Liberal Arts and Sciences: Modules

First Year

Natural Sciences Book Club

The ability to combine skills and knowledge from different disciplines is vital to address the global social and environmental challenges we are facing in the modern world. This module will take a fresh approach to topical science subjects (e.g. gender, human evolution and the universe) using popular science books (e.g. 'Testosterone Rex' (Fine, 2017), 'A Brief History of Time (Hawking, 1988) and 'A Brief History of Everyone Who Ever Lived' (Rutherford, 2016) and integrate this with a cultural and social perspective.

Taking an interdisciplinary approach, two key texts will be covered in class sessions (one book in each semester) with specialised lecturers from different fields approaching the content from different points of view. Using a combination of lectures and seminars there will be opportunities to acquire new knowledge; develop key skills and work with students from different disciplines. There will be a clear focus on critical analysis and evidence-based literature reviewing. The module will also consider the writing styles and approaches in different disciplines. Furthermore, students will be expected to engage in critical discussions and group work where they will need to recognise and appreciate the viewpoints of others in a sensitive manner. The students will be expected to be active participants in the learning process. The overall aim of this module is for students to develop a greater awareness and understanding of science subjects potentially outside of their immediate discipline area and to integrate their knowledge and skills from diverse areas to explore different critical perspectives. The module will raise diverse questions around key topical issues, and will address the fundamental question of what it means to be human.

Second Year

Interdisciplinarity I: Truth and Post-Truth in the Age of Big Data (10 credits, semester 1)

Interdisciplinarity is an advanced method of research that requires a unique set of skills. Unlike multidisciplinarity, this kind of research integrates different methodologies and blurs the lines between disciplines.

In 2018-2019, this module looked primarily at the topic of truth and post-truth in the age of big data. How can we recognise the truth? In an age of big data, our interests and values have been commodified and exploited, and with accelerated communication, fake news can be disseminated without accountability. Experts delivered classes about the uses and manipulation of language, statistical data, and other attempts to persuade in scenarios where 'truth' becomes increasingly ambiguous and contested.

The class created an inventory identifying examples of fake news that occur during the semester.

Interdisciplinarity II: Sustainability (10 credits, semester 2, plus a summer term study visit – e.g. to Brussels)

The final core module is the culmination of key skills learning and also teaches an advanced set of skills designed to enable you to turn your multidisciplinary degree into an interdisciplinary one. You will work as part of an interdisciplinary research group that will select real-world problem/s and identify how to tackle them. Potential examples, taken from the UN's sustainability goals, are:

• Ensuring quality education for all and promotion of lifelong learning
• Achieving gender equality and empowering all women and girls
• Ensuring access to water and sanitation for all.

As a group, you will explore your chosen issue from a variety of perspectives. Each member of the group will provide disciplinary expertise and will teach a seminar to the rest of the research group, including setting the reading and leading the discussion. Other sessions will focus on integrating the different disciplinary approaches, and we will also have sessions led by experts from across the university who will discuss the interdisciplinarity of their research.

This module completes your training in key Liberal Arts and Sciences skills and prepares you, if you wish, for the interdisciplinary dissertation and fourth-year modules.

Fourth Year

Liberal Arts and Natural Sciences Independent Research Project

This project option develops focused engagement with the interdisciplinarity which is at the heart of the Liberal Arts and Natural Sciences approach to learning. The end product will reflect your unique pathway through your LANS degree and express your experience of working across disciplinary boundaries, demonstrating your ability to contemplate thought-provoking questions, engage in innovative approaches to knowledge, and to seek creative solutions to a range of debates.

Your research focuses on a topic or problem rooted in interdisciplinary study and, generally, it will be one you define yourself. The exception will be if you wish to conduct research wholly within and across

the natural sciences, where projects are typically first articulated by academic staff. Once you have generated your idea you will consult with a supervisor to define its parameters with reference to current scholarship and knowledge. Once this stage is completed you will design the project and conclude by producing a substantial portfolio of independent research.

You can take a 40 credit or 20 credit LANS independent research project. If you choose the latter, then you will be required to take an additional 20 credits of independent study work. This might be fulfilled through your Major area, or by taking both of the LANS Entrepreneurial Skills modules.

Learning Entrepreneurial Skills (20 credits or 10 credits, semester 1)

An enterprising and entrepreneurial mindset and skills is highly prized by employers globally, and ensure that you are able to compete at a high level within the graduate labour market. This module will help you to become enterprising in your approach to problems by enabling you to develop abilities, behaviours and qualities to 'make things happen'. Through engagement with a range of experts and hands-on activities you will strengthen your skills in approaching challenges in a creative and resourceful way.

Working in teams, and through research, business-plan creation, and a pitch of the business plan, this module supports your development as a:

- Creative, enterprising and transformative thinker
- Skilful and technologically astute problem solver
- Persuasive communicator
- Globally and locally aware citizen
- Confident, flexible lifelong learner
- Resilient and dynamic leader.

Entrepreneurial Start-up (20 credits, semester 2)

Your business plan has successfully been pitched, what next? Students now explore product viability through to launch. The actual product launch is not embedded in the module, but you can of course pursue this outside of your studies.

You receive initial practical training in how to demonstrate entrepreneurial skills, and engage in independent guided learning as part of a team, collaborating on the design, planning, and viability-testing phases. Your progress through this module is supported and guided by the University's outstanding Careers Network team.

Throughout your learning journey on these modules, you will benefit from the expertise and guidance of our external partners, which in 2017/2018 included: international technology companies (IBM, Google), local Start-up accelerators (Entrepreneurial Spark, BizzInn) and investor firms (Midven, Blue Sky finance)

This document was written several months in advance of the start of the academic year. It is intended to provide prospective students with a general picture of the programmes, courses and modules offered by the School. Please note that not all programmes, courses or modules are offered every year. Our research is constantly exploring new areas and directions of study, therefore some courses or modules may be amended or withdrawn and new ones offered in their place.