



THE UNIVERSITY OF
SYDNEY

Part of the Sydney in
2032
Strategy



Faculty of Science

Strategic Plan 2024-25

Acknowledgement of Country

The University of Sydney's campuses and facilities sit on the ancestral lands of many of Australia's First Peoples, who have for thousands of generations exchanged knowledge for the benefit of all. These include the Gadigal, Gamaraygal, Dharug, Wangal, Tharawal, Deerabbin, Darkinyung, Guringgai, Gamilaraay, Barkindji, Bundjalung, Wiradjuri, Wiljali, Ngunawal, Gureng Gureng and Gagudju Peoples.

Respectfully acknowledging the ancient learning cultures and traditions of Aboriginal and Torres Strait Islander peoples, the University of Sydney declares its commitment to the continuation of this sharing through the agency of our work. There is no part of Australia where we work that has not been loved, nourished and cared for since the beginning of time.



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Leadership foreword

It is a great privilege to be the Dean of the Faculty of Science and to work with a leadership team so committed to the ongoing improvement of our already excellent research and educational offerings. As a team, we are both excited and proud to introduce our first strategic plan under the University's *Sydney in 2032* Strategy.

This document articulates the first set of initiatives we will implement in the Faculty of Science to deliver on the University's 10-year strategy, focused on the four key aspirations we share across the institution: our student-focused education is transformational; our research is excellent, tackles the greatest challenges and contributes to the common good; our community thrives through diversity; and becoming a better place to work and a place that works better. This document is a starting point for a decade-long journey, and we will further invest in our staff and students as we progress.



Commencing in 2024, we will also refresh the Science First Nations Strategy, taking into consideration the University's priorities. Actions under the Science strategy will span across embedding unique First Nations knowledge and partnerships in our education and research and creating an environment where more Aboriginal and Torres Strait Islander students, researchers and colleagues thrive.

Now, more than ever, science has a role to play in tackling the great challenges facing our society, and indeed the planet. To realise the aspirations in *Sydney in 2032*, we will collaborate with our partners and community, train and nurture our staff, and enable our students with the best of science knowledge and practice. We will be known for our dedication to foundational science and for tackling the challenges of improving health and wellbeing; enabling resilience and sustainability in a complex environment; and innovating for tomorrow's industries.

We will be nation-leading and recognised globally. Though this statement is bold, it is achievable because of the calibre of our people. When asked to identify

the greatest strength of the Faculty of Science, my answer, unequivocally, is our staff and students. From Camperdown to Narrabri, from One Tree Island to Camden, we are a team driven by curiosity and a desire to learn. Together, we will deliver on this strategic plan, and ensure that we are at the forefront of science teaching, research and innovation nationally and globally.

This document has been many months in the making and I would like to acknowledge those who have contributed – across workshops, meetings and our faculty town halls – as well as the support from our colleagues in the Strategic Planning Office. Your contribution has been greatly appreciated.

The strength of our faculty is our people.



Marcel Dinger
Dean of Science



Sydney in
2032
Strategy

OUR ASPIRATIONS

Building on the First Nations knowledge of these lands,
we are Australia's first university, Sydney's university
and a great global university

Our student-focused
education is
transformational

Science 2024–25 initiatives

- Supporting student success
- Developing our staff to enhance teaching and learning outcomes



Our community
thrives through
diversity

Science 2024–25 initiatives

- Implementing our Equity, Diversity and Inclusion Strategy



Our research is excellent,
tackles the greatest
challenges and contributes
to the common good

Science 2024–25 initiatives

- Driving impact through faculty-wide research missions
- Broadening career options for higher degree by research students



A better place to work, and a place that works better

Science 2024–25 initiatives

- Recruiting and retaining the best academic talent
 - Investing in infrastructure for excellence
 - Evolving the Science approach to partnering

Our aspirations for 2032: *The role of the Faculty of Science*

In 2032, we are the first Australian science faculty to come to mind for prospective staff and students, partners and funders. Our reputation as a leader in foundational, translational and breakthrough research and outreach has amplified our impact and influence.

Science in 2032 is a faculty driven by curiosity, a desire to learn, and an openness to experimentation. We demonstrate the value and importance of science to society, achieving academic excellence across both education and research.

We are known as the place with the best scientists and the best science in Australia, and are recognised globally for our significant scientific, industrial and societal impact through foundational, translational and transformational research. We pursue three distinctive future-facing research missions: improving health and wellbeing; enabling resilience and sustainability in a complex environment; and innovating for tomorrow's industries.

We are a gateway to global collaboration, with an extensive and diverse network of partners that empowers us to address these and other pressing challenges facing our world. We are trusted as the leading science faculty in Australia for partnering with industry, research translation and commercialisation, complementing our recognition in more traditional measures of academic excellence. We work with First Nations communities to embed their knowledge, skills and concepts into our teaching and research. Our commitment to seamless collaboration ensures that working with us is a smooth and efficient process, enabled by a visible front door for our partners.

The faculty is a rewarding place to work and study, where we train and nurture our people at all levels. We are home to global research leaders who are valued for being collaborative, approachable, and excellent at contributing to multidisciplinary work. We train our research students to become intellectually confident by developing a level of comfort with the unknown and a willingness to work into

uncertain outcomes. Each faculty member takes pride in the work produced by teams of colleagues within the faculty, valuing a shared sense of diversity, community and purpose. Our education-focused staff's work underpins our transformational educational experience, and our technical support and professional staff are valued as integral to our success.

We foster an inclusive culture where diversity in all its forms is respected, valued, and enabled by a commitment to flexibility. All our students and staff feel welcome, safe and respected, encouraged by engaged leaders and an ecosystem of mentoring. We research and teach in a cohesive way, using a multidisciplinary approach where it makes sense. Cutting-edge facilities across our campuses enable our people to do their best work, capitalising on unique opportunities for field research and specialised learning environments.

When they graduate, Science students are equipped for a variety of careers and primed to play a decisive role in tackling scientific challenges within the context of society. Their proficiency in the foundations of science empowers them to think critically, ask the right questions, and solve problems using scientific reason. Building on the University's rich scientific tradition, they become sought-after voices who communicate deep insight about science and its role in addressing societal challenges.

Our graduates build enduring connections that enrich their future lives, and remain engaged with us through their careers. We benefit from the many ways our vibrant and expert alumni community provides learning and career opportunities for our students and graduates.



One Tree Island Research Station.



Our student-focused education is *transformational*

By 2032, Science will be a more supportive and nurturing learning environment where excellent teaching allows our diverse student cohort to become adept in scientific reasoning and to acquire personal and professional attributes to tackle the most significant challenges that the world is facing.

Science will continue to evolve its curriculum and elevate its teaching excellence through ongoing faculty-based initiatives, and through contribution to the development and implementation of critical University-wide priorities under *Sydney in 2032*. These include the Teaching and Learning Strategy (and the related Strategic Education Grants), the Sydney Curriculum Program, and the Academic Excellence Program. We will also continue our work on the Extended Bachelor Program, and deliver on the Work Integrated Learning strategy.

In 2024–25, we will also improve and invigorate the learning experience of Science students by altering our approaches to advising students and to in-classroom practice, and by further developing our staff through mentorship and investment in professional development.

Science 2024–25 initiatives

Supporting student success

We will provide additional support to ensure student success. This will include improving communication of the Science curriculum and possible pathways so that students are aware of the different opportunities available to them, both while at the University and after they graduate.

We will modernise our in-classroom experience by transforming learning designs, updating our approach to assessment to ensure integrity in the age of generative AI, and ensuring alignment with disciplinary, workplace and student needs to support successful learning. We will deliver early formative assessment and feedback to students to enable success.

We will increase the diversity of our cohort by removing the mathematics pre-requisite and providing additional resources and support to ensure all students can succeed from their starting knowledge and skills. We will increase efforts to indigenise the curriculum and improve the Extended Bachelor Program which enables university study for new cohorts of Indigenous students.

Developing our staff to enhance teaching and learning outcomes

To improve the student experience at the frontline we will demonstrate and celebrate teaching excellence at all levels of the faculty, and further invest in the development of academic and professional staff who are essential to a transformational education experience. How we define, support and reward teaching excellence will be strongly aligned to the standards and practices collaboratively developed through the Academic Excellence Program.

We will create roles responsible for raising engagement with professional development opportunities for our academics (such as the Peer Review for Teaching program) and for expanding career development support for professional staff.

A particular focus will be enabling the development of our tutors and demonstrators with whom our students engage most. We will establish a formal community of practice and a mentoring program to better support these critical staff as part of broader work to foster a culture of continuous improvement in our teaching.

Finally, we will drive collaboration between teaching staff, educational designers and education support officers to enhance the student learning experience.



International Science School program.

Our community thrives *through diversity*

By 2032, Science will have established a more supportive environment to ensure all members of our diverse student and staff cohorts feel welcome and respected. Fostering a sense of community and belonging is critical to our success.

We will contribute to – and benefit from – the University’s diversity initiatives, including the further rollout of the MySydney scholarship scheme and the development of the University’s Equity, Diversity and Inclusion framework. To complement this institution-wide work, we have identified local actions to dovetail with these broader programs.

Science 2024–25 initiative

Implementing our Equity, Diversity and Inclusion Strategy

We will continue to implement the faculty’s Equity, Diversity and Inclusion Strategy, which focuses on five areas: enablers, staff and student recruitment, representation, career progression, and communication and engagement.

We will continue to build our data and understanding of diversity self-report surveys that assess demographic information, feelings of inclusion, perceived barriers to success, and potential areas for improvement. By gathering and engaging with this information at both faculty and school level we will enrich our understanding of our diverse student and staff cohorts, and be better equipped to make stronger, more informed decisions.

We will also build a more supportive and inclusive environment for our students and staff by widening our efforts to promote our ‘inclusion in action’ and cultural competence training at all levels of the faculty. We will place particular emphasis on ensuring that promotion committees, selection committees and talent search teams complete this training.

To facilitate more inclusive decision making, we will audit and monitor on an ongoing basis the membership of Faculty of Science committees to assess equity and proportional representation.

We will establish targets for diverse student and staff representation in each of the faculty’s schools, informed by our improved data collection. To achieve those targets, we will enhance and increase our various diversity initiatives and programs, including undergraduate scholarships, stipends for higher degree by research (HDR) students, proactive talent searches and strategic hiring.

Working within the University’s overall framework, we will review our approaches to recruitment to identify opportunities to be more equitable in our new appointments, such as by taking a more inclusive approach to enable better support for part-time roles or by being more flexible on qualifications.

Finally, we will take a more strategic approach to developing diverse talent and improving career progression outcomes by enhancing professional development and support structures such as mentoring for diverse staff, building on the success of the Strategic Promotion Advice and Mentoring (SPAM) program.



Students at Camperdown/Darlington Campus.

Our research is excellent, tackles the greatest challenges and *contributes to the common good*

Under the *Sydney in 2032* strategy, we will create scale, focus and significant scientific, industrial and societal impact by assembling teams that are equipped to understand and lead responses to the greatest challenges of our time.

The Faculty of Science will be known as the place where the best scientists carry out the best foundational, translational and transformational scientific research in Australia.

Under *Sydney in 2032*, we will work to ensure our researchers are recognised for their academic excellence, outstanding partnerships, commercialisation successes and societal impacts. We will also be known for training the science leaders of the future, ensuring that our higher degree by research (HDR) graduates are equipped to excel across diverse career pathways, bringing a scientific perspective to the decisions that affect us all.

To achieve this aspiration of research excellence, we have identified two key priorities for the next two years.

Science 2024–25 initiatives

Driving impact through faculty-wide research missions

We will reinforce the impact of our deep expertise by establishing broad research missions to complement our unique strength in foundational research. The first three missions will focus on improving health and wellbeing, enabling a sustainable and resilient society, and innovating for tomorrow's industries.

Establishing and raising awareness of these missions will provide an enhanced view of our collective research expertise, increasing engagement with external partners and funding agencies.

Internally, our missions-based approach will drive research collaboration between different colleagues, within the faculty and across the University to pursue impactful, multidisciplinary research endeavours in support of our overall research aspiration.

Broadening career options for higher degree by research students

Although there are many vital, dynamic and valuable research careers open to our higher degree by research (HDR) graduates, both within and outside academia, we have an opportunity to improve the uptake of these diverse opportunities. We will drive a cultural shift to encourage and support broad career decisions and pathways and increase opportunities for HDR students to augment their skill sets.

We will actively encourage HDR students to undertake internships – benefiting them, their academic adviser, the University, and our internship partners. Internships will broaden the questions, scope and impact of those aiming for traditional academic careers, and attract a more diverse cohort of applicants for HDR degrees.

In addition to more internship opportunities, we will increase the exposure of our research students to a broader range of industry, government and societal challenges through training, supervisory advice, and facilitating engagement with industry and government partners. Leaders with deep scientific skills will be beneficial to both the scientific community and society at large.



Releasing a koala at a Gunnedah farm.

A better place to work, *a place that works better*

Our greatest strength is our people – our staff and students. Our focus under this aspiration will be to support them through effective recruitment and retention, through cutting-edge infrastructure, and through improving how we partner.

We will continue to attract and nurture the best people to enable the very best research and education on our diverse campuses. Equally, we will target investment to ensure our physical facilities allow us to do our best work.

Science will also contribute to the University's aspiration of nurturing strong, enduring external partnerships across our community by taking a more strategic approach to our partnering within the University, with government, industry and community, and with other academic institutions.

Science 2024–25 initiatives

Recruiting and retaining the best academic talent

Science will actively pursue a more strategic approach to academic recruitment and retention. We will review and refine our communications to prospective employees, ensuring that they align with the strategic aspirations of the University, while also evolving our approach to professional development and mentoring in the context of the University's Academic Excellence Program to better nurture our people through their career at Sydney. Coupled with this, we will continue to enhance our strategic hiring programs, such as the Horizon Fellowships.

Investing in infrastructure for excellence

Our physical facilities are key to allowing Science staff and students to excel and to attracting and retaining the best talent in the scientific community. We will define a fit-for-purpose and future-facing Science physical facility plan, taking into consideration our diverse school priorities for new investment and making the most of our current spaces and the opportunities they offer. We will prioritise actively prosecuting the case for evolving our facilities to meet student and staff needs within the University community.

Evolving the Science approach to partnering

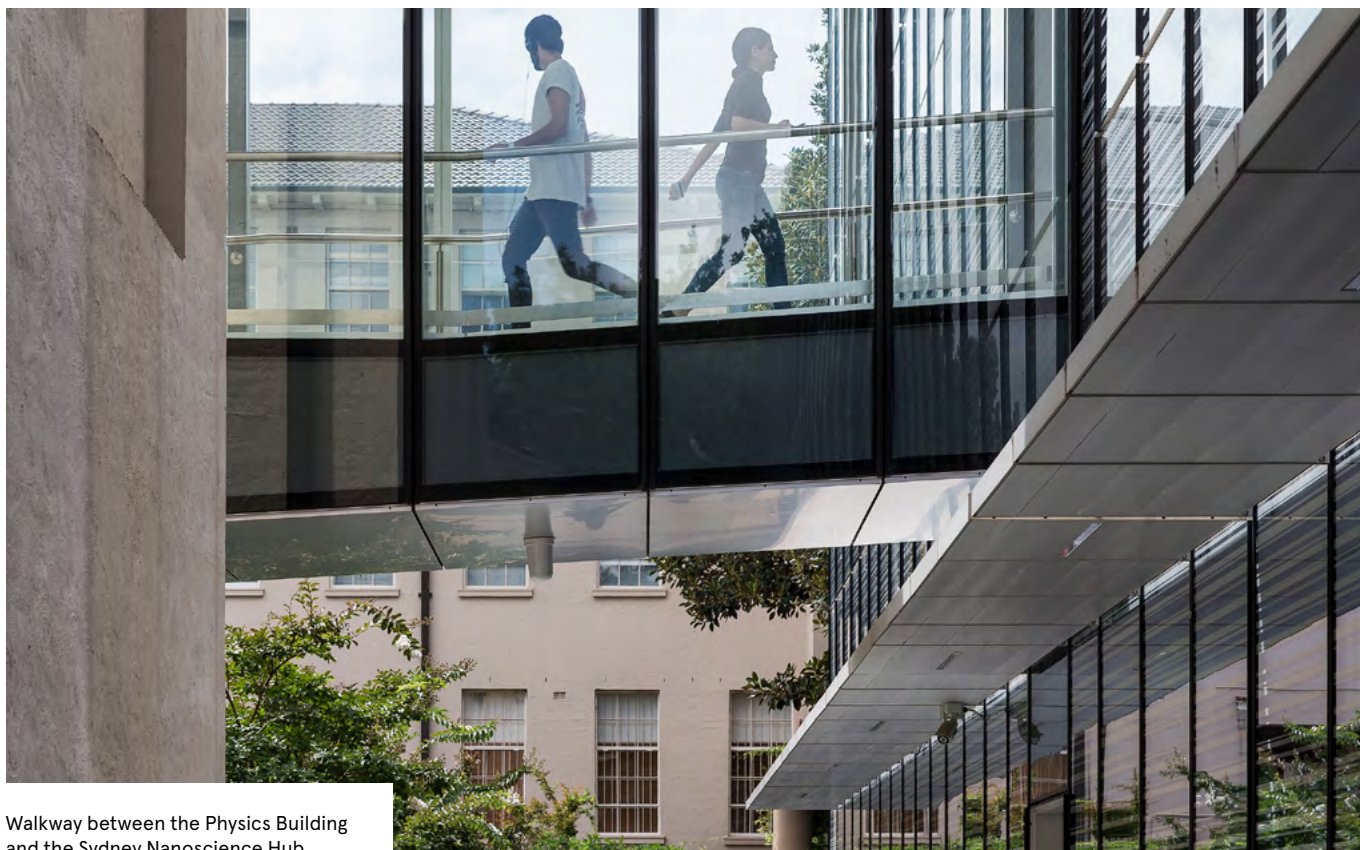
We will extend our strong tradition of forming partnerships that allow us to meaningfully increase the external funding and impact of our research and enrich the learning experience of our students.

Key to achieving more strategic partnerships will be promoting and valuing partnering activities in the University's Academic Excellence Program, and internally communicating and celebrating the success stories and benefits for our faculty members. In tandem, strengthening our engagement with existing and potential external partners will increase the visibility of what makes Science at Sydney special.

A key first step will be to develop a holistic understanding of how we in Science partner in practice. We will then develop and deliver a program of continuous improvement to enable us to establish and nurture external partnerships more effectively.



IA Watson Grains Research Centre and Narrabri farms.



Walkway between the Physics Building and the Sydney Nanoscience Hub.

How this strategic plan was developed

We developed the Faculty of Science Strategic Plan 2024–25 through a highly collaborative and consultative process throughout 2023.

As we progressed, with support from the Strategic Planning Office, colleagues across the faculty had opportunities to provide feedback and contribute ideas that directly informed the plan, as summarised below.

Senior leader workshops

The faculty's senior leaders – including the Dean and associate deans, heads of schools and senior professional staff – came together for a series of workshops in 2023 to develop this strategic plan. The leaders reflected on the current state of the Faculty of Science and generated a preliminary vision for the faculty in 2032. After seeking broader feedback on this vision, the group also identified potential barriers to achieving the vision and developed initiatives for 2024–25 to provide the foundation for achieving this aspirational vision.

Broad faculty engagement

Faculty staff were invited to reflect on the emerging priorities generated through the senior leaders' workshops. An online survey received more than 200 responses and informed the refinement of priority initiatives.

Staff were also kept informed via a town hall meeting.

Targeted consultation

Other faculty stakeholders were also engaged at different points throughout the process through one-on-one interviews including heads of school and associate deans that focused on understanding specific school- and function-based opportunities and challenges.

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