Doherty Institute

THE UNIVERSITY OF MELBOURNE

The Royal Melbourne Hospital

A joint venture between The University of Melbourne and The Royal Melbourne Hospital

NCIRS
National Centre for Immunisation Research and Surveillance

THE UNIVERSITY OF SYDNEY
Institute for Infectious Diseases

The Peter Doherty Institute for Infection and Immunity
and
National Centre for Immunisation Research and Surveillance (NCIRS)
present

A course in vaccinology and immunisation science

Who is this course for?

This practical online course is for people relatively new to the area and for those wanting to broaden and update their understanding of vaccines, vaccine development and the principles underpinning the introduction and running of immunisation programs.

This includes, but is not limited to, practitioners, academics and researchers, such as primary healthcare and specialist doctors, community and immunisation nurses, those working in public health, government (all levels) and health policy, pharmaceutical industry, regulators, aged care workers, journalists and ethics committee members.

How much does this course cost?

The first 'Primer' module in 2021 is free. Registration fee for the remaining 10 modules is A$200 (standard), A$100 (full-time students) or A$100 for 6 or fewer modules. Full fee remission scholarships are available for those from selected regional countries. Instructions on applying for scholarships will be available with registration for Module 2 onwards.

Visit our website for more information and to register for the course.

How will the course run?

Sessions will be run via Zoom, facilitated by Australian and international experts in their field. Sessions will include principles and case studies with opportunities for learner questions and contributions. The indicative schedule of modules is on the following page.

Access to course materials will only be provided to registrants. Course completion certificates for each module attended will also be provided.

Course schedule

Topic	Date and time
A primer in vaccines and immunisation: History, key epidemiologic and immunologic principles, introduction to vaccine programs and safety. Lessons from COVID-19 for future vaccines.	7 - 10 pm AEDT, 17 November 2021
Vaccine immunology: The immune response, innate and adaptive features, including immune memory, modern vaccine technologies and platforms.	Dec 2021 (TBA)
Vaccine design: More on advances in vaccine and immunisation technologies, intended and non-intended effects of vaccines, adjuvant mechanisms and safety.	January - April/May 2022
Clinical trials: Clinical trial design – Phase I-IV, evolution of clinical trial processes, adaptive and cluster designs, volunteer recruitment, how results are analysed, vaccine immunogenicity, efficacy and safety for licensure.	
Vaccine manufacture and regulation: Licensure process, emergency use authorisation and good manufacturing practice, post-marketing commitments, IP sharing, technology transfer and global equity, interactions between pharmaceutical industry and governments.	
The value of vaccines: Health economics for vaccine policy, disease burden and the public health impact of vaccines, vaccine funding frameworks, measuring vaccine cost effectiveness, equity and value.	
Vaccination programs: Introducing vaccines into immunisation programs, importance and role of expert advisory bodies, vaccine delivery approaches, maternal immunisation, program communications and vaccine promotion, role of GAVI (the Vaccine Alliance), UNICEF and WHO.	
Vaccine safety: Pharmacovigilance and models for monitoring vaccine safety and adverse events, assessing, preventing and mitigating adverse events, causality assessments, risk-benefit framing and managing uncertainty.	
Social and behavioural dimensions of vaccination: Social and behavioural drivers of vaccine uptake, influences on vaccine confidence, evidence-based interventions for increasing vaccine uptake, vaccine access, addressing vaccine hesitancy in the clinic and community.	
Surveillance and evaluation of vaccination programs: Immunisation program surveillance infrastructure, measuring vaccine coverage, measuring effectiveness and public health impact on disease control, implementation.	
Current and future vaccine preventable disease challenges: Planning for emerging infections and pandemic responses, accelerated pathways for new vaccines, the role of CEPI, technology transfer and increasing independence of LMIC, innovations in vaccine delivery and future vaccination programs.	

This course is supported by an untied educational grant from Sanofi-Aventis Australia to the University of Melbourne. NCIRS is providing in-kind support towards the development and delivery of this course.

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Module 1:

A primer in vaccines and immunisation

7-10 pm AEDT Wednesday 17 November 2021

Visit our website for further information and to register

Moderated by:
Professor Terry Nolan and **Professor Peter McIntyre**

With a course welcome from:
Professor Sharon Lewin (Director, the Peter Doherty Institute for Infection and Immunity) and **Professor Kristine Macartney** (Director, National Centre for Immunisation Research and Surveillance)

Professor Peter Doherty
A Nobel view of vaccines and science

Professor David Isaacs
Lessons from vaccine history

Professor Katie Flanagan
Vaccine immunology and design: a primer

Professor Kristine Macartney
The revolution in vaccine safety

Professor Kim Mulholland
Immunisation systems in emerging economies

Professor Margaret Burgess
From Norman Gregg to rubella elimination

Professor Peter McIntyre
Vaccine impact: Herd and UnHerd

Professor Paul Offit
Cautions from vaccine history

Professor Terry Nolan
Immunisation systems in established economies

Professor Andy Pollard
Vaccine lessons from the SARS-CoV-2 Pandemic (with Professor Peter Doherty)