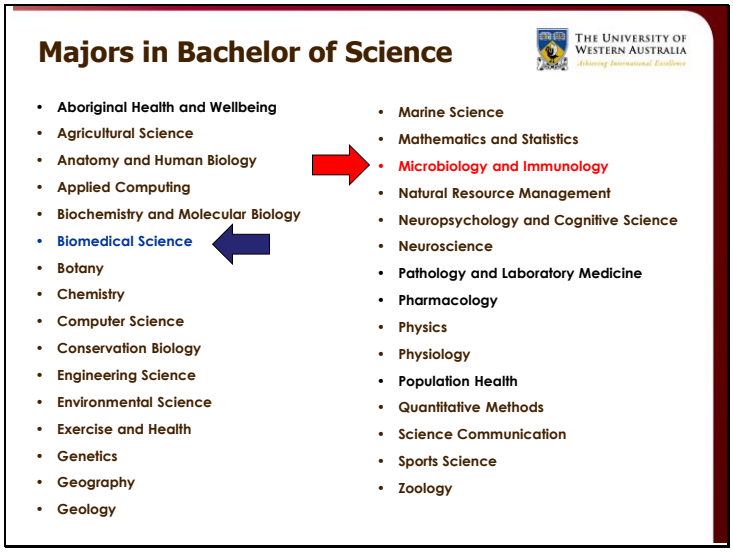
Slide 1

Welcome to the presentation on the UWA undergraduate Major in Microbiology and Immunology.

Slide 2



Our Major is one that sits within the Bachelor of Science. The range of Majors that can be taken within the Bachelor of Science is very broad as you can see here.
You can also take Microbiology & Immunology as a second Major as part of a Biomedical Science major. We'll take a look at that option later when we view the study plans.

Slide 3

So what is Microbiology? It's the study of microorganisms or microbes, which are the tiny organisms all around us that are generally too small to be seen with the naked eye. Some important ones are the bacteria, fungi, protozoa, algae and viruses.

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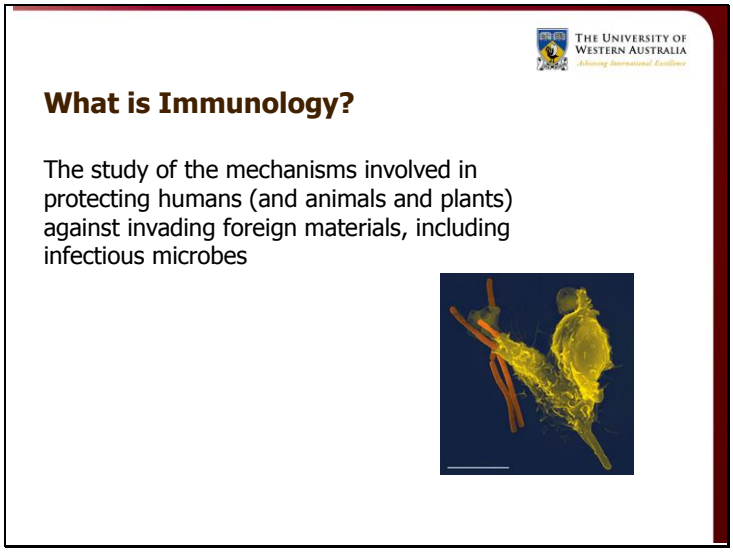

This major also includes immunology, one of the fastest-growing of all the disciplines in the biological sciences. Immunology is the study of host defences against invading foreign materials, including infectious microbes.

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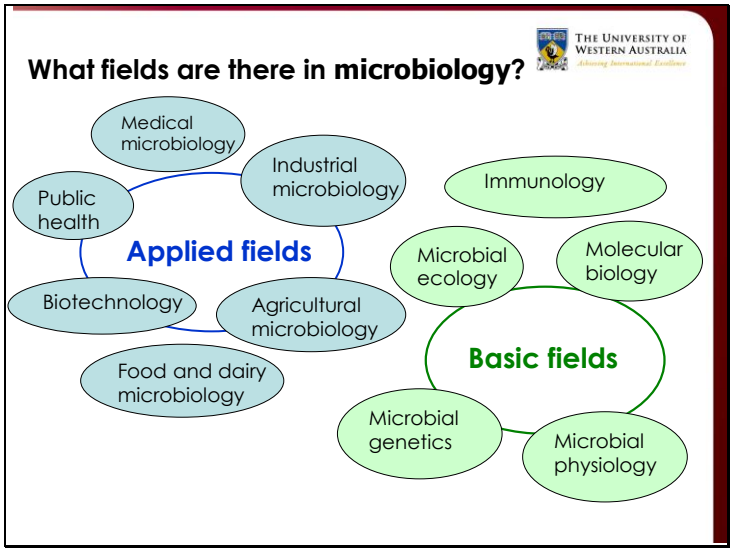

Microbiology is a broad subject, and has both basic and applied aspects. The basic fields are concerned with the biology of microorganisms themselves, such as their ecology, genetics, physiology and molecular biology. Immunology is also an important basic science taught in this major. The applied fields are concerned with practical problems such as infectious diseases, covered in medical microbiology and public health; food spoilage and food production, industrial uses of microbes and the molecular engineering of microbes to produce useful products in biotechnology, and the impact of microbes on agriculture. Microbiology graduates gain employment in all these fields.

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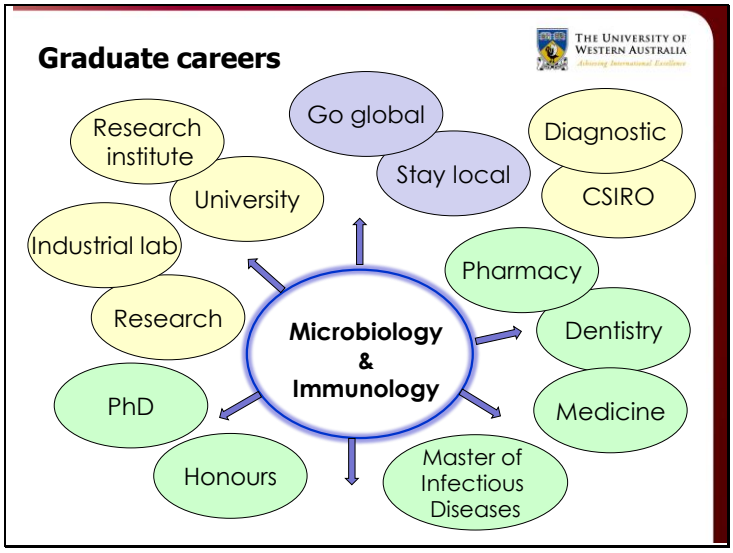

Microbiology graduates have a wide variety of career options. Some will pursue research, starting with Honours, then either entering a PhD and after that maybe a post-doc position, or finding a job in a research lab which might be in an industrial setting, or a research institute or in a University department. Others will take up further study, in Graduate Medicine, or other specialisations such as Dentistry or Pharmacy. We offer a Masters course in Infectious Diseases, which can lead to improved employment opportunities, or provide another route into PhD studies. Some graduates will work in diagnostic labs, others in CSIRO, while some take up a teaching career. Some of our graduates stay here in Perth while others move overseas. If you like the idea of travel, it's possible to do your Honours or PhD project overseas too! And in our Masters of Infectious Diseases course, the research project may be taken overseas as well.

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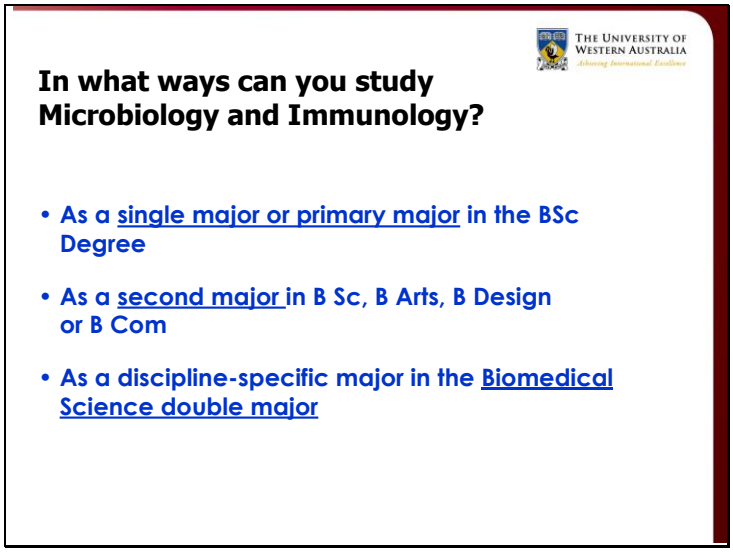

So, how can you study the Major in Microbiology & Immunology? First of all, you can take this Major as your only Major or as your degree-specific Major in a Bachelor of Science degree.
You could take Microbiology & Immunology as your second Major, either as part of a BSc or through one of the other degrees offered at UWA.
Or you could choose Microbiology & Immunology as your discipline-specific Major in the Biomedical Science double Major.

Let's take a look at these options in more detail.

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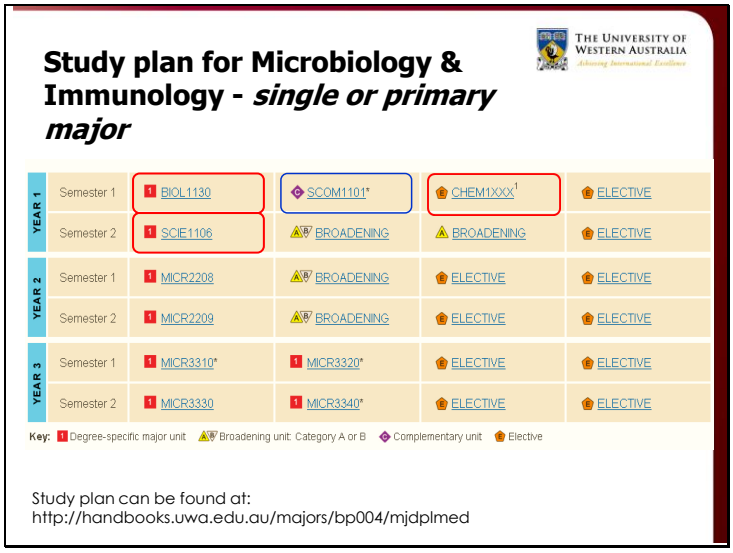

Here is a study plan for Microbiology & Immunology as a primary Major. In first year you will take units in Biology, Science Communication as a complementary unit, and Molecular Biology. A level 1 Chemistry unit is required for students without WACE chemistry.

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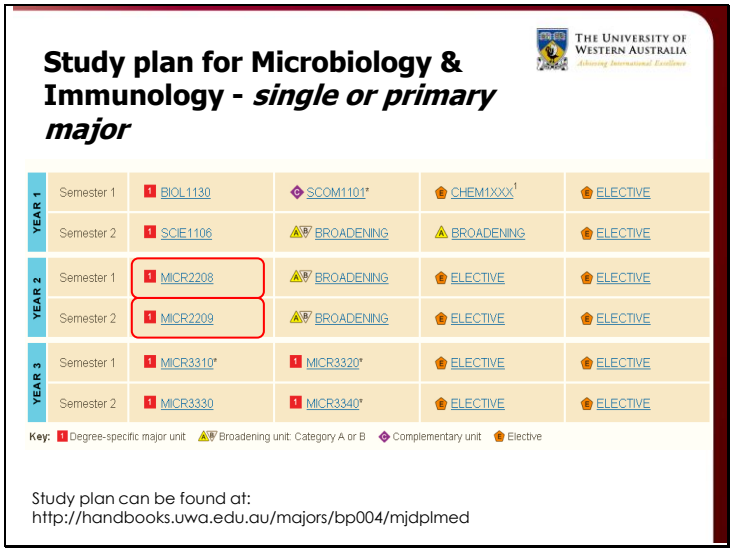

Study plan for Microbiology & Immunology - *single or primary major*

THE UNIVERSITY OF WESTERN AUSTRALIA

YEAR 1	Semester 1	BIOL1130	SCOM1101*	CHEM1XXX[1]	ELECTIVE
	Semester 2	SCIE1106	BROADENING	BROADENING	ELECTIVE
YEAR 2	Semester 1	MICR2208	BROADENING	ELECTIVE	ELECTIVE
	Semester 2	MICR2209	BROADENING	ELECTIVE	ELECTIVE
YEAR 3	Semester 1	MICR3310*	MICR3320*	ELECTIVE	ELECTIVE
	Semester 2	MICR3330	MICR3340*	ELECTIVE	ELECTIVE

Key: Degree-specific major unit; Broadening unit: Category A or B; Complementary unit; Elective

Study plan can be found at:
http://handbooks.uwa.edu.au/majors/bp004/mjdplmed

Microbiology-specific units begin in second year, with a core program of two units. In MICR2208 you will study Introductory Microbiology, which provides an introduction to the microbial world. It will include some genetics, physiology and molecular biology of microbes, as well as their basic biology and features. MICR2209 discusses the causes and the control of infectious diseases and provides an introduction to immunology.

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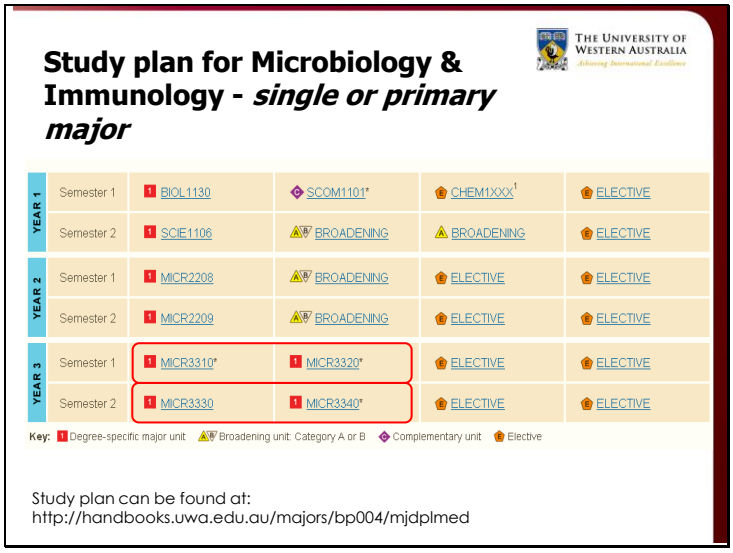

In third year you will take 4 core units in microbiology. MICR3310 teaches Applied and Environmental Microbiology, including aspects of industrial microbiology and biotechnology, as well as microbial ecology.
The other 3 units have a medical and infectious diseases focus:
MICR3320 is about Viruses and Viral Diseases. MICR3330 covers Bacteria and Bacterial Diseases;
and MICR3340 is about Immunology in Health and Disease.

If you decide to take a 2nd major, then some of the elective units would be replaced by the units required for that major.

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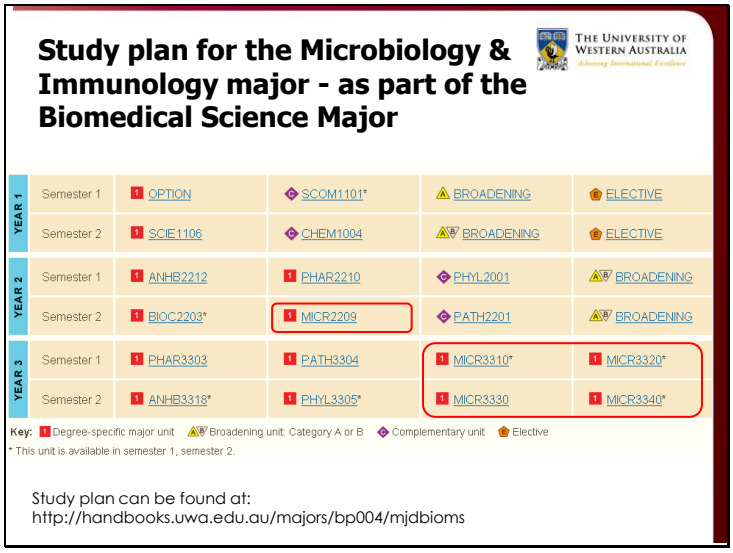

If you study Microbiology & Immunology as part of the Biomedical Science Major, you will take only one of the 2nd-year units in Microbiology, which is MICR2209. In 3rd-year you take the 4 microbiology units described earlier.

If you would like to look at these study plans in detail, they can all be found in the handbook available on the UWA website.

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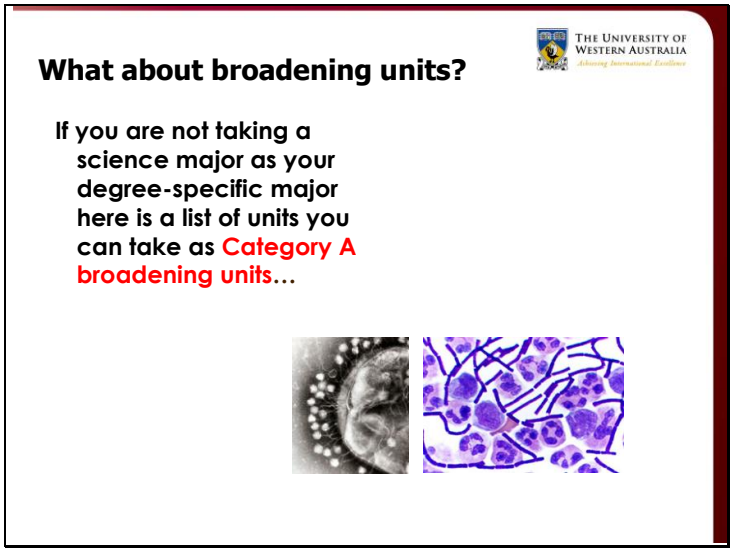

If your degree lies outside Science, you might be interested in some of the broadening units the Faculty of Medicine Dentistry and Health Sciences has to offer.

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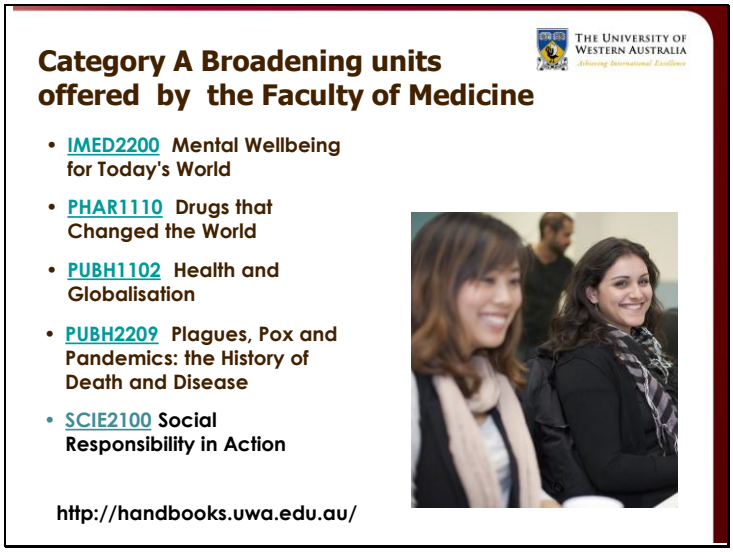

We have broadening units in mental health, pharmacology, public health and also the social sciences.

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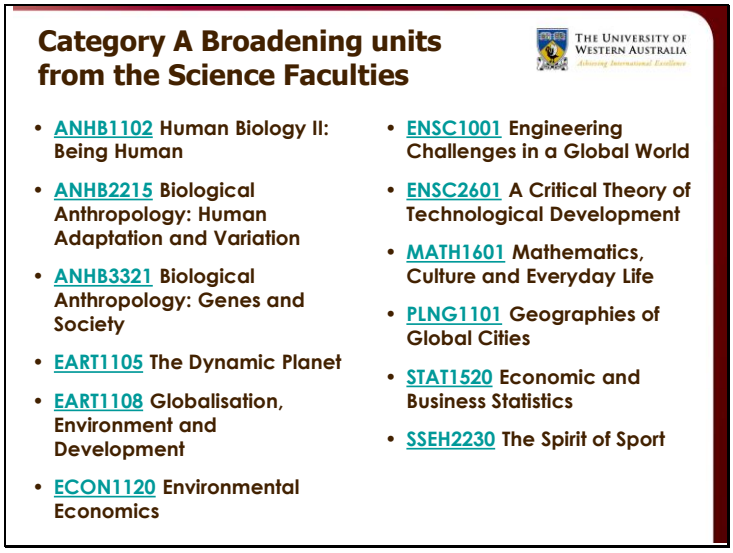

And of course, there are many broadening units you can take within the Faculties of Science.

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Hopefully this presentation gave you an idea of what you can expect from studying a Microbiology & Immunology Major. If you have any further questions, please don't hesitate to come and talk to us.

Thanks for listening and we hope to see you here at UWA!