



**UTS**

UNIVERSITY  
OF TECHNOLOGY  
SYDNEY

# Faculty of Science

Strategic Plan  
2024 – 2028





## A message from our Dean, Professor James Wallman

UTS has a vision to be a leading public university of technology recognised for our global impact. The University's commitment to, and energy for, teaching, innovating, and undertaking research that benefits society, is embodied by the Faculty of Science.

Today, our Faculty serves more than 2,500 students across our programs, and employs more than 340 staff across academic and professional roles. Our teaching and research seek to provide our students with a distinctive experience and a rich science education leading to diverse employment prospects. Our staff enjoy an inclusive, collaborative environment in which they can realise their personal and professional ambitions.

The Faculty of Science has been the home of a number of areas of research excellence, and has led many significant initiatives over the years. We have enjoyed a history of collaboration with external partners, and have been recognised nationally and internationally for outstanding performance in research and education, demonstrated by consistently high performance across rankings.

The launch of our Strategic Plan for 2024 – 2028 heralds the beginning of a new era for Science at UTS – one which seeks to deepen the excellence and impact of our research, inspire our students, position our graduates for success, foster a diverse and inclusive science community, and broaden our partnerships for impact.

This plan could not have been completed without the active and passionate contribution of colleagues from across the Faculty. I thank all those who participated so enthusiastically.

Our future vision is both powerful and inspiring, and I look forward eagerly to the years to come.



**UTS acknowledges the Gadigal People of the Eora Nation, the Boorooberongal people of the Dharug Nation, the Bidiagal people and the Gamaygal people upon whose ancestral lands our university stands.**

**We would also like to pay respect to the Elders both past and present, acknowledging them as the traditional custodians of knowledge for these lands.**

# Starting Snapshot\*

**2,500+**

Undergraduate and postgraduate students (EFTSL)

**210+**

Academic staff (FTE)

**130+**

Professional and technical staff (FTE)

**>\$30 million**

Annual research income

**2nd in Australia**

Proportion of highly-cited research (Leiden Open Edition)

**4th in Australia**

for contributions to sustainable development (THE Impact)

Our vision is to be a leading public university of technology recognised for our global impact

\* As at February 2024

## UTS 2027 Strategic Plan

In 2023, UTS renewed its UTS 2027 strategy in light of sector and workforce changes brought about by the global pandemic in 2019. The strategic plan details a set of initiatives and projects to deliver on the university's commitment to teaching, innovating, and undertaking research that benefits society.

Key strategic initiatives in UTS 2027 include:

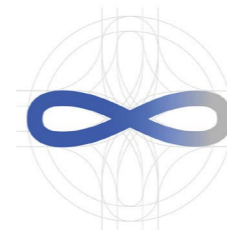
- providing learning for a lifetime;
- enhancing the university's pathways and impact through connected research;
- developing a distinctive experience for all stakeholders;
- strengthening the university's partnerships, with a focus on sustainability; and
- developing new ways of working, teaching, and learning to adapt to change.

UTS is already well on the way to achieving its vision for 2027. This is demonstrated in achievements such as:

- UTS ranked in the top 150 universities in the world in the Times Higher Education (THE) World University Rankings 2024.
- UTS ranked 14th in the world for Times Higher Education (THE) Impact Rankings 2023 against the United Nations' Sustainable Development Goals.
- UTS ranked in the top 100 universities in the world in the QS World University Rankings 2024.

The UTS Faculty of Science supports and plays a key role in implementing UTS 2027.

### Initiatives



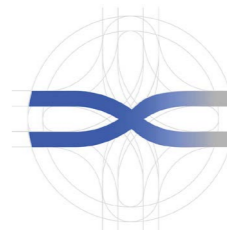
Lifetime of Learning



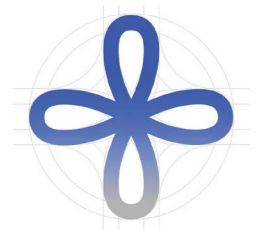
Connected Research



Our Distinctive Identity



Sustainable Partnerships



Working Together

### Values

<b>Discover</b>	and share new knowledge and new ways to lead through our teaching, research, intellectual debate and use of technology
<b>Engage</b>	and collaborate with each other, alumni, partners, professions and communities, locally and internationally
<b>Empower</b>	each other to grow, contribute, challenge and make a difference
<b>Deliver</b>	on our obligations to each other, our partners and communities while maintaining high standards and ethical behaviour
<b>Sustain</b>	our local and global environment, organisational health and our ability to create a positive, viable future

# Faculty vision, values and strategic priorities

## UTS Science vision and values

### Vision

We will change the world for the better through our exceptional graduates, impactful scientific research, and innovative technology.


### Values

<b>Integrity</b>	Continue to build on our culture of honesty and transparency across the Faculty, advancing science in the best interests of people and the planet.
<b>Excellence</b>	Deliver excellence by producing high quality, internationally respected research with positive impact.
<b>Collaboration</b>	Foster a culture of collaboration that leverages our diverse expertise and perspectives for greater impact.
<b>Innovation</b>	Be recognised for our cutting-edge technologies, passion for science, research, and teaching and learning approaches.
<b>Inclusion</b>	Nurture a supportive and inclusive environment where all people feel valued, respected, and empowered through a sense of community and belonging.

### UTS Values

Discover  
Engage  
Empower  
Deliver  
Sustain

# UTS Science strategic priorities

 <p><b>Leverage our research strengths to deepen the excellence and impact of our research</b></p>	 <p>Connected Research</p>
 <p><b>Provide an inspiring experience that draws in students from Australia and around the world who share our passion for science</b></p>	 <p>Our Distinctive Identity</p>
 <p><b>Position our graduates for success as confident and capable scientists of the future</b></p>	 <p>Lifetime of Learning</p>
 <p><b>Foster a diverse, empowered and inclusive science community</b></p>	 <p>Working Together</p>
 <p><b>Broaden and strengthen our partnerships as a key element of our unique identity</b></p>	 <p>Sustainable Partnerships</p>

UTS Science is committed to excellence across five interlinked strategic priorities, each with a view to changing the world for the better.

These strategic priorities are underpinned by a set of goals and initiatives, each of which will contribute to the Faculty's vision and broader UTS 2027 ambitions.

Success against these priorities will be driven by the Faculty's exceptional academic and professional staff, students, and partners, and supported by UTS central and Faculty systems.



## Science Extension at UTS

In 2023, the Faculty of Science began offering the Mentor Science+ Science Extension program.

Led by Dr Lisa Cabral, Associate Professor Irina Kabakova, and Professor Willa Huston, the program is a social justice initiative to address STEM subject access inequalities in NSW high schools. Mentor Science+ Science Extension offers HSC Science Extension opportunities to schools with populations that are underrepresented in STEM careers.

The program teaches Science Extension to students who are unable to access Science Extension at their own school. It also aims to disseminate research principles and ideas to the general public, build connection and reputation between high schools and UTS, and inspire HSC students to undertake UTS Science degrees and develop careers in Science.

Students, both those being taught Science Extension by UTS, and those taught by our partner schools, have the opportunity to be mentored by current researchers throughout their scientific research project and attend specialist workshops on:

The Scientific Research Proposal:

- How to conduct a Literature Search/Review
- How to perform Critical Analysis

The Data, Evidence and Decisions:

- Statistics in Scientific Research

Mentor Science+ Science Extension enjoys working with a variety of high schools, including government and non-government schools. The program currently has 15 schools participating, with three of these schools teaching Science Extension for the first time. The 15 schools include schools from regional NSW, Western Sydney and all-girl schools. Three of our students identify as Aboriginal and Torres Strait Islander (ATSI) students.



# UTS Science Strategy on a page




## Our vision

We will change the world for the better through our exceptional graduates, impactful scientific research, and innovative technology.

## Our values

**Integrity, Excellence, Collaboration, Innovation and Inclusion**

## Our strategic priorities

<p>Leverage our research strengths to deepen the excellence and impact of our research</p>	 <p>Connected Research</p>
<p>Provide an inspiring experience that draws in students from Australia and around the world who share our passion for science</p>	 <p>Our Distinctive Identity</p>
<p>Position our graduates for success as confident and capable scientists of the future</p>	 <p>Lifetime of Learning</p>
<p>Foster a diverse, empowered and inclusive science community</p>	 <p>Working Together</p>
<p>Broaden and strengthen our partnerships as a key element of our unique identity</p>	 <p>Sustainable Partnerships</p>

## Our strategic goals

### Impactful research

- Articulate and embody our research priorities and faculty research themes
- Build critical mass in our fundamental research
- Increase the translation and commercialisation of science
- Attract, grow and retain talented researchers

### Inspiring experience

- Provide excellent on-campus and flexible learning opportunities for our students
- Facilitate students' success from their first to their final day

- Build strong connections and a sense of belonging for our students
- Instill a lifelong passion for science in every graduate
- Support our staff to be exemplary educators

### Exceptional graduates

- Equip our students with the skills and attributes they need to be job ready
- Establish a portfolio of scientific programs that are exceptional and distinctive
- Create distinctive, confident, and responsible graduates who are exemplary scientific thinkers

### Inclusive community

- Broaden and deepen our approach to equity, diversity and inclusion
- Increase the diversity of our staff and students for inclusion and innovation
- Foster an exceptional staff experience, and support staff to grow and contribute to the shared future of our Faculty

### Strong partnerships

- Increase and diversify external research funding through proactive business development
- Expand the breadth and depth of our external engagement for teaching, learning and research impact

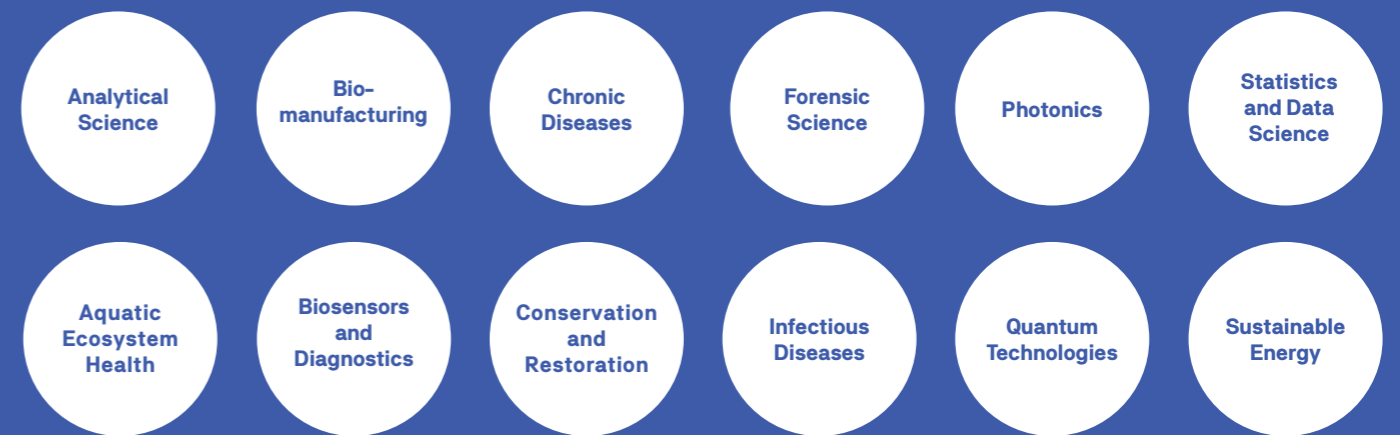
# UTS Science research themes and focus areas



## Cross-cutting research themes



## Research focus areas



## Schools

- School of Mathematical and Physical Sciences (MaPS)
- School of Life Sciences (SoLS)

## Institutes

- Australian Institute for Microbiology and Infection (AIMI)
- Climate Change Cluster (C3)

## Research centres



Research performance is of particular importance to any Faculty of Science. Over the period of this strategy, the UTS Science Faculty will strengthen and leverage its current research strengths and look to build new directions in research through increased cross-disciplinary collaboration and support for the growth of new research areas.

## Research themes and focus areas

**Research themes:** Cross-cutting areas of research that are representative of the breadth of research priorities defined across the Faculty.

**Research focus areas:** Strong and/or growing, focused areas of research will be prioritised for future Faculty and university funding, appointments and infrastructure.

# Strategic priorities, goals and initiatives

## Priority

# Leverage our research strengths to deepen the excellence and impact of our research

## Goals

**Articulate and embody our research priorities and faculty research themes**

**Build critical mass in our fundamental research**

**Increase the translation and commercialisation of our science research**

**Attract, grow and retain talented researchers**

## Initiatives

Identify existing strong and unique areas of research across the Faculty, and actively promote these internally and externally

Build critical mass and distinctiveness in our research through focused priority research areas

Establish cross-cutting research themes for the Faculty to enhance impact and foster collaboration

Implement approaches to achieve future growth for the Faculty's priority research areas

Map and showcase our research achievements against the UN Sustainable Development goals

Recruit and develop exemplary researchers in selected fundamental research areas, as well as the staff required to support their success

Achieve a stronger international focus as part of our growing global research impact

Identify and pursue opportunities to lead COEs/CRCs and grow MRFF funding

Clearly articulate and communicate our success in fundamental research, both internally and externally

Proactively broaden and strengthen our partnerships for translational and commercial research\*

Evaluate existing IP for potential commercialisation, patenting or licencing opportunities

Provide researchers with the support needed to proactively engage in business development and relationship-building, and to identify new opportunities for developing IP, patents and licences\*

Equip broader Faculty staff (professional and technical) with the skills required to engage proactively with external partners and support commercialisation activities\*

*\*see Partnership Priority*

Design career pathways and establish targeted fellowships and scholarships to support and retain high-performing HDRs, ECRs and MCRs

Develop a strong pipeline of future research students through the Faculty's undergraduate and postgraduate programs

Recruit high-quality HDR students from our Global Strategic Partners

Provide peer-mentoring and peer-review opportunities for researchers to support high quality proposals and publications

Enhance collaboration between researchers to encourage cross-disciplinary research and relationship-building through organised networking events, stand-ups, and presentations.

Celebrate, showcase and reward exemplary research



Priority

# Provide an inspiring experience that draws in students from Australia and around the world

## Goals

**Provide excellent on-campus and flexible learning opportunities for our students**

**Facilitate students' success from their first to their final day**

**Build strong connections and a sense of belonging for our students**

**Support our staff to be exemplary educators**

## Initiatives

Offer increased asynchronous and self-directed learning opportunities for students, providing them with the tools and support they need to engage in these forms of learning

Continue to evaluate and consider ways to offer mutually-beneficial forms of flexibility in teaching and learning delivery, including timetabling

Leverage and continue to take advantage of the Faculty's exceptional facilities to support outstanding innovative, active, practical and research-inspired learning opportunities

Engage with students as partners, incorporating the student voice in the design of the student experience

Invest in targeted efforts to improve the first-year student experience, to improve retention, belonging and identity as a science student

Enhance the quality of formative student feedback across all courses

Implement a comprehensive student leadership and mentoring program

Increase staff responsibility for enhancing the student experience, for example, through better communication of the First Year Scientist Toolkit and by appointing a Faculty leader in this space

Set aside space for a dedicated 24-hour student learning commons (or similar) for Science students to collaborate and build community

Increase Faculty engagement with, and promotion of, student clubs and societies

Engage with students to provide access to advice for administration, course and discipline information as well as networking and professional development activities

Instill a lifelong passion for science in every student

Celebrate, reward and showcase exemplary teaching

Introduce mentoring, collaboration and coaching for academic and professional staff to support high quality education delivery

Provide staff with targeted training for the high quality delivery of asynchronous and self-directed learning

Strengthen peer-reviewed and team teaching models

Commit to and facilitate, community science education, including school outreach and community science opportunities

Priority

# Position our graduates for success as confident and capable scientists of the future

## Goals

**Equip our students with the skills and attributes they need to be job ready**

**Establish a portfolio of Faculty programs that are exceptional and distinctive**

**Create distinctive, confident, and responsible graduates who are exemplary scientific thinkers**

## Initiatives

Co-design course content with industry and employers and ensure students are exposed to opportunities in creative and innovative scientific thinking

Incorporate a coordinated set of enterprise skills across Science Faculty courses and embed the Faculty's employability framework

Invest in exceptional WIL and professional placement experience, including SMEs and start ups to provide students with hands-on, practical skills

Enhance the Faculty's contribution to scientific leadership through high quality development and delivery of the Faculty's Lab to Leadership suite

Institute an ongoing process to refine the Faculty's portfolio of programs

Develop scientific programs that provide students with the opportunity to develop their research, inquiry and critical thinking skills

Identify opportunities for filling gaps in the market (for which UTS has expertise and resources) through the introduction of new programs

Identify opportunities to further differentiate existing, successful Faculty programs

Continue to grow and diversify our international student cohort through active engagement in international recruitment

Introduce new forms of learning, and target enterprise learning opportunities that meet student, industry and university needs for life long learning

Embed social justice, inclusivity, sustainability, and Indigenous graduate attributes across the Faculty's degrees to ensure graduates bring critical, ethical, creative and inclusive thinking to their scientific practice

Provide opportunities for students to engage broadly across the university, including UTS Startups and the UTS Sustainability team

Provide students with opportunities to engage in cross-disciplinary collaboration to deepen their learning and build their capacity to generate novel solutions to common challenges

Map and showcase learning against the UN Sustainable Development Goals, with a particular focus on incorporating underrepresented goals in the curricula and enhancing learning against these



Priority

## Foster a diverse, empowered and inclusive science community

### Goals

**Broaden and deepen our approach to equity, diversity and inclusion**

### Initiatives

Broaden the Faculty's definition of Equity, Diversity and Inclusion (EDI) to include disability, neurodivergence, cultural and linguistic diversity (CALD) and carers.

Improve the Faculty's understanding of the diversity of its students and staff by increasing data collection and reporting

Develop an EDI strategy, with specific goals to be actioned by the Science Equity and Diversity Committee (SEaD), and provide adequate support and resources to achieve inclusion outcomes

**Increase the diversity of our staff and students for inclusion and innovation**

Increase diversity across the Faculty, including across levels, schools and disciplines

Amplify opportunities and support career pathways for progressing both academic and professional women to senior roles, with continued support for Academic Women in Science (AWIS)

Improve gender equity in STEMM through SAGE Accreditation projects

Increase Indigenous representation, including through student recruitment and outreach

Coordinate efforts with EDI teams across and outside of the university for maximum impact

**Foster an exceptional staff experience, and support staff to grow and contribute to the Faculty strategy**

Identify and implement distinctive ways to enhance the Faculty's employee value proposition (within the broader UTS employee value proposition)

Support the local implementation of the UTS People Strategy 2023-2027 initiatives

Provide targeted leadership training to support current leaders and develop those with leadership potential, creating a strong pipeline

Ensure career pathways are available to all Faculty staff

Celebrate, reward and showcase the exemplary contributions of all Faculty staff



Priority

## Broaden and strengthen our partnerships as a key element of our unique identity

### Goals

**Increase and diversify external research funding through proactive business development**

### Initiatives

Continue to proactively identify and document existing business development relationships across the Faculty

Deepen the Faculty's pipeline of 'whole of lifecycle' engagement through proactive external engagement

Broaden and deepen industry and business partnerships by increasing proactive participation in industry networking and engagement activities

Create opportunities for co-location with industry

Increase proactive engagement with strategic partners, particularly for philanthropic organisations and individuals, non-university research organisations and international partners

Partner with other faculties for major external funding opportunities

**Expand the breadth and depth of our external engagement for teaching, learning and research impact**

Increase engagement with other UTS faculties for cross-discipline teaching, learning and research

Deepen relationships and establish new partnerships with other universities for teaching and research innovation

Expand existing partnerships to ensure multiple touchpoints across the research and teaching and learning ecosystems

Provide current students with career building opportunities, including networking opportunities and career showcases, by leveraging relationships with alumni

Engage with other faculties, and or universities, to identify research, teaching and learning best practice

## **For more information**

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