

User-centred design of dementia-friendly environments

Virtual, project-based placement opportunity for university students around the globe. Medical Science and Data Science students are encouraged to participate in this cross-cultural & multidisciplinary learning opportunity to address the global challenge of dementia in an ageing society.

About TEDI-London

TEDI-London is a collaborative, design-led engineering higher education provider founded by the three PLuS Alliance partners – Arizona State University (ASU), King's College London (King's) and UNSW Sydney (UNSW).

When fully operational, TEDI-London will offer a new type of engineering education for future engineers. Our flexible, project-based programmes will empower students to become independent, curious learners with a global, future-focused outlook.

TEDI-London's vision is to transform engineering education to transform lives – this means preparing students with the skills and knowledge to identify and solve global challenges.

Why Dementia Projects?

An ageing population is currently viewed as a major societal problem that needs addressing.

Globally, the ageing society has been a key motivator and driver of innovation, particularly technology-driven innovation. With an ageing society comes an increase in dementias, making it a key global health challenge. 47 million people globally live with dementia, and this is set to reach 82 million by 2030, with 1 new case diagnosed every 3 seconds. Indeed, dementia has been identified as the biggest global health challenge of the current and future generations

Dementia is a condition that results from a variety of brain illnesses, meaning dementia is not a single disease, and can affect people in different ways depending on the type of dementia. It is chronic and progressive, with no cure currently, and affects thinking, memory, language, emotions, behaviour and inhibits the ability to perform everyday activities. This means people with dementia are not only stigmatised and socially excluded, but family members and carers are also greatly impacted. Early diagnosis, improved quality of life and better awareness, understanding and support of dementia in society are all critical to tackling this major global challenge. As the global challenge of dementia is multifaceted, TEDI-London encourages multidisciplinary students to address this challenge.

**Summer School 2020
(Virtual Placement)**

TEDI-London's Summer School 2020 students will be set the challenge of creating innovative solutions to make Canada Water and other communities dementia-friendly environments. This is part of TEDI-London's role in [British Land's Canada Water Masterplan](#).

The Challenge

The challenge will ask students to create novel, feasible and commercially viable projects in one of three areas:

- 1) **Outdoor Environments:** working in partnership with a local community enterprise, create a dementia-friendly outdoor community space.
- 2) **Residential:** working in partnership with a major retailer, create a residential dementia friendly solution, ensuring an intergenerational 'sky city' is integrated into the ground level town.
- 3) **AI & Big Data:** create a supportive system that would enhance the safety, support or quality of life of people with dementia and their carers within the local area.

The projects will require students to understand the problem through research and consultation, then conceptualise and prototype practically viable and user-centred technological solutions, all in collaboration with stakeholders from industry, the community and people with dementia. These projects will then be showcased to industry and the community, with pitching panels offering opportunities to further develop successful projects.

Benefits

Students will gain a unique learning experience to complement their university studies, expand their professional networks and learn new transferrable professional skills that will help them to stand out in the highly competitive graduate recruitment market. Students will:

- Learn how to do user-centred design and develop entrepreneurial skills
- Conduct stakeholder consultation, including with people with dementia, carers, government and industry
- Experience online pitching to industry leads during an industry showcase
- Be offered opportunities for a follow up face-to-face prototyping and translation of projects into the British Land Canada Water masterplan, in London!

Student will develop a diverse range of professional skills, including:

- project management (i.e. planning, design, delivery)
- leadership & independent thinking
- multidisciplinary teamworking
- research and evaluation

- critical thinking
- analytical problem-solving
- multi-channel communication
- self-reflection
- professional writing
- market research
- stakeholder management
- client work and pitching

Students

As the global challenge of dementia is multifaceted, TEDI-London encourages multidisciplinary students to address this challenge. Project teams may include engineers, medical scientists, architects, designers, lawyers, computer scientists, social scientists, healthcare, business and performing arts students. We believe the knowledge from these different disciplines combined will lead to better, more innovative solutions.

What is important is that students value diversity, global perspectives and a desire to be challenged, to learn from others and to experience working with a broad range of stakeholders. Students must be open to the idea that people with dementia are experts of their own experience, necessitating their input into solutions.

Working in multidisciplinary, online teams from different countries on real-world projects will give students a unique learning experience and contextual understandings. In addition, the experience of co-designing solutions with people with dementia and their carers, community leaders, local businesses and industry further demonstrates why TEDI-London 2020 Summer school offers an exceptional learning opportunity for students, that in turn benefits the wider community.

Duration, Attendance and Course Credit

The program is conducted online, as a 6-week, part-time, flexible, project-based learning experience, from 1st June-10th July. It is led by TEDI-London and facilitated by academics and industry leads from around the world. TEDI-London is offering this program free-of-charge for UNSW students.

UNSW students studying medical sciences or data science may undertake this opportunity as a SCIF2199 Science work placement, which is a 6 UOC science elective course. Enrolment into SCIF2199 will be in Term 2, 2020. To be eligible for SCIF2199 course credit, student must:

- have completed a minimum of 48 units of credit;
- have a credit WAM (65 or above);
- have space in their program for a science or free elective; and
- be enrolled in programs 3991 or 3959, or undertaking a major in Anatomy, Neuroscience, Pathology, Pharmacology or Physiology.

Please note that [standard course fees](#) will apply for any UNSW student who elects to undertake the program as SCIF2199. As per any normal course, can be deferred via HECS or paid up-front.

Program Outline

Students are expected to be available for 10-20 hours per week (flexible times) between 1 June – 10 July 2020 (Weeks 1 to 6 of Term 2 2020). After the official conclusion of the TEDI-London program, students undertaking the experience as a SCIF2199 virtual work placement may use the remainder of Term 2 to complete their SCIF2199 assessments. There are no final exams for SCIF2199.

The program will allow students to undertake self-directed learning and peer learning with other students from around the world. They will experience expert workshops, mentoring, collaborative working with partners and stakeholders, as well in-depth, content-specific knowledge and project-based group work.

Term 2 2020

| | | |
|---------------------------|-------------------|--|
| Led by TEDI-London | Week 1 | <ul style="list-style-type: none"> - How to work effectively in remote, global, multidisciplinary teams - Understanding dementia - 24 hr global team challenge - Getting the most from your mentors |
| | Week 2 | <ul style="list-style-type: none"> - User-centred design - Market research with people with dementia and their carers - Stakeholder-centred co-design in complex systems - Design sprint |
| | Week 3 | <ul style="list-style-type: none"> - Engineering principles to address global challenges - Principles of rapid prototyping and lean design - Concept catalogue creation - Iterative co-design with people with dementia and industry |
| | Week 4 | <ul style="list-style-type: none"> - Prototype development - Iterative co-design with people with dementia and industry - Systems and design engineering within public policy contexts |
| | Week 5 | <ul style="list-style-type: none"> - From prototype to demo - Value propositions & Business planning - Pitch training |
| | Week 6 | <ul style="list-style-type: none"> - Pitching - Industry showcase - Project evaluation |
| Led by UNSW | Weeks 7-10 | <ul style="list-style-type: none"> - Complete SCIF2199 assessment tasks - Attend virtual debrief with SCIF2199 course coordinator |

How to Apply

UNSW students who wish to undertake this program as a SCIF2199 virtual work placement, must apply via [this online form](#). Students will need to login with their zID and zpass to access the form.

To be eligible for this virtual placement under SCIF2199, UNSW students must:

1. have completed a minimum of 48 units of credit;
2. have a credit WAM (65 or above);
3. have space in their program for a science or free elective; and
4. be enrolled in programs 3991 or 3959, or undertaking a major in Anatomy, Neuroscience, Pathology, Pharmacology or Physiology.

Students can request a progress check from the [UNSW Nucleus Student Hub](#) if they are unsure about requirement number 3.

UNSW Science will check if students meet the above eligibility requirements before passing applications to TEDI-London for review.

As part of the application process, students will be asked to answer 6 questions. Please have these prepared before applying online. Responses may be submitted as a written document or as a video.

1. Why are you interested in being involved in creating dementia friendly environments?
2. What do you hope you would learn from attending the summer school?
3. How do you imagine you might use what you learn at the summer school in the 12 months following the summer school?
4. What do you think would be challenging about the summer school for you personally?
5. How would you approach and deal with these challenges?
6. What skills do you have that you think would be assets at the summer school and why would these be useful?

[APPLY NOW](#)

Applications are due 11:59pm Wednesday 6th of May.

NOTE: UNSW students who would like to take part in the program without SCIF2199 course credit should apply directly to TEDI-London. Please use [this application form](#) to apply directly to TEDI-London.

Questions?

For more information about the 2020 TEDI-London summer program, please contact:

Martha Cooper-Thorne
martha.cooper-thorne@tedi-london.ac.uk

For more information about SCIF2199 course credit, please contact:

UNSW Science Learning and Teaching Unit
science.industry@unsw.edu.au

To request a progression check (to confirm if you have space in your degree for SCIF2199), please contact:

UNSW The Nucleus Student Hub
<https://nucleus.unsw.edu.au/en/contact-us>