



A new approach to bio-preparedness

The concept of a “nuclear winter” has long been understood, but in uncharted new scientific territory in the modern world, there is little awareness of the risk of a “biological winter”, how this risk should be addressed, and what new systems, legislation and approaches are needed to mitigate unprecedented challenges to biosecurity.

This course is for professionals involved in any aspect of bioterrorism preparedness and response, who wish to be intellectually challenged, to think outside the square, to gain insight into quantum changes in science which pose a biosecurity risk, to understand the different perspectives of sectors involved in response, and to gain new critical skills which can be applied in their professional practice.

The course can be taken as part of a degree program, or can be done alone for professional education. We can also provide a tailored version to organisations, to be delivered face to face or fully online to suit organisational needs.

Overview

This course presents an innovative new approach to critically evaluating risks and responses to biosecurity threats to human health in the modern age. Our systems, thinking, training, legislation and policies have lagged far behind momentous changes in science, leaving us vulnerable to population-level harm from bioterrorism. Synthetic viruses and genetic engineering of pathogens are a reality, with a rapid acceleration of dual-use research of concern (DURC), which is research intended for good which may also be used to cause harm to humans. The public availability of methods for DURC genetic engineering, risks of laboratory accidents, coupled with the insider threat, poses an unprecedented risk for global biosecurity. This course covers bioterrorism past, present and future; case studies in risk analysis, risk mitigation, prevention and response; distinguishing natural from unnatural epidemics; surveillance tools, rapid intelligence and analysis methods; International health regulations, governance, insider threat and ethical frameworks; and response (decontamination and protection of responders).

We use a combination of novel teaching methods, including a movie, *Pandemic*, which has been custom made for the course. Hear from expert international speakers from the FBI, NSW Police, Australian Army, Defence Science and Technology Group and the University of Texas Medical Branch Police Department, along with UNSW faculty. You will learn

Who should do this course?

This course is designed for stakeholders from any sector involved in BT response, who wish to gain a better understanding of bioterrorism in the modern age, and to gain insight into diverse perspectives into prevention, mitigation and response. Students will have an intensive, interactive experience, which will include exposure to the perspectives of different sectors in biosecurity.

about key aspects of bioterrorism recognition, response and mitigation.

Course description

- This course will provide a grounding in human health aspects of bioterrorism and response, for first-responders, analysts or policy makers from health, emergency management, law enforcement, military or other relevant backgrounds. This course will not only teach the latest concepts in bioterrorism, but will enhance the ability of participants to engage

Don't have a background in health?

We cater for all needs and include a pre-course module which will provide you the required background in infectious diseases, public health and epidemiology.

Enrolled UNSW postgraduate students can take this course for credit, or it can be taken as a stand-alone course for professional development. We are happy to discuss tailored solutions for organisations. Eligibility criteria for non-enrolled participants: must be working in a relevant discipline involved in response to infectious diseases emergencies, such as defence, law enforcement, emergency services, public health, policy, paramedical, etc. Places are limited.

more effectively with other sectors in emergency response.

- An overview of bioterrorism past, present and future scenarios will be covered.
- Case studies in risk analysis, risk mitigation, prevention and response will be studied. These will cover engineered transmissible H5N1 avian influenza; distinguishing natural from unnatural epidemics, surveillance tools, rapid intelligence and analysis methods.
- International health regulations, governance of DURC, insider threat and ethical frameworks will be examined.
- Models for cross-sectoral collaboration and communication will also be explored.
- Preparation of first line responders to biohazards will be covered, including personal protective equipment, decontamination, epidemic control measures, post-exposure prophylaxis and vaccines for biosecurity.

Flexible delivery

For busy professionals with diverse needs, we provide you the flexibility to do this intensive course in Sydney in face-to-face workshop mode or as a fully online intensive. We ensure an equivalent interactive, intensive experience regardless of which mode of delivery you choose. Our experienced tutors will be available to discuss problems online or face-to-face in the classroom. Participants who do not have a background in health will be provided with online pre-course material covering the basics of public health, infectious diseases and epidemiology. This will need to be completed before doing the intensive workshop.

Location

School of Public Health and Community Medicine, UNSW, Sydney Australia.

Registration and payment

Applicants wishing to attend the course for professional development should register via the links under the Non-Students tab on the SPHCM Summer School website: sphcm.med.unsw.edu.au/summer-school.

If you have any further queries please contact: postgrad-sphcm@unsw.edu.au or call (02) 9385 1699.

Organisations interested in discussing tailored solutions for their staff should contact Prof Raina MacIntyre r.macintyre@unsw.edu.au

Featuring international expert speakers from all sectors.

UNSW Faculty

Prof Raina MacIntyre is Head of the School of Public Health and Community Medicine at UNSW and Professor of Infectious Disease Epidemiology. She is an international leader in emerging infections and runs a highly strategic research program spanning epidemiology, vaccinology, mathematical modelling, public health and clinical trials in infectious diseases. She is best known for research in the transmission dynamics and prevention of infectious diseases, particularly respiratory pathogens such as influenza.



Dr David Muscatello is a Senior Lecturer at the School. He has a PhD in the epidemiology of influenza. He also has many years experience in government as an epidemiologist specialising in acute disease surveillance using administrative databases, public health intelligence and biostatistics including time series analysis. He played a major surveillance role in the New South Wales government response to pandemic influenza in 2009 and has served on the Australian National Influenza Surveillance Committee.



A/Prof David Heslop is an active military medical practitioner, the Senior Medical Advisor CBRNE Medical to Special Operations Command (Res), and full time academic at UNSW. He has recently transitioned from Officer Commanding the ADFs only dedicated CBRNE capable medical incident response capability. He has ongoing ADF wide responsibilities for the provision CBRNE health capability advice, policy development, capability development and CBRNE operational health risk analysis.



Dr Alex Rosewell is a graduate of the Australian Field Epidemiology Training program, the MAE at ANU, and completed his PhD on "Strengthening Disease Surveillance in Papua New Guinea" at UNSW, while working in the Emerging Diseases Surveillance and Response Team in WHO. He has extensive experience in infectious diseases outbreak control including cholera, Ebola, shigellosis, measles, influenza, meningococcal disease, hepatitis E, pertussis and turtle meat poisoning.



Dr Rose Leontini is a Lecturer in the School, where she teaches clinical and public health ethics in the medical programme and in a number of postgraduate courses. She has an interdisciplinary background, with research and teaching interests including health ethics, health sociology, history and philosophy of science and technology, and cultural studies.



Enquiries

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More information: sphcm.med.unsw.edu.au/course/bioterrorism-health-intelligence

Images: Virus: iStock; Firefighters decontaminate & triage victim: Flickr; US Army, Africa: Flickr; Riot police: iStock

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