101 things you might not know about UniSA
AUSTRALIA’S UNIVERSITY OF ENTERPRISE

Acknowledgement of Country

UniSA respects the Kaurna, Boandik and Barngarla peoples’ spiritual relationship with their country. We also acknowledge the diversity of Aboriginal peoples, past and present.

Find out more about the University’s commitment to reconciliation at unisa.edu.au/RAP
The Adelaide Planetarium, based at the University’s Mawson Lakes campus, has been operating for more than 40 years. The Planetarium operates a Zeiss Jena ZPK1-star projector that can display the relative position and brightness of about 5000 stars.

32,500+ STUDENTS
UniSA researchers led the team behind Active Healthy Kids Australia: the nation’s first report card into the physical activity of its children.

Australian children and young people were graded D- for their overall physical activity levels, with only 19 per cent of 5–17 year olds meeting the recommended physical activity guidelines. Our children are however performing well in organised sport participation, graded B- in this area. Australia also outperforms the rest of the world for the quality and availability of our sporting infrastructure.
The University is home to the world’s largest spatial augmented reality lab, the UniSA Holodek, where 40 sets of projectors, 30 digital cameras and an ISO1200 wide area are used to create digital overlays on a variety of physical objects.

Yett Soo War Way Lee was a Chinese rice miller who, in the late 19th century, against a backdrop of rising racism in Adelaide, introduced the idea of international trade with China as well as the benefits of multicultural engagement. Fighting through two false criminal accusations that were mounted by anti-Chinese political forces, Way Lee became widely respected and honoured due to his commitment to his new home as well as his charity and community engagement activities. Way Lee’s contribution to the state of South Australia may be generally unheard of, but is acknowledged at the University’s City West campus, as namesake of the Way Lee Building.
TEAM UNISA: THREE-TIME MEN'S VOLLEYBALL CHAMPIONS AT THE AUSTRALIAN UNIVERSITY GAMES.

UniSA's Hawke EU Centre for Mobilities, Migrations and Cultural Transformations undertakes research aimed at providing solutions in matters of migration, asylum and refugee protection. The Centre pursues a vigorous program of activities aimed at directly addressing the political importance of planning and learning through bilateral dialogues, particularly in regard to our shared commitments to the respect and promotion of human rights, fundamental freedoms, democracy and the rule of law.
Our health sciences students provide more than 1.3 million clinical service hours in nursing, physiotherapy, medical radiation, podiatry, occupational therapy and more, to the South Australian community each year.

UniSA was the first university in Australia to make a stated commitment to reconciliation. The University was subsequently the first in South Australia to launch a Reconciliation Action Plan (RAP). The plan provides a framework for building relationships, deepening respect and providing more opportunities for Aboriginal and Torres Strait Islander people.
UniSA’s legal advice clinic

offers confidential, free advice to the public on matters concerning traffic accidents, consumer credit disputes, criminal law and more. The Clinic has provided more than $1m worth of legal advice to the community since it began in 2011.

Researchers at UniSA, in conjunction with SMR Automotive, produced the world’s first commercially-viable automotive mirror made entirely of plastic. The mirror is lightweight, shatterproof and could potentially reduce greenhouse gas emissions by more than 400,000 tonnes by 2017.
New research undertaken by the University’s **Body in Mind** research group has shown that pain is not only a response to what’s happening in the body, but a wider response to information received from the brain’s receptors including sight, sound and more. Body in Mind researcher Dr Tasha Stanton has also been awarded a Tall Poppy award for her work with the group.

**Gordon Samstag** was a talented painter and senior lecturer at the SA School of Art from 1961–1970. Coming from the US to teach budding South Australian artists, Gordon saw the potential of the local art industry, but also understood its status as an emerging player, largely removed from the wider world of artistic endeavour and influence. Gordon and his wife Anne returned to the US in 1976, but the South Australian arts scene had left its mark on the pair. Upon his passing in 1990, Samstag left behind a bequest that has seen more than 130 artists supported to travel and study overseas.
The University has been educating South Australia’s urban planners for more than 60 years.

Our urban planning program was established in 1949 and is the only one of its kind in SA.

Our tourism and events program has been admitted to the SA Tourism Awards Hall of Fame.
The University has a long-standing commitment to equity and diversity.

In 1993, it was the first Australian university to appoint a Pro Vice Chancellor with the task of improving access to tertiary education. Since then, the University has made tertiary study a reality for thousands of students from a variety of backgrounds including Indigenous, students with disabilities and those from low socio-economic backgrounds. This commitment to equity has also been recognised by the Good Universities Guide (2015) with a five-star rating for the socioeconomic equity of our student population.

Did you know that your foot is made up of 26 bones, 33 joints and more than 100 tendons, muscles and ligaments?

UniSA is the only university in South Australia to teach a professionally-recognised program in podiatry.
Scientists from UniSA, along with colleagues from Third Military Medical University in Chongqing, China, made a ground-breaking molecular discovery in their work to find a cure for Alzheimer’s disease.

The team discovered that the p75ECD is a physiologically neuroprotective molecule against the irregular neural toxicity that allows Alzheimer’s to take hold. Further studies are now required to establish p75ECD as a drug candidate and diagnostic marker for the disease. The same team also discovered that the drug Edaravone can alleviate the progressive cognitive deficits of Alzheimer’s disease. Particularly, the drug can help to bind the toxic amyloid peptide which contributes to the degeneration of nerve cells in Alzheimer’s patients, alleviating the disease’s pathologies and improving learning and memory functions.

Our Centre for Cancer Biology is one of the top three cancer research centres in Australia and, from 2018, will have a new home in our brand-new $230m Health Innovation Building.
Did you know that society creates 2.5 quintillion bites of data every day? This extraordinary volume of data, generated by technologies and systems such as mobile phones, social media sites, online searches, as well as sensor technologies and machine-to-machine interactions has given rise to the exciting area of big data. UniSA is the national headquarters for an $88 million Data to Decisions Cooperative Research Centre (CRC) which will produce research aimed at making the task of analysing big data easier for organisations.

5-STAR MBA

Our MBA is ranked five stars™ by the Quacquarelli Symonds international rating system and by the Graduate Management Association of Australia. It has also been consistently ranked among the top ten MBAs in Australia since the inception of the Australian Financial Review BOSS magazine MBA survey in 2007.
The University has been a key supporter of the Santos Tour Down Under (TDU) for more than 15 years. The event was the first to join the prestigious Union Cycliste Internationale (UCI) World Tour outside of Europe and is the only UCI event in the southern hemisphere. The University’s team, Team UniSA, has been competing in the TDU since 2001.
Reputation is everything in business.

It’s why we’ve sought the very highest standard of accreditation from the European Quality Improvement System (EQUIS) for our Business School. Our Business School is the largest in South Australia and we have held this accreditation for more than 10 years. We’re also one of only eight Australian universities and 156 universities worldwide to gain this prestigious accreditation.

Did you know that seven out of the ten diseases that cause most harm to humanity in terms of death, mortality and quality of life are spread by insects? UniSA’s Mosquitos and Public Health Research group is working to reduce the risk of mosquito-borne diseases, specialising in medical entomology and epidemiology.
UniSA is the only university in the State to teach professionally-recognised programs in medical radiation. As one of six Australian universities to secure government funding to implement Virtual Environment Radiotherapy Training (VERT), our radiation therapy students can treat virtual patients using the very latest in simulation technology.

Imagine an area where people live, work and play which has been designed specifically to leave the smallest carbon footprint on the environment. The launch of Adelaide’s first Living Laboratory is seeing the development of such a precinct into a living, thriving research hub. The site is expected to bring real-time knowledge to developers, builders and planners, informing the way residential and industrial premises can be created and put to use with minimal carbon emissions. The project is a collaboration between the South Australian Government and the Low Carbon Living CRC, and researchers from the UniSA Zero Waste SA Research Centre for Sustainable Design and Behaviour are leading the project.
The long-term effects of the mental stress connected to combat are emerging as a significant health issue for returned veterans worldwide.

Taking on the challenge of improving the mental health outcomes of society’s bravest, are UniSA researchers who believe cutting-edge research in computational cognitive neuroscience may hold the key. Using cognitive augmentation, a process involving the real-time feedback of EEG signals non-invasively to influence cognitive function, the technology may help to enhance the brain’s core capabilities, restoring impaired neural processing systems to normal functional levels.
More than 120 years after her birth, the name of Lillian de Lissa endures as a symbol of excellence in early childhood education. Born in Sydney in 1885, Lillian started the first free kindergarten in South Australia. In 1979, the de Lissa Institute (as part of the Adelaide Kindergarten Training College) moved to what is now the Magill campus of UniSA. UniSA maintains its proud connection with Lillian today through the de Lissa Institute of Early Childhood and Family Studies Research Group.

The Anomalocaris (pictured) is an example of the Burgess shale type fossil that existed on Kangaroo Island during the Cambrian geological period. These fossils are unique in including organisms with soft parts that are not usually seen in the fossil record. Working as part of an international team on the island, UniSA researcher Associate Professor Jim Jago found that the Burgess Shale Type fossils had quite large eyes. This important discovery indicated that well developed eyes actually occurred tens of millions of years earlier than previously understood and at this stage such eyes are unique to Kangaroo Island.
SA’s leading university for graduate careers

2016 Good Universities Guide

Our Centre for Business Growth guides small to medium enterprises (SMEs) on the path to greatness, with innovative diagnostic tools, research and world-leading experts. The Centre’s programs are so beneficial that 100 per cent of CEOs who attended them would recommend them to other businesses looking to unlock their growth potential.
A remarkable figure of history, Nelson Mandela is remembered for his outstanding passion, commitment and achievements in progressing social justice, reconciliation and peace. Mandela was made an Honorary Doctor of the University in 1998 at a special ceremony at Fort Hare University. In 2001, his close relationship with former Australian Prime Minister Bob Hawke also saw Mandela accept an invitation to become International Patron of the Hawke Centre – a bond that the University held with Mandela until his passing in 2013.

Research by our Ehrenberg-Bass Institute for Marketing Science was behind the SA Government’s courageous decision in 2009 to ban the single-use plastic bag. Following the ban, our researchers discovered that 80 per cent of people had supported it and changed their shopping behaviour.
The University enjoys partnerships with elite sporting teams including Port Adelaide Football Club (PAFC). This partnership extends onto the sporting field with UniSA PhD students, like Daniel Rogers (pictured), working alongside PAFC sports professionals to make his research industry-informed and applied.

UniSA is home to the largest structural strong-floor in Australia. The floor is used for testing structures and structural elements such as beams, columns, slabs, walls and cladding by industry and for teaching in the University’s civil engineering program at the Mawson Lakes campus.
The University of South Australia was founded in 1991, through the amalgamation of the South Australian Institute of Technology and the Magill, Salisbury and Underdale campuses of the South Australian College of Advanced Education.

UniSA researchers have developed a train driver advice system that runs from an iPad, helping trains stay on time and reducing their energy use and carbon emissions by up to 20 per cent. The technology was trialled successfully in France on the 320km/h TGV train and the technology has now been adopted by the rail operator to be rolled out for use by their 1500 TGV drivers.
UniSA researchers have taken out two
Australian Museum Eureka Prizes
– the most comprehensive national science award. The awards were won for the researcher’s work on progressive technologies including Super Dots and a new system that will allow energy to be stored at up to a tenth of the cost of batteries.

The Super Dots are the world’s smallest and brightest flashlights, capable of illuminating diseased cells within the body and may allow real-time diagnosis of disease in the future.

The new phase-change technology involves freezing salt to store power. By solidifying and melting an inexpensive salt solution, energy is stored and released quickly and cheaply, helping Australian produce companies to reduce multibillion-dollar refrigeration costs.

UniSA and University College London (UCL) have signed a partnership agreement that will see the two institutions collaborating on research and teaching strengths designed to meet the needs of future industries in areas such as minerals processing, advanced manufacturing and sustainable energy production.
In 2015, UniSA staff and students came together to smash the Guinness World Record for the World’s Longest Bike. The 42-metre long bike was created over a period of nine months and was supported by Santos working in collaboration with UniSA mechanical engineering students.

UniSA is rated in the highest category in the areas of Teaching Quality, Generic Skills and Overall Satisfaction in the Architecture field of study (Good Universities Guide 2016). The University is also ranked in the top 100 for Architecture globally (2015 QS World University Rankings).
Our disability support services include a dedicated Disability Hub to help raise awareness and understanding, and enable full participation in all aspects of university life. Our support for students with a disability is ranked number two nationally according to the International Student Barometer.

Engineering and technology at UniSA is ranked in the world’s top 100, top six in Australia and first in South Australia, in the Times Higher Education World University Rankings (2015). Built environment, including civil engineering, has also been rated five stars in the 2015 QS Stars discipline ranking.
UniSA is rated number one in South Australia for student satisfaction. (Good Universities Guide 2016)
We hold a place among the world’s best and brightest for our education programs in the top 100 of the 2015 QS World subject rankings.

Our plans for a new education precinct at Magill, including an on-campus birth to year 12 school, will also transform how we offer teaching in education into the future.

The University has partnered with global IT giant Hewlett Packard Enterprise to support South Australia’s IT innovators, including students, and industry with a new space to exchange and explore ideas. The plan also incorporates an IT Honours program that integrates world-class education with industry experience through a built-in internship.
UniSA scientists delivered a wearable computer and augmented reality kit to aid Australia’s ground-breaking bionic eye research project. The technology allows Bionic Vision Australia to run studies where participants see what those with a bionic eye would be seeing as close as possible. The new backpack provides the company with more processing power, reduced weight and advanced battery technology.

UniSA is home to Australia’s only internationally-recognised Architecture Museum located at our City West campus. It was formed in the mid-1970s after architectural historian Donald Leslie Johnson initiated a private collection and in the absence of a local repository to preserve documents related to the history and practice of architecture and related professions in South Australia. In 1990, he donated it to the School of the Built Environment, part of the South Australian Institute of Technology (one UniSA’s antecedent institutions). The acquisition included drawings, practice records, personal papers, photos, slides, books and periodicals.
Our Cognitive Neuroscience Laboratory houses state-of-the-art equipment for measuring human brain activity during cognitive tasks, including a Biosemi Active Two high-density (256 channel) EEG system and a Magventure MagPro X100 repetitive Transcranial Magnetic Stimulator in combination with a Brainsight2 neuronavigator.

Our QS five Stars™ business school ranking, awarded by the Quacquarelli Symonds international rating system, places us in the top one per cent for Business Schools globally. We are also rated five Stars in five sub-categories: teaching and student quality, internationalisation and diversity, facilities, engagement, and program strength in the Master of Business Administration (MBA).
Our researchers are engaged in more than 500 international collaborations worldwide across 45 countries.

The Cambrian is the era that extends between 542 and 488 million years ago. During this time, the Earth looked quite different, with land masses shifting over time to form the world as we know it in this day and age. Research undertaken by UniSA researchers, has found through work in Antarctica that the Tasmanian and Antarctic land masses were actually quite close together circa 500 million years ago – a find which only further enhances our understanding of the world during this important geological period.
The Hon Dr Basil Hetzel is a pioneering pharmacist whose work in the elimination of iodine deficiency disorders has improved the lives of millions of people worldwide.

Dr Hetzel’s research established a link between iodine deficiency and brain damage in unborn children. Following this discovery, Dr Hetzel led a worldwide campaign to incorporate iodized salt into the diets of more than two billion people in more than 130 countries. Dr Hetzel is a National Living Treasure (awarded by the National Trust), a recipient of Thailand’s most prestigious medical award, the Prince Mahidol Award, the Inaugural Chair of the Hawke Centre and was made the University’s second Chancellor in 1992.
UniSA’s Magill campus has a television studio with one of the largest green screens in South Australia. Students also gain hands-on experience producing radio journalism and broadcasting on the UniSA-based internet radio station UniCast.
Material science researchers could eliminate the need for windscreen wipers using permanent coatings on transparent materials which in turn would eliminate the need for glass windscreens. Replacing these with lighter plastic windscreens also means less reinforcement in car bodies, resulting in cheaper cars and better fuel economy.

Emeritus Laureate Professor John Ralston's (AO FAA FTSE) distinguished career as one of Australia's most prominent physical chemists led to breakthroughs in the practice of minerals processing and particle and surface technology worldwide.

He also led the establishment of The Ian Wark Research Institute (1994 to 2015), the Australian Research Council's Special Research Centre of Excellence in Particle and Material Interfaces. The Wark performed first-class fundamental research, significantly, the AMIRA International Project which made steep changes to the processing of minerals worldwide. Professor Ralston was named as the University's first Emeritus Laureate Professor in 2006 and was made an Officer of the Order of Australia in 2008.
You probably didn’t know that when your favourite glass of white is starting to look hazy, thaumatin-like proteins (TLPs) are generally responsible.

Current practice to prevent the hazing of wines involves using bentonite to remove haze forming proteins (HFPs) like thaumatin. There is currently no specific method to detect its presence and tailor bentonite treatment. This leads to the treatment of wine which may not require it, subsequently affecting taste, quality and cost.

The identification of the responsible proteins by the Australian Wine Research Institute (AWRI) has allowed UniSA researchers to start working on the development of a specific colorimetric dipstick sensor. The porous silicon-based sensor will deliver a YES/NO result indicating the presence of TLPs, followed by subsequent quantification by further analysis.
UniSA’s Practice-Based Nursing Lab is home to Noelle, a state-of-the-art birthing manikin. Noelle and baby Hal can simulate a range of scenarios including breach, caesarean and uncomplicated births.

Biophilia is a term that defines the affinity humans have with nature. The term was first brought into prominence by eminent biologist Edward O. Wilson, who suggested that a connection with the natural environment is essential to leading healthy and fulfilling lives. UniSA’s Barbara Hardy Institute has a research unit dedicated to the creation of biophilic cities through hands-on research activities that allow city-dwellers to immerse themselves in the natural environment as collectors and analysers of environmental data. Citizen Science helps environmental scientists to gather the valuable geographical information they need through community volunteers who, in turn, become more engaged with their natural world through observation and recording.
The University is well-connected to industry through more than 2000 partnerships with local and global heavyweights including Hills Limited, Hewlett Packard Enterprise, Santos, Coca-Cola, Unilever, Google, ANZ, ESPN, Foxtel, Mars, Nielsen and more.

Ever wondered where your cat goes?

A UniSA research team is set on finding out with the help of volunteer pet owners around Adelaide. Cat Tracker is an innovative project that uses GPS tracking equipment to track the movements of local cats. The study aims to determine just how far cats venture in order to better understand their personalities and behaviours.
The Bob Hawke Prime Ministerial Centre is committed to delivering a diverse program of events and exhibitions throughout the year which reflect their fundamental themes of strengthening our democracy, valuing our diversity and building our future.

It has been engaging meaningfully with the South Australian community through its public lectures since 1997 having presented hundreds of speakers reaching hundreds of thousands of people in South Australia and globally. The Centre's namesake is former Prime Minister, the Hon Bob Hawke, who was a major supporter of education, international understanding and of the balance between economy and equity for the social good. The Kerry Packer Civic Gallery, part of the Centre, also provides a dedicated space for organisations to convey their social messages through art.

Students training to become healthcare professionals may have access to new technology developed by UniSA researchers that can simulate an infinite range of medical conditions.

The new manikins use Spatial Augmented Reality (SAR) to project various types of physiology and conditions onto an array of 3D shapes representing body parts and without the need for VR goggles or headwear. The technology also supports the tracking of trainee hand movements, turning the manikin into an interactive learning space with diagnostic prompts and other educational questions integrated into the system.
In 2003, the Kenyan Government took the monumental step of ending school fees, opening up the education system to all for the very first time.

However, while all now had access to education many were still either skipping school or leaving early in search of food. Ann Wawira Njiru understood the problem and took the skills and knowledge she learnt through her nutritional sciences studies at UniSA back home to Kenya to help these children. Working to develop a nutritious menu, made from local, seasonal produce and combined with mentoring and tutoring support from university students, Ann developed a program that has seen participants’ school attendance improve drastically. Ann hopes to take the project to the Kenyan government to be adopted by schools across the nation.

Did you know that almonds were Australia’s most valuable horticultural export in 2014/15?

According to the Almond Board of Australia, the popular nuts are expected to generate around 10 per cent of national horticulture’s gross value of production. UniSA is supporting this thriving industry, working with Horticulture Innovation Australia (HIA) to improve almond processing in three ways. The first involves reducing the loss of damaged kernels through improved cracking technology. The team is also looking at improving the aeration in storage facilities so that farmers can harvest and store nuts earlier, as well as producing more effective hulling methods.
Sustainable production of food is increasingly important as the world’s population grows and the land available for farming decreases. It’s in the space of improved engineering solutions that UniSA researchers are working to improve how we grow our food products more sustainably. For instance, a grain harvester modified to also destroy weed seeds will allow farmers to reduce chemical use and better manage weeds which are becoming herbicide-resistant. Our researchers are improving the livelihoods of farmers in the Middle East by promoting conservation agricultural practices such as no-till farming – a practice which helps to reverse soil degradation, conserve soil water and improve crop water use efficiency. In South East Asia, low-cost machinery solutions are being developed and promoted to improve the establishment of direct seeded rice and address labour shortages.
The disposal of the waste raises a number of ecological concerns for the marine environments that surround desalination plants. UniSA researchers have been working on a novel use for the concentrated brine that is a by-product of desalination. Through a revolutionary process, the researchers have been able to create soda ash from the waste by combining it with industrial waste gases such as carbon dioxide. Soda ash has various applications such as glass production and is used in products including soap, detergents, water treatment chemicals, paper and pulp.

A Lean Management Leaders Education partnership between the UniSA Business School and the Royal Australian Air Force put it on track to achieve $500 million in savings without sacrificing capability.
The collective intelligence of minute creatures can generate vast and unexpected systematic complexity.

Take the underground ant empires in Melbourne that stretch across more than 100km and are home to millions of ants. All are conceived and created by tiny creatures with far less individual processing power than our own. Called swarm intelligence, UniSA’s Defence and Systems Institute is working on Unmanned Ground Vehicles (UGVs) that mimic the behaviour of swarm insects to create armies made of tiny robots that work together to complete a single task. The technology uses sophisticated mathematical modelling to overcome the sight limitations of traditional machine vision systems by drawing inspiration from the visual capabilities of a fly.

Brenton Ragless, David Bevan, Rebecca Morse, Sally Sara, Sabra Lane, Clive Mathieson, Patrick Keane, Indira Naidoo, Michael Vincent, Lainie Anderson, Emma Reballato, Helen McCabe

UniSA has been graduating some of Australia’s finest journalists, editors, commentators and media personalities since 1973.
Yet, as adults our bodies lose this capacity—sometimes to the point where wounds fail to heal at all. This is partly due to a protein called Flightless I (FLii) which has found to be counterproductive to the wound healing process. Researchers at UniSA have developed an antibody which reduces the amount of FLii and has proven to improve wound healing and reduce scarring. The team is now trialling the use of cell-populated dressings containing the antibodies with a final goal of commercial production.

UniSA was the first university to implement the Football United™ program outside of New South Wales. The program provides free football matches for at-risk youth, in particular refugee, migrant and Indigenous children.
Roadside and workplace drug and alcohol testing may become easier thanks to technology developed by UniSA researchers. While current technology is particularly effective at detecting opiates and amphetamines, the final confirmation of a positive result for cocaine and cannabis is still dependent on biological tests. The new technology could allow officers to confirm the detection of drugs of abuse at point of collection via a mobilised, lab-on-chip application which outputs reliable results at the site of testing.
From exploring the outer limits of space, to overcoming the barriers of racial prejudice and forging a highly successful career in space administration, Major General Charles Bolden Jr has led an extraordinary life.

As head of NASA for more than 30 years Bolden has overseen an era of expansion and exploration supported by the advancement of space and aeronautics technology. Bolden’s worldwide advocacy for access to education and commitment to making the seemingly impossible, possible spans a lifetime and has been recognised by the University with an Honorary Doctorate.
The quality of water that is supplied to communities can profoundly affect the health outcomes of wider populations. Chemical disinfection is the most widely used technique to control waterborne pathogens, ensuring that water can reach the consumer safe from microbial contamination or free from harmful/unpleasant compounds. Treatment methods however, can unfortunately leave behind harmful by-products. NDMA is an emerging contaminant categorised as probably carcinogenic to humans, and UniSA researchers are working to produce an electrochemical sensor for the rapid, sensitive and reliable detection of NDMA in water samples.

Common Ground is a residential construction project that provides secure accommodation to Adelaide’s most disadvantaged people. The building comprises 52 apartments over seven levels and took 41 weeks to build and deliver. UniSA construction management graduate James Clark oversaw the project’s design and construction from start to finish and won a Professional Excellence Award in Residential Construction from the Australian Institute of Building (AIB) for his contribution to the project.
Hip replacements helped to restore mobility to more than 90,000 Australians in 2014 and as the country’s ageing population rises safe, effective and inexpensive joint replacement technology is becoming more important.

Scientists at UniSA have come up with a novel way to reduce the risk of post-operative infections arising from biomedical implant surgery. The team has developed a coating for implants which effectively stuns bacteria and discourages them from forming infectious biofilms. It is little known that bacteria actually communicate with each other, acting cooperatively to identify suitable areas of the body to infect and grow. The coating’s technology effectively interrupts this communication between the organisms and reduces their capacity to form into a biocolony around the surgical site.
Indium Tin Oxide (ITO) is a transparent conducting material that enables new display technologies such as touch screens and smart windows to function. Its use has become widespread with the recent prevalence of smart phones and other optoelectronic devices, and conversely, its cost is increasing while supply is decreasing. UniSA researchers have developed a viable alternative organic based coating process that offers comparable flexibility, transparency and conductivity and are working to introduce the product commercially. Still in development, this coating may work as a low cost and environmentally friendly solution.

Huge oil tankers travel the Earth’s oceans and new offshore drilling platforms are being setup every day to satisfy the world’s demand for oil. Oil spills have been an unfortunate result of this demand, and are responsible for the widespread destruction of a number of marine ecosystems. UniSA researchers have been working to make the clean-up of oil spills cheaper, easier and more effective with the development of oil-water separation membranes. The membranes are driven by gravity and are applied to recovery vessels which, through suction devices can suck the polluted water through the mesh, returning clean water into the ocean.
Jeffrey Smart was an iconic painter and accomplished draughtsman, graduating from the South Australian School of Arts and Crafts (now a part of UniSA’s School of Art, Architecture and Design). In 2011, Smart received an Honorary Doctorate from UniSA. He passed away in 2013, aged 91, leaving behind an unprecedented legacy in Australian art. Smart’s unending quest for inspiration encapsulates UniSA’s enterprising spirit and the University named its $85 million learning centre at City West campus in his honour.

Jeffrey Smart, Self-portrait at Papini’s 1984–85, oil and acrylic on canvas, 85×115 cm
Geoffrey Maitland remains the most well-known Australian physiotherapist throughout the world. During his time at UniSA he taught his innovative techniques and developed the world’s first manipulative physiotherapy postgraduate program at the SA Institute of Technology in 1974. Maitland was instrumental in developing a new and more systematic approach to the examination and treatment of patients with musculoskeletal disorders. Physiotherapists around the world have benefited from the concepts and principles of this approach which are as relevant today as they were when first taught at UniSA.

In 2013, UniSA became the first university to host an online brainstorming event and ideas generator – UniJam. Working with IBM technology, the University community contributed more than 17,000 posts during the 38-hour event about their ideas for the University’s future.
Built in 1884, Murray House rests at the entrance of UniSA’s Magill campus. An oldworld site, rich in history and heritage, the house has been a subject of rumour over the years, for some who believe it is haunted. Stories of ghostly encounters are varied, but one of the most persistent is about the presence of a young girl called May, who some claim, at 12–13 years of age and dressed in period finery has been seen on the main landing of the house’s staircase. Recently, two UniSA film students decided to investigate the sightings and film their findings. Spending a night in the house, the pair recorded unexplained radio frequencies when touching the staircase’s balustrade. Strange sights and sounds, including a young female singing, as well as a presence were also reported by paranormal experts who visited the house. While the presence of ghostly occupants remains a mystery, the student’s documentary makes an interesting contribution to the University’s history.

Breaking ground: Trevor Richie graduated in 2014 from UniSA to become SA’s first identified Indigenous occupational therapist.
Dragonfruit, pomelo, jackfruit, longan, hawthorns – these new descriptors may find their way onto Chinese wine bottles soon thanks to research by UniSA’s Ehrenberg-Bass Institute.

The research studied the equivalence of Chinese and Western taste descriptors, both generic terms such as smooth, fruity, sweet, mellow and specific terms relating to fruits, vegetables and spices, and found that generic terms were three times more likely to be used when describing Chinese wine. It also provided valuable evidence regarding what the Chinese taste equivalents were to the specific Western descriptors currently used on wine labels.

Placed 35th in the world, UniSA is the youngest Australian university ranked in Times Higher Education’s ranking of top universities under 50 years of age in 2015.
FedSat was a bold mission led by UniSA scientists, to make Australia’s mark on 21st century space research.

The 58kg satellite (approximately the size of a bar fridge), completed 20,000 orbits of the Earth or more than one billion kilometres, collecting space weather and radiowave data along the way, before its batteries ceased in 2007 – one year later than expected. FedSat’s legacy stands firm through the provision of data and experimental space infrastructure that will continue to be of use to space exploration into the future.

Tessa Henwood-Mitchell spent four months working at an orphanage in Bolivia as part of her social work degree at UniSA. Inspired by the needs of children in the region, Tessa established Tia International Aid (TIA), and launched the ValenTIA program, an initiative which reaches out to Bolivian children and youth with the aim of empowering them to reach their full potential. ValenTIA, which means ‘courage’ in Spanish, provides education, employment and accommodation support to 14-18 year olds who are making the transition from state care into independent living.
Every drop of rain that has fallen on the roof of ANZ Stadium has been harvested and reused thanks to rainwater harvesting software developed by UniSA researchers.
Sir Terry Pratchett OBE contributed an enormous amount to the literary world. As the creator of the Discworld novels, a series of stories set within an imaginary disc-shaped world resting on the backs of four giant elephants, and supported by a giant turtle swimming through space, Pratchett captured the imaginations of many. Later in life, while suffering from a rare form of early-onset Alzheimer’s disease, Pratchett became a strong advocate for the right to die with dignity, eventually producing three documentaries on the subject as well as his experiences confronting his own mortality. Pratchett was made an Honorary Doctor of the University in 2014 and following his passing in 2015, endowed a scholarship fund to support future research in culture and identity transformations in conjunction with the Long Room Hub at Trinity College Dublin.

UniSA social work and international relations student Jay Dohnt inspired the nation when winning a bronze medal in the 2008 Beijing Paralympics 400-metre freestyle. He also represented Australia in the 2012 London Paralympics and has been inducted into the Swimming South Australia Hall of Fame. Jay has been a participant of the Hawke Ambassador program, spending six months in Argentina and is continuing his sporting success post-retirement playing wheelchair basketball in the National Wheelchair Basketball League.
In November 2012, more than 1000 South Australians came together to gather vital information to help researchers understand our local population of 114,000 koalas better.

Led by a team from the University, and enabled by GPS and smartphone technology the volunteers reported more than 1500 koala sightings and submitted over 1000 photos of the furry marsupials. Results of the count found that temperature range, elevation and rainfall were key determinants of koala inhabitation. The results of the study led to the adoption of a statewide strategy to manage and conserve koala populations into the future. The Great Koala Count has now been taken up in NSW and Victoria.

Women in rural Africa often die giving birth because they can’t get to a hospital. But while petrol and electricity are scarce and unaffordable, there is plenty of sunlight. The University of South Australia is working with Italian organisation Cesvi and St. Albert’s Hospital Mission Zimbabwe to develop solar-powered taxis that will transport women to hospital to give birth.
UniSA researchers are commercialising a new product that uses magnetic particles to detect the spread of cancer throughout the body, instead of radioisotopes. The Hand-Held Ultrasensitive Magnetometer Probe detects clinically-introduced magnetic materials in lymph nodes and, combined with an MRI, can accurately locate the sentinel lymph node, the most likely location of cancer cells which then spread to more distant organs.

UniSA encourages and promotes healthy living and supports its academic community by offering a smoke-free campus environment and providing how-to-quit resources to staff and students looking to kick the habit.
The University of South Australia is celebrating its 25th birthday in 2016. We know it’s our people who make the University great, so we’re celebrating with the faces of UniSA.