

Rethinking Food Systems for Better Health and Sustainability

This is a collaborative project organised by three internationally renowned Universities, i.e. the University of Padua (Italy), the University of Sydney (Australia) and the University of Lausanne (Switzerland). This year's edition will be hosted entirely at the University of Sydney campus. The project class will be made up of a mix of students from the three above mentioned universities (up to 60 students).

PROJECT BRIEF

Food is central to family, cultural and community identity. It is essential to sustain life and food-related activities, provide income and livelihoods for billions of people on earth. With the continuing rise in global food production and manufacturing to meet increasing demand and the additional impact on ecosystems and climate, there is a pressing need to rethink our food systems.

In this project, student teams representing unique mixes of disciplines will explore food systems in culturally diverse Australian communities, pursuing questions such as: How can we educate and upskill diverse communities on the importance of nutrition when they can neither afford to change their habits nor understand in culturally relevant ways the need for doing so? How do you approach health literacy in multicultural communities; how do you ensure "consumer engagement" when the "consumer" is not monolithic but rather poly-ethnic, poly-cultural... What role does government, industry, the health system and individuals have in this mission? How could the "silicon valley" of the new international airport in Western Sydney and advanced manufacturing capabilities, be leveraged to improve health outcomes for the population through diet? How can technology and in particular AI solve some of the challenges of access to health and healthcare? How can we transform food systems so it can meet the changing needs of consumers in a more sustainable way? What role can consumers, producers, manufacturers, industry leaders and government play to achieve ambitious targets? How can we rewrite the narrative of food production and supply to reflect a progressive industry that will engage a diverse future workforce and facilitate a more comprehensive approach to solving complex issues within the sector? Through collaborative research into these areas, students will provide solutions on how we can rethink food systems for better health and sustainability.

This year's project will specifically focus on: Barriers to access in South Western Sydney: How to promote good health (including the role of healthy food) in communities of diversity and disadvantage, where barriers to health and healthcare access span socio-economic, cultural and linguistic lines.

Project Partner

Ingham Institute is a not-for-profit medical research institute based in South-Western Sydney, with a mission of "Pioneering translational research to achieve global health equity". South Western Sydney has a rapidly growing population of 1.3 million people and is typified by extraordinary diversity and disadvantage:

- Half the population speaks a language other than English at home.
- More than 40% were born overseas.
- The District has almost two thirds of the state's humanitarian entrants and refugees.
- Half of the community is in the state's lowest socioeconomic quintile.

These “social determinants of health” intersect; they mean increased risk factors for disease, as well as poorer health outcomes. They also mean this population is less likely to seek and receive the help they need when they need it, due to multiple intersecting barriers. This is why Ingham Institute exists - to promote and pioneer health equity. Ingham Institute's research focus is informed by the unique health needs of its global population. It conducts translational and multi-disciplinary research in areas that this community needs most - Diabetes/Obesity, Cardiovascular Disease, Lung Cancer and Stroke. It has a number of additional community-level focuses such as integrated oral health and its impact on broader health. Each of these conditions has higher-than-average prevalence in the south-west, and involve challenges relating to lifestyle, diet, health literacy, access to prevention and screening, and health system navigation in the face of language and cultural barriers. Importantly, solutions pioneered through research and successfully translated for South Western Sydney are - due to its demographic - ready-made for global application.

Ingham Institute is located at Liverpool, but has two more centres opening in the South West Sydney locations of Campbelltown (Macarthur) and Bankstown to expand opportunity for research impact and translation.

Project Context

Food and diet have always shared a causal relationship with many human diseases. In recognising this, the past two years has seen the Federal Government commission two inquiries into issues relating to food systems and population health in Australia. The first, *Australian Food Story: Feeding the Nation and Beyond - Inquiry into food security in Australia*, identified 35 recommendations relating to improving the security and supply chain resilience of agriculture and food production systems in Australia. This includes addressing recommendations regarding public health relating to food and nutrition. The second inquiry, *The State of Diabetes Mellitus in Australia*, identified 23 recommendations related to improving population health outcomes related to the diet related disease of Type 2 Diabetes, including addressing the concept of “Healthy Food Security” – being a populations ability to access, afford and consume healthy food. These two inquiries identify a complex interplay of socio-cultural, economic, environmental and policy factors impacting the domestic food system, which directly influence public health outcomes in terms of diet related diseases such as Obesity, Type 2 Diabetes, Cardiovascular Disease, and Cancer.

Whilst Australia enjoys an abundance of food in theory as a net exporter of agricultural products, the ability of many communities to achieve ‘healthy food security’ and subsequent positive health outcomes has remained elusive. Income, education, lifestyle and housing have all been identified as determinants of health that can compromise an individual's ability to access a healthy diet. People living in low socio-economic areas have been identified as more at risk of developing diet related disease with new approaches to ensuring healthy food security, providing a mechanism to reverse this trend. The communities of the South Western Sydney region are particularly at risk when compared to other parts of Sydney and greater rural and regional areas. With the top ten languages in this region being a language other than English, South Western Sydney is one of the most culturally and linguistically diverse communities in Australia. As a region, it also has one of the highest rates of diet related disease, with contributing factors including low income households, cultural disconnect and poor urban planning. The impacts of diminished food security for this community in economic,

social and health contexts means that ensuring healthy food security is of primary focus for the government and community.

Project Scope

With a research strategy informed directly by the unique health needs of its population, and a team of multi-disciplinary researchers who are practising clinicians in co-located health services, coupled with investment in key population centres of SW Sydney including Liverpool, Fairfield, Bankstown, Campbelltown and Bowral, Ingham Institute is positioned to drive positive change in improved healthcare understanding and access for the region and improving the health outcomes for people living in these communities.

This project invites interdisciplinary, global student teams to consider how Ingham Institute can improve health access and health literacy, including improving diet related health outcomes, for South Western Sydney's diverse communities, particularly in areas of research focus related to oral health, diabetes, stroke, cardiovascular disease and "tech-quity" (equity through technology). Some suggested directions that students may choose to investigate related to these areas of research focus include:

- New cross-industry partnerships for translating research outputs of Ingham Institute projects related to diet related disease into actionable, impactful strategies within the South-West Sydney community.
- Innovative approaches for transitioning research concepts to commercial outputs that ensure a more food secure community.
- Creative strategies for building health equity in culturally and linguistically diverse communities.
- Deployment of health technology and AI for improving consumer engagement and health literacy in populations characterised by socio-economic disadvantage and health system wariness
- Novel approaches to building awareness and engagement of research impact for promoting continued investment in Research, Development & Education related to equitable access, health literacy and global population health.