

Faculty of Engineering & Information Technology

HEAD OF DEPARTMENT -CHEMICAL ENGINEERING

FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY

MESSAGE FROM MARK CASSIDY, DEAN, FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGY



For over 150 years, our Faculty has been the leading provider of engineering and information technology education and research in Australia. We are built around three key pillars: world-class research, exceptional teaching and learning and a focus on wider engagement both with industry and the community. Our global reputation ensures we attract top academic staff and students who share our commitment to knowledge for the betterment of society.

In 2015 we commenced FEIT 2025, our bold 10-year vision to transform engineering and information technology at the University of Melbourne. Worldclass thought leadership, the continued high quality of our graduates and the impact of our research to help address global problems are key areas of focus for FEIT 2025. This vision will be realised through significant investment in new infrastructure, strengthening industry engagement and growing the size and diversity of our staff and student base to drive innovation and develop the transformative technologies of the future. FEIT 2025 will see unprecedented opportunity for collaboration and knowledge bringing together some of the world's brightest minds.

In 2021 our innovation precinct, Melbourne Connect opened its doors. The precinct is next to the University's main Parkville campus and will become Australia's leading innovation hub for data science and information technologies, hosting researchers, businesses, government bodies and community members. Set to open in 2027, our new campus at Fishermans Bend will facilitate collaboration with leading local and international organisations across the transport, energy, manufacturing, water, food, mining, defence and infrastructure sectors.

Diversity and inclusion in engineering and information technology is central to us achieving this vision. We are committed to creating an environment that values, supports and respects the unique views, knowledge and individual experience of our staff and students. Our best work is done in collaboration, immersed in a supportive environment and a culture where new ideas and diverse perspectives thrive. We commit to ensuring our staff are clear about expectations, feel supported and encouraged to contribute their ideas and know where to turn if they require support.

There has never been a more exciting time to join us. Help us achieve our bold vision.

"We are committed to creating an environment that values, supports and respects the unique views, knowledge and individual experience of our staff and students."

FACULTY OF ENGINEERING & INFORMATION TECHNOLOGY

The Faculty of Engineering & Information Technology (FEIT) works with industry, government and entrepreneurs to solve realworld challenges. Our graduates and researchers lead the way in engineering and information technology to build a more sustainable future.

For over 150 years, our Faculty has been a leading provider of engineering and IT education and research in Australia.

We are built around three key pillars: world-class research, exceptional teaching and learning and a focus on wider engagement both with industry and the community.

Our global reputation ensures we attract top academics and students who share our commitment to knowledge for the benefit of society.

CHEMICAL AND BIOMEDICAL ENGINEERING:

The School of Chemical and Biomedical Engineering integrates the expertise and capabilities of both Chemical and Biomedical Engineering. The resulting mix of skills creates new horizons for engineering and enables the realisation of transformative new ideas into practical innovations.

Our research in biomedical engineering covers a breadth of areas in biomaterials and tissue engineering; biomechanics and mechanobiology; bionics, biomedical imaging and neuroengineering; systems and synthetic biology. We have strong national and international linkages with industry, hospitals, research institutes, and universities. By partnering with the Melbourne School of Medicine, we have roles embedded in the new Aikenhead Centre for Medical Discoveries (ACMD). We enthusiastically join forces to drive new medical discoveries.

Our vision is to nurture future leaders and foster world leading, industry focussed research in chemical and biomedical engineering.

Our strong collaborations with industry, government and community partners inform our teaching and research programs with real-world requirements. Industry engagement is a key focus area for the School.

CBE has doubled its research income over the last five years and has been awarded grants and contracts in the amount of \$89.0m in the past 3.5 years.

As at May 2022, CBE have a total of 136 academic and professional staff (headcount). In Chemical Engineering (CE), a total of 89 and in Biomedical Engineering (BME), a total of 47. There are currently 202 Graduate Researchers based in the School.

Our main teaching offerings include the Master of Chemical Engineering and Master of Biomedical Engineering, as well as undergraduate majors within the Bachelor of Science.

We are currently in the recovery phase post covid with our student numbers steadily increasing to about 600 EFTSL this year.



DEPARTMENT OF CHEMICAL ENGINEERING

At the Department of Chemical Engineering we are working to solve the most pressing issues of the modern world. Our research and education embrace local and global sustainability goals to achieve positive change for healthy people, healthy environments, and healthy economies. We are working on important projects such as clean energy biofuels, targeted drug delivery for cancer treatment and new methods of air pollution control to address the UN Sustainable Development Goals.

Our laboratories are housed across four locations including a substantially renovated main building, a second building devoted exclusively to research, two floors within the nearby Chemistry building and a presence within the Bio21 Institute. Our academics have been elected as Fellows of the Royal Society, the world's oldest scientific society, the Australian Academy of Science, and the Australian Academy of Technological Sciences and Engineering.

Strong collaborations with industry, government and community partners inform teaching and research programs with real-world requirements. Industry Engagement is a key focus area for the Department. We carry out research projects based on deep collaborations with government and business and we also work with organisations that provide internship project opportunities for students. We offer three Masters of Chemical Engineering specialisations (Business, Sustainability and Environment, and Materials and Minerals) with over 300 students, as well as undergraduate majors within the Bachelor of Science and Bachelor of Commerce.

chemical.eng.unimelb.edu.au



OUR PURPOSE, VISION AND FEIT 2025 STRATEGY

PURPOSE

Our purpose is to benefit society through the creation and application of knowledge in engineering, digital and data with our students and the global community we serve.

MODERN ENGINEERING, GLOBAL IMPACT

Our vision and strategy

A bigger, better and bolder FEIT – preparing outstanding graduates and achieving global impact through our teaching and research, together with our partners.

Our vision implies:

» We are Australia's number one engineering and IT faculty and will strive to be considered among the greatest in the world.

- » We will be the cornerstone of a multiprecinct, thriving Melbourne-based engineering and IT community characterised as scholarly, entrepreneurial and driven by discovery and innovation.
- » We will be a faculty of choice for students and employers locally and internationally, attracting diverse and exceptional global talent and developing outstanding graduates who are prepared to shape society and progress as industry leaders.
- » We will be recognised globally for our leadership in innovative solutions that resolve some of society's biggest challenges, and a trusted voice that can influence policy and corporate vision.

Achieving our vision will require an uncompromising pursuit of excellence in our teaching and research, underpinned by deep and genuine collaboration with our partners and community.





UNIVERSITY OF MELBOURNE WILL STRENGTHEN ITS POSITION AS AUSTRALIA'S NUMBER ONE UNIVERSITY



WE WILL TEACH OVER 7,000 STUDENTS



ONE OF THE TOP 20 ENGINEERING AND IT FACULTY IN THE WORLD



EVERY STUDENT HAS MULTIPLE OPPORTUNITIES FOR EXPERIENTIAL AND WORK-INTEGRATED LEARNING



TOP 2 IN G08 FOR STUDENT EXPERIENCE

OVER 500 FTE ACADEMIC

STAFF



INCREASED STUDENT DIVERSITY, ENHANCING OUR LEADERSHIP AROUND FEMALE PARTICIPATION IN OUR PROGRAMS

AIKENHEAD CENTRE FOR MEDICAL DISCOVERIES (ACMD)

Accelerating collaboration in biomedical research to solve today's health challenges.

ACMD is a bold initiative to create the first hospital-based, world-class healthtech innovation Centre in Australia.

At ACMD we are accelerating the development of previously unimaginable discoveries through biomedical engineering in devices, bionics, implantables and regenerative medicine.

ACMD is a collaborative research partnership of leading universities, research institutes, tertiary hospital and major industry partners. Clinicians embedded within our multi-disciplinary teams, inform our work on today's toughest healthcare challenges including chronic diseases. ACMD partners are University of Melbourne, Australian Catholic University, RMIT University, Swinburne University of Technology, University of Wollongong, St Vincent's Institute, Bionics Institute, O'Brien Institute, Centre for Eye Research Australia and industry partner, Stryker.

ACMD will be housed in a high-profile purpose-designed Centre on the campus of St. Vincent's Hospital Melbourne. This Centre will become a world leading, fully integrated medical, engineering, scientific and commercial research hub that accelerates tangible outcomes for today's health challenges for everyone.

The new ACMD facility is expected to be completed by mid-2024. When it will house a diverse team of 500 experts, including clinicians, scientists, engineers and mathematicians.

WORLD FIRST. PEOPLE FIRST.

"The most difficult health and medical problems crumble when you bring together the greatest minds and set them a challenge."

Dr Erol Harvey, CEO ACMD



GRAEME CLARK INSTITUTE FOR BIOMEDICAL ENGINEERING (GCI)

Established in 2017 and named in honor of the Australian pioneering creator of the Multi-channel Cochlear Implant - Professor Graeme Clark, our goal is to shape the future of healthcare with biomedical engineering solutions that deliver health, societal and economic benefits to Australia and the world.

We promote and coordinate the extensive bioengineering activities that exist across The University of Melbourne, drawing on emerging scientific and engineering approaches to drive transformative clinical solutions. We are located in the Melbourne Biomedical Precinct which has established itself as a major global research and teaching powerhouse, with over 25 collaborators from health services, research and academic partners, and shortly where the ACMD will also open.

Co-location in the center of the Melbourne Biomedical Precinct offers unparalleled access to the clinical and research opportunities available across the entire network of partners.

The strength of these partners, the relationships and existing collaborations, together with the proximity of the facilities provides unique opportunities to develop transformative health technologies. "By creating a community of engineers, scientists and clinicians in the healthcare system, relevant clinical problems will be identified and strategies for new approaches will be enabled and developed in partnership with industry."

Professor David Nisbet Director, Graeme Clark Institute



MELBOURNE CONNECT

Melbourne Connect, is one of the foremost innovation precincts in the world. Through the co-location of talented researchers, scientists, academics and students with private enterprise and government partners, Melbourne Connect seeks to unlock the value and global reach of the University's research and people. The pivotal work to be undertaken in Melbourne Connect will address major societal challenges by identifying solutions that are data driven, digitally enabled and socially responsible. This innovation precinct is where a large proportion of FEIT are located, together with a number of industry partners. The Precinct is also home to Creator Space, Science Gallery Melbourne, new retail tenancies, childcare, student accommodation for post-graduates and visiting academics and new public open spaces.

Melbourne Connect is a major initiative that aligns with the University's strategic intent of greater enterprise engagement for enhanced research translation and impact. Current activity is focused on a number of parallel and inter-dependent workstreams: ongoing engagement with government and industry partners to build research and innovation partnerships and secure tenancies; and delivery of an 'activation' program of curated events, activities and exhibitions to enhance interactions between the University academic staff, Melbourne Connect precinct tenants, and the wider community.



POSITION SUMMARY AND SELECTION CRITERIA

Classification	Associate Professor Level D Professor Level E
Salary	\$162,590 - \$209, 428 p.a. (pro rata for part-time) plus applicable loading
Superannuation	17%
Working hours	Full time / part time (1 FTE)
Basis of Employment	Fixed term 3-year appointment. The appointee will retain an underlying continuing substantive position as a Level D or Level E in the Department.

POSITION SUMMARY

The Head of Department is a key academic leader in the School of Chemical and Biomedical Engineering (CBE) who is responsible for leading and managing all operational and strategic plans across the Chemical Engineering Department.

This position will align the Department goals with the strategic plans of both the School and the Faculty of Engineering and Information Technology (FEIT) 2025.

Providing leadership as a supervisor, mentor, and coach the Head of Department will develop the capability and knowledge across the academic team supporting them to delivery excellence in Teaching and Research.

Within the broader context of the University's Strategy as expressed in Advancing Melbourne 2030, the Head of Department works closely together with colleagues to ensure that the strategic objectives are met whilst strengthening the discipline and improving the experience of the associated staff and students.

The Head of Department is instrumental in forming relevant academic partnerships with other disciplines across the School and the wider University community, industry and government to strengthen:

- a. The teaching and learning outcomes in all classes taught by academic staff in the Department, and as required across FEIT.
- b. The research outcomes of the Department, with the aim of achieving a balanced portfolio of Cat 1 and Cat 2-Cat 4 research income to underpin world class research activities at a national and global scale.
- c. The Departmental collegiate atmosphere, including diversity, inclusion, and wellbeing.

The Head of Department for Chemical Engineering will engage with both internal and external stakeholders, including industry partners, government agencies, the FEIT professional and academic leadership and other Faculties such as the Faculties of Science (FS), Medicine, Dentistry and Health Sciences (MDHS) and Veterinary and Agricultural Sciences (FVAS) to develop long term relationships that can contribute to the future of the Department.

1. SELECTION CRITERIA

1.1 ESSENTIAL

- 1.1.1 PhD in Engineering or a relevant discipline aligned with the disciplines of the Department.
- 1.1.2 Demonstrated leadership capability with experience managing resources to achieve clear objectives whilst engaging and aligning team(s) around the operational and strategic plans.
- 1.1.3 Demonstrated experience in managing and providing guidance and dependable judgement in all matters academic across a complex organisation such as a large Department, covering all aspects of teaching and research, as well as staff supervision.
- 1.1.4 Proven excellence, and world class reputation, in teaching and research, as per the expectation of an Associate Professorial or Professorial appointment in the School.
- 1.1.5 Superior interpersonal communication skills with the ability to foster, maintain and influence collaborations and partnerships with a wide variety of internal and external stakeholders.
- 1.1.6 Demonstrated capacity to build and to lead effective teams including interdisciplinary collaborations.
- 1.1.7 Demonstrated management of curriculum design and inclusion of discipline related digitisation.
- 1.1.8 Acquainted with OHS regulations as they apply to the Chemical Engineering discipline.

1.2 SPECIAL REQUIREMENTS OF THE ROLE

1.2.1 This position requires the incumbent to hold a current and valid Working with Children Check.

OUR STRATEGIC PLAN

ADVANCING MELBOURNE 2020 - 2030

The University's strategic direction is grounded in its purpose. While its expression may change, our purpose is enduring: to benefit society through the transformative impact of education and research. Together, the vision and purpose inform the focus and scale of our aspirations for the coming decade.

Advancing Melbourne reflects the University's commitment to its people, its place, and its partners. Our aspiration for 2030 is to be known as a world-leading and globally connected Australian university, with our students at the heart of everything we do.

We will offer students a distinctive and outstanding education and experience, preparing them for success as leaders, change agents and global citizens.

We will be recognised locally and globally for our leadership on matters of national and global importance, through outstanding research and scholarship and a commitment to collaboration. We will be empowered by our sense of place and connections with communities. We will take opportunities to advance both the University and the City of Melbourne in close collaboration and synergy.

We will deliver this through building a brilliant, diverse and vibrant University community, with strong connections to those we serve.

The means for achieving these goals include the development of the University of Melbourne's academic and professional staff and the capabilities needed to support a modern, world-class university. Those means require a commitment to ongoing financial sustainability and an ambitious infrastructure program which will reshape the campus and our contribution to the communities we engage with. This strategy, and the priorities proposed, is centred around five intersecting themes; place, community, education, discovery and global.

More information about Advancing Melbourne can be found at about.unimelb.edu.au/strategy/advancing-melbourne.



2. KEY RESPONSIBILITIES

2.1 LEADERSHIP AND SERVICE

- 2.1.1 Provide leadership and management to the Department of Chemical Engineering to deliver on their operational activities and strategic initiatives.
- 2.1.2 Drive Departmental performance through developing performance targets and indicators in collaboration with the Head of school, the department, and professional teams that align to the outcomes the School and FEIT 2025 strategic plans.
- 2.1.3 Lead the staff within the department, provide mentoring and coaching to build capability and knowledge. Hold regular performance discussions, complete formal performance review processes, and assist them with career planning, promotion and identifying development needs and opportunities.
- 2.1.4 Foster a positive culture within the Department of Chemical Engineering that values and celebrates excellence in both teaching and research, promotes creativity and rewards and recognises individual and group achievement.
- 2.1.5 Manage the allocated budget of the Department and planning for equipment, other infrastructure expenditure and monitoring of expenditure against allocations.
- 2.1.6 Participate actively on Department/Faculty/University committees.
- 2.1.7 Work actively with the Department's industry advisory group and with external industry bodies.

2.2 TEACHING AND LEARNING

- 2.2.1 Provide strategic leadership in improving the quality and innovation of education and training in Chemical Engineering.
- 2.2.2 Plan and manage the Department's teaching and learning including allocation of workload.
- 2.2.3 Support the preparation of teaching and learning support grants to develop new teaching or improve existing teaching and learning outcomes.
- 2.2.4 Enhance and develop teaching programs and methods to provide rational and cohesive courses for undergraduate and postgraduate students at the highest international level.
- 2.2.5 In your teaching discipline, coordinate and teach subjects and courses, in line with Faculty of Engineering and Information Technology workload models and Subject Evaluation Survey expectations.
- 2.2.6 Ensure support and training is provided to postgraduate students undertaking research projects within the department.

2.3 RESEARCH AND RESEARCH TRAINING

- 2.3.1 Foster excellence in research and teaching and develop best practice standards for the Department.
- 2.3.2 Set the direction and lead, original, innovative, and distinguished research programs that have demonstrable impact that is of benefit to society.
- 2.3.3 Develop collaborative, cross-disciplinary research initiatives with national and international partnerships within and beyond the University.
- 2.3.4 Obtain significant research funding from sources outside the University.
- 2.3.5 Publish in top-tiered refereed journals, books or monographs, reports and refereed conference proceedings.
- 2.3.6 Supervise postgraduate students undertaking research projects or degrees.

2.4 ENGAGEMENT

- 2.4.1 Lead and develop a strong engagement culture across all activities in the department.
- 2.4.2 Identify and develop strategic engagement opportunities with industry, community organisations and government partners with the aim of further enhancing academic activities, staff and student experience.
- 2.4.3 Participate in School and FEIT events as appropriate.
- 2.4.4 Provide guidance and support to undergraduate and postgraduate associations within the Department.
- 2.5.4 Ensure that Departmental activities are well communicated to all stakeholders in line with the overall branding of the School and the University.

OUR CITY

GEOGRAPHY

Melbourne is the capital city of Victoria - and is the second largest city in Australia with a population of more than 5 million people and a metropolitan area of 9990.5 km2. The Economist Intelligence Unit has rated Melbourne one of the world's most liveable cities for six consecutive years, based on its education, entertainment, health care, research and development, tourism and sport.

The City of Melbourne municipality, in which the University's main Parkville campus is based, covers 37.7 km2 and has a population of more than 143 000 people. It includes the city centre and a number of attractive inner suburbs with thriving communities and businesses.

The City of Melbourne is home to residents from 180 countries who speak more than 233 languages and dialects and follow 116 religious faiths. The Wurundjeri, Boonwurrung, Taungurong, Dja Dja Wurrung and the Wathaurung people of the Kulin Nation are the Traditional Owners of the land now known by its European name of Melbourne.

The City of Melbourne is recognised as Australia's cultural capital with a number of world-class galleries and museums, internationally renowned food and wine regions, and an impressive year-round calendar of events catering for all tastes.

PARKVILLE CAMPUS

The Parkville campus provides easy access to cafes, shops and services; libraries with extensive collections; as well as cultural and sporting facilities. Nearby Lygon Street is home to a huge variety of cafes and shops while the northern end of the University is adjacent to the popular Princes Park, hosting a range of outdoor activities.

Parkville is recognised as the hub of Australia's premier knowledge precinct, comprising eight hospitals as well as numerous leading research institutes and knowledge-based industries. Although a sizeable portion of the Faculty of Medicine, Dentistry and Health Sciences is located in Parkville, the Faculty also has academic departments co-located at a range of health services throughout the Melbourne metropolitan area and rural and regional Victoria. These include St Vincent's Hospital, The Royal Victorian Eye and Ear Hospital, Austin Hospital, Western Health, Northern Health as well as the Department of Rural Health based at Shepparton in the Goulburn Valley with health services affiliations to almost 40 smaller towns in rural Victoria.



FURTHER INFORMATION AND WEBSITE ADDRESSES

General information about the University of Melbourne and this opportunity is available through the following websites:

About the University of Melbourne

about.unimelb.edu.au

The University of Melbourne's Strategic Plan

about.unimelb.edu.au/strategy/advancing-melbourne

2019 Annual Report

about.unimelb.edu.au/strategy/annual-reports

Melbourne School of Engineering eng.unimelb.edu.au

Faculty of Medicine, Dentistry and Health Sciences mdhs.unimelb.edu.au

Biomedical Engineering Department biomedical.eng.unimelb.edu.au

Melbourne School of Medicine medicine.unimelb.edu.au

Akinhead Centre for Medical Development acmd.org.au

Graeme Clarke Institute clarkinstitute.unimelb.edu.au

The Melbourne Biomedical Precinct: www.melbournebiomed.com

Apply

For other career opportunities at the University of Melbourne, and to apply, please visit: about.unimelb.edu.au/careers

For queries, please email snr-talentacq@unimelb.edu.au

Please do not send your application to this email address

