

THE SCIENTIFIC RESPONSE TO COVID 19: CAREERS IN SCIENCE

The response to the Covid 19 pandemic required expertise from a wide range of scientific backgrounds. Explore the various response solutions and related career roles and courses.



University of
Salford
MANCHESTER

EDUCATING THE PUBLIC

Educating the public about best hygiene practices and enforcing rules such as lockdown measures, social distancing and mask wearing has been essential to controlling the spread of the virus.

/ **PUBLIC HEALTH SCIENTISTS** translate specialised health information into more digestible public education campaigns to reach as many people as possible.

RELATED COURSES: Biological Sciences / Biomedicine / Human Biology and Infectious Diseases

RESEARCHING THE ORIGINS

Understanding where the virus came from and how it began to spread is important to reducing the threat of future variants or new viruses to global health security.

/ **EPIDEMIOLOGISTS** investigate the patterns of spread from the earliest confirmed cases and test samples to map the virus' mutations.

/ **ZOONOTIC DISEASE SPECIALISTS** research how the virus may have jumped the species barrier to be able to infect humans.

RELATED COURSES: Wildlife Conservation / Human Biology and Infectious Diseases / Biomedical Sciences / Geography

MAPPING THE SPREAD OF THE VIRUS

Monitoring the spread of Covid 19 has been essential to informing lockdown and social distancing policies, as well as identifying new variants of the virus.

/ **EPIDEMIOLOGISTS** monitor case numbers and map patterns to understand how quickly the virus is spreading.

/ **PUBLIC HEALTH SCIENTISTS** advise policy makers on strategies to reduce the spread of the virus.

/ **BIOMEDICAL SCIENTISTS** carry out genotype testing on positive Covid 19 samples to test for concerning variants.

RELATED COURSES: Human Biology and Infectious Diseases / Biomedical Science / Geography

CREATING VACCINES

Developing an effective Covid 19 vaccine and immunising a large proportion of the population is essential for keeping the virus in check.

/ **VACCINE RESEARCHERS** have worked on developing, conducting clinical trials, and producing new vaccines to target Covid 19.

RELATED COURSES: Biomedical Science / Human Biology and Infectious Diseases / Biochemistry

DEVELOPING AND PROCESSING TESTS

Diagnostic testing has been vital to helping contain the spread of Covid 19, as well as helping plan treatment for hospital patients.

/ At the start of the pandemic, **VIROLOGISTS** around the world worked on developing a diagnostic test to detect SARS-CoV-2 (the virus that causes Covid 19).

/ **BIOMEDICAL SCIENTISTS** work on processing patients' samples in laboratories to determine whether they have Covid 19.

RELATED COURSES: Biomedical Science / Human Biology and Infectious Diseases

DISCOVERING TREATMENTS

Anti-viral drugs are used to treat Covid 19 patients to prevent the virus from multiplying and increase their chance of survival.

/ **PHARMACEUTICAL SCIENTISTS** discover which existing drugs can be used to effectively treat Covid 19.

/ They are also involved in the developing, testing and manufacturing of new drugs designed to specifically treat Covid 19.

RELATED COURSES: Biochemistry / Pharmaceutical Science

DID YOU KNOW?

The Pfizer/BioNTech vaccine was the first mRNA vaccine to complete clinical trials and be licenced for use.

mRNA vaccines work by teaching our body how to make a protein to trigger an immune response.

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