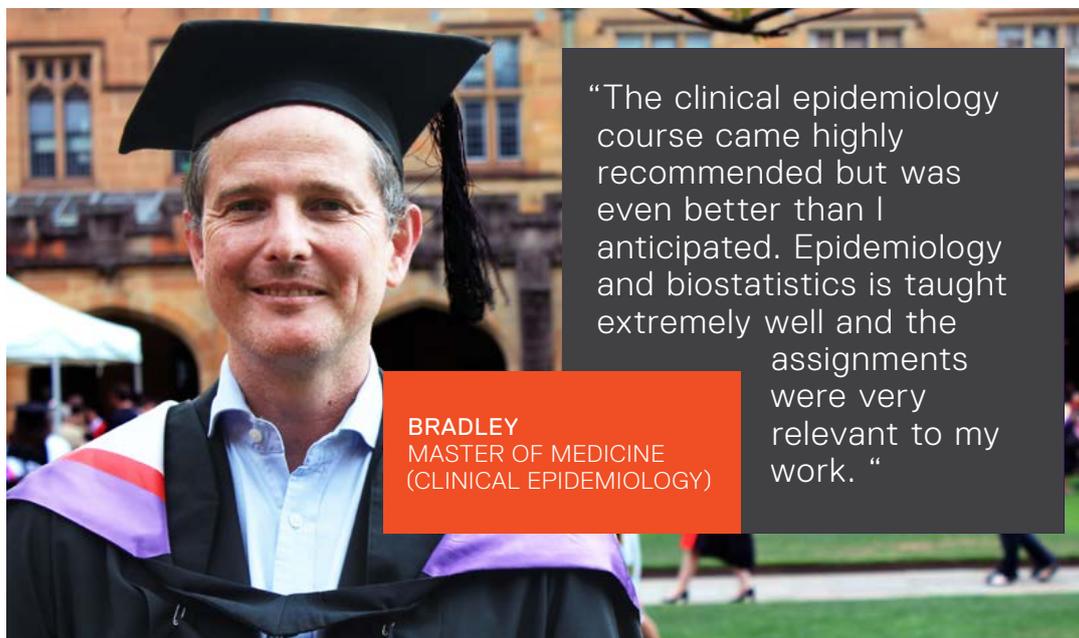
Your university email account

Every student at the University of Sydney is issued with a Sydney Mail email account. To access your inbox you will need to login using your email address, which is in the format unikey@uni.sydney.edu.au. For more information on Sydney Mail please see sydney.edu.au/students/student-it.html.

The University will only email information to your student email account. Your student email account will be used to contact you about assessments and examination related matters such as supplementary exams. For this reason it is imperative that you check your account regularly. Failure to read and respond where necessary to formal University communication could mean that you fail to correctly maintain your enrolment, which may lead to unnecessary financial and/or academic liability.

Diverting your email

If you do not wish to use the university email as your primary email account, please follow the simple instructions on the IT website in order to forward your student emails to your personal email: sydney.edu.au/ict/student/email/index.shtml.



MyUni

The MyUni student portal is your gateway to online student resources. It is located at sydney.edu.au/myuni and can be accessed using your UniKey login and password. Through MyUni you will be able to manage your enrolment, update your contact details, and find links to important information.

LMS eLearning

Most units of study in the School of Public Health are accompanied by an online eLearning site through LMS eLearning. Each unit of study site will provide links to unit resources, assessment and course outlines, announcements, and a grade centre used for uploading assignments. LMS can be accessed through your MyUni site or at canvas.sydney.edu.au/ using your UniKey and password.

Information technology

The University provides a range of Information Technology (IT) services that

will facilitate your learning experience for the duration of your candidature. It is important that you check your student email account, MyUni site and LMS eLearning site regularly, and that you know your UniKey account ID. For more information on any of the student IT services please see sydney.edu.au/students/student-it.html.

School of Public Health computer lab

The School of Public Health has a large computer lab situated on the third floor of the Edward Ford Building (A27). The Lab, available for students studying at the School, has networked PCs with a range of word processing, spreadsheet and statistical software. Students also have access to computing rooms across university. These labs are often booked for classes, so please check the timetables. For more information and links to the timetables please see sydney.edu.au/medicine/public-health/study/learning-and-teaching/timetable.php.

Student guides

- Sydney School of Public Health Learning and Teaching Resources Webpage - sydney.edu.au/medicine/public-health/current/coursework/index.php
- The University of Sydney School of Medicine - sydney.edu.au/medicine-health/schools/sydney-medical-school.html

University of Sydney policies

- Policies in the Sydney Medical School - sydney.edu.au/policies/default.aspx?mode=folder&uri=7822650
- Sydney Medical School Policies and Forms - sydney.edu.au/medicine/current-students/policies-forms/index.php

Library and research

- University of Sydney Library - library.sydney.edu.au

School of Public Health timetables

- Timetable information - sydney.edu.au/medicine/public-health/study/learning-and-teaching/timetable.php

Campus Cards

- sydney.edu.au/campus-cards

Special Consideration

- sydney.edu.au/current_students/special_consideration/

General information and support services

For information about academic support and appealing against academic decisions please see sydney.edu.au/students/browse.html?category=administration&topic=complaints-and-appeals

The University of Sydney provides a host of Student Services to ensure that you are supported throughout your time at the University:

- Aboriginal and Torres Strait Islander Students - sydney.edu.au/study/academic-support/aboriginal-and-torres-strait-islander-support.html
- Accommodation - sydney.edu.au/campus-life/accommodation.html
- Career Guidance - sydney.edu.au/careers/
- Chaplains - sydney.edu.au/chaplains/
- Child Care - sydney.edu.au/stuserv/child_care/
- Counselling and Psychological Services - sydney.edu.au/current_students/counselling/
- Disability Services - sydney.edu.au/study/academic-support/disability-support.html
- Financial Assistance - sydney.edu.au/stuserv/financial_assistance_office/index.shtml
- International Office - sydney.edu.au/study/academic-support/support-for-international-students.html
- Scholarships - sydney.edu.au/scholarships/
- Student Safety - sydney.edu.au/campus-life/safety-security.html



Meet the Clinical Epidemiology Team

Teaching staff



A/Prof Clement Loy is a clinical epidemiologist and cognitive neurologist, with a research interest in molecular genetics. He is Director of the Huntington Disease (HD) Service at Westmead, which serves about 70% of people with HD in New South Wales. He is an investigator in a number of NHMRC and NIH funded projects, and clinical trials for people with HD. He likes numbers, went through the Clinical Epidemiology program in the late 1990s, and enjoys teaching clinical epidemiology. He strives to translate evidence into practice and serves on a number of governmental advisory panels, including the Economic Subcommittee of the PBAC.



Dr Sharon Reid MBBS MPH FRACGP FRANZCOG Dip Paed a Senior Lecturer in Clinical Epidemiology at the School of Public Health, University of Sydney. She is also a General Practitioner and works clinically in Addiction Medicine at Royal Prince Alfred Hospital. Sharon's main research and academic interests are around postgraduate teaching and learning, systematic reviews, quality and safety in health care, and drug health impacts on women. She enjoys family, friends, gentle gym work-outs and 'Rocky Road' Chocolate.



Dr Fiona Stanaway is a medical doctor with a special interest in immigrant health. She completed a Master of Public Health followed by a PhD on health and ageing in Italian Immigrants in Australia. Fiona has been heavily involved in teaching Evidence Based Medicine to medical graduates for a number of years. She also coordinates the core unit of the Clinical Epidemiology Program, CEPI5100 Introduction to Clinical Epidemiology. Her many and varied interests include ballet classes, making her own clothes and learning foreign languages. She aims to be fluent in ten languages before she dies (currently up to four).



Prof Angela Webster is a Nephrologist and Transplant Physician, having trained in England, Scotland and Australia. She studied clinical epidemiology and subsequently a PhD at the University of Sydney. Always believing one job is never enough, she now splits her time between her staff specialist appointment at Westmead hospital and teaching and research in clinical epidemiology at the school of public health. Her research interests are wide ranging, but centre around design and reporting of studies, and on the theme of the interaction of chronic diseases. She can't function without a cup of tea in the morning, and her favourite things include her young son, snorkelling on sunny days, camping in remote places, purring cats, left-field British comedy and long evenings sharing food and wine with friends.



Dr Naomi Noguchi is a Lecturer in Clinical Epidemiology. Naomi practiced primary care with geriatric patients in Japan before obtaining her Masters of Public Health and PhD in epidemiology from the University of Sydney. Her PhD was on the Concord Health and Ageing in Men Project (CHAMP study), with a particular focus on older men's urinary symptoms. Her research interests include the geriatric syndromes and frailty, and her passion has always lied in teaching EBM subjects. Naomi is a keen ocean swimmer and also enjoys stand-up paddle boarding.



Christina Abdel Shaheed is a pharmacist and academic with an interest in pain management. Her research evaluates the quality use of medicines across a range of conditions. Christina is also committed to understanding the effectiveness of non-pharmacological management options for pain and communicating these findings to the public in order to help people make informed decisions about their treatment.



Katy Bell is a Senior Lecturer in Clinical Epidemiology at the University of Sydney School of Public Health. She liked the MMed(ClinEpi) so much that she enrolled in a PhD with the Clin Epi team and hasn't really ever left. Katy's main research and academic interests are around evidence based use of tests for screening, diagnosis and monitoring of disease. Her time away from work is spent being educated by the next generation of critical thinkers (her son and daughter, currently aged 8 and 6)



A/Prof Germaine Wong is a nephrologist at Westmead Hospital, with special interests in transplantation. She is also NHMRC Post-doctoral Research Fellow, Ludwig Engel Research Fellow and Senior Lecturer at the School of Public Health, University of Sydney. Her main area of research interests include: cancer epidemiology in the chronic kidney disease, social ethics in organ donation and allocation, decision analytical modelling, health economics, population health research, and quality of life studies in patients with chronic kidney disease.



Adjunct A/Prof Giovanni Strippoli is a nephrologist and epidemiologist at the School of Public Health at the University of Sydney. He is chairman of the Academy and SVP Scientific Affairs at Diaverum, a global organization active in education and research and treating over 30,000 people with chronic kidney disease worldwide. He has an interested in the design, conduct, synthesis, dissemination and implementation of clinical research evidence to guide clinical decision making in the area of chronic kidney disease, diabetes and hypertension. He is an author of more than 200 peer-reviewed publications, and deputy Coordinating Editor of the Cochrane Kidney & Transplant Group. He enjoys collecting and breeding rare and exotic macaws, among other species in his menagerie located in Southern Italy.

Administration staff



Abe Worthington is the Program Administrator for the Clinical Epidemiology and Biostatistics programs. He trained as a high school history teacher, and in conservation and land management. He has worked in numerous roles across the university over the last several years.

Further information

If you have any questions about postgraduate study in Clinical Epidemiology with the School of Public Health, please contact us or visit our website.



L-R: JONATHAN CRAIG,
SUZANNE MAHADY, ANGELA
WEBSTER, FIONA STANAWAY,
CLEMENT LOY, PHILIP CLAYTON

Clinical Epidemiology Program

Room 301A, Edward Ford Building (A27)
University of Sydney, NSW, 2006
T +61 2 9351 5994
E sph.cepi@sydney.edu.au

CONTACT	FOR ENQUIRIES REGARDING	INFO/EMAIL	PHONE
Clinical Epidemiology Program Administrator	General course enquiries	sph.cepi@sydney.edu.au	+61 2 9351 5994
Clinical Epidemiology Course Coordinator	Requests to undertake non-recommended elective units of study	naomi.noguchi@sydney.edu.au	+61 2 9351 1903
Unit of Study Coordinator	Unit content, assessments, extensions etc.	See Unit of Study Outlines on page 21 for applicable coordinator	See Unit of Study Outlines on page 21 for applicable coordinator
Faculty Services Office	Changes to your candidature or enrolment	fmh.facultyservices@sydney.edu.au	
LMS eLearning Support	Problems with LMS eLearning	sph.onlinesupport@sydney.edu.au	
HECS and Fee Office	Local Fees and HELP Information	sydney.edu.au/study/finances-fees-costs/fees-and-loans.html	+61 2 8627 8239
International Office	International applications; fees and loans; student advisors; visas	sydney.edu.au/study/academic-support/support-for-international-students.html	+61 2 8627 8300

ACKNOWLEDGEMENT OF COUNTRY

The School of Public Health acknowledges the traditional owners of Country, the Gadigal peoples of the Eora nation, upon whose land the University of Sydney now stands. As we learn from one another and share our knowledge, teaching and research practices at the University today, may we also pay respect to the knowledge embedded forever within the Aboriginal custodianship of Country.

SCHOOL OF PUBLIC HEALTH

Sydney Medical School

T +61 2 9351 5994

E sph.cepi@sydney.edu.au

sydney.edu.au/medicine/public-health

Produced by the Sydney School of Public Health,
the University of Sydney, November 2018
The University reserves the right to make alterations to any
information contained within this publication without notice.