Millennials: more than cogs in the work machine
Buddies building a love of literacy

Students from the University of Melbourne have been working with Ardoch Youth Foundation on their Literacy Buddies program with some great results. By Kate Dukes.

There are many Victorian children who need extra help with their literacy skills, and this is where Ardoch Youth Foundation’s Literacy Buddies program is helping in quadrants to the University’s mission to provide education support for children and young people experiencing disadvantage.

The program teams adults, the ‘Big Buddies,’ with children, their ‘Little Buddies,’ to encourage the Little Buddies to read and write, while providing meaningful interactions with positive adult role models.

St Thomas Aquinas School in Geelong has been collaborating with Ardoch for a number of years to help enthuse their students about the importance and joys of writing. On a beautiful Spring day this year, the Year 6 students from the school visited the University of Melbourne as part of the program being run with a group of creative writing students.

The buddies have been exchanging letters throughout the year, sharing their interests and stories they have written and often decorating the letters with wonderful illustrations and graphics.

“This experience has been different from anything they have done before,” explains the Little Buddies teacher, Christie Waight.

“It has been great for them, not just for the writing aspect but for the mentoring – having someone to look up to. It has given our students the opportunity to meet new people, learn more about study and life at university and that there can be wonderful rewards when you step outside your comfort zone,” Ms Waight says.

During their visit to the University of Melbourne, the group of excited Little Buddies had an opportunity to do just that, travelling to meet their buddies and experience university life for a day. The young boys and girls shared stories with their buddies before heading off on a tour of the campus, which included a walk across the lawns and a short history lesson in the quadrangle. To their delight the tour ended in the Sports Precinct where an impromptu soccer game was a highlight of the day.

The program has been a really positive experience for the University creative writing students as well, who have previously faced the challenge of writing stories for children without knowing what a child wants: they aren’t children themselves any more and some don’t have younger siblings.

“This year I thought it would be a good opportunity to give them their own young reader to provide feedback on their work,” says Dr Amy Brown, the students’ tutor.

“I think it has surprised them seeing the range of literacy levels and vocabulary. That’s the nice thing about corresponding by letter rather than in person – they get to assess the reading age as well as learn about their interests and try to enthuse them with books,” Dr Brown says.

The collaboration between the University of Melbourne and Ardoch looks set to grow with other programs being discussed with other faculties for 2015, all with the same ultimate goal: to foster a love of learning.

www.ardoch.asn.au
Rice husk grist to the cement mill: new student developed technology

Edward Brelsford, Kareem Sultan and Carl Muir. Photo: Peter Casamento.

A new gadget – the rice husk ash grinder – Invented by Engineering students, can turn rice waste into cement. By Kristen Goodgame.

Students from the University of Melbourne have developed a revolutionary machine to create low-cost, environmentally sustainable building materials, which is expected to have substantial applications in developing countries.

The Rice Ash Husk Grinder, developed by Edward Brelsford, Simon Liley, Kareem Sultan and Carl Muir, was on show as part of the recent Endeavour Expo, which showcases final-year projects developed by engineering and IT students at the University of Melbourne, and which provides a sneak peak of technology and innovation for tomorrow.

The team developed an experimental device, allowing them to determine the most efficient way to grind rice husk ash, a waste product from rice production, creating an alternative, highly-sustainable ingredient for concrete. The innovative concept paid off for the students, who were awarded the 2014 Endeavour Sustainability Prize, as well as the Departmental Prize for Mechanical Engineering.

Of the materials that we use most in the world, concrete is second only to water. The fundamental building material is typically held together by cement, which is produced through consumption of a large amount of energy. This means the production of concrete, buildings and other infrastructure leaves a hefty bill and a vast carbon footprint in its wake.

By using rice husk ash as an ingredient for concrete, less cement or ‘glue’ would be needed to construct buildings, reducing the infrastructure’s impact on the environment. As a waste product that is plentiful in South-East Asian countries such as Thailand and Indonesia, the material offers greater energy efficiency during concrete production, empowering communities in developing countries to cheaply and sustainably develop infrastructure.

“Instead of seeing rice husk ash as a waste product, we can use it in the construction of buildings across Asian countries,” says team member Kareem Sultan.

Simon Liley says concern about sustainability was the team’s guiding passion.

“I believe strongly that engineering can be a powerful force for good and I hope to take that belief with me wherever I end up,” Mr Liley says.

Edward Brelsford agrees, and found working with a dedicated group on a project that was centred on sustainability and had a chance of being implemented very enjoyable.

“It’s important to do something you’re passionate about, and something you may not get the opportunity to do again. It’s not very often you get to select a project that interests you, and that you are supported to make that project the best it can be.”

Carl Muir concedes the final year project was a massive challenge, but also inspiring, offering a blank page for the team to write on.

“We received a lot of support from the Department, who allowed us to conduct our tests in their labs and provided a lot of help along the way,” he says.

Academics in the Department of Infrastructure Engineering are currently working on similar research projects, including an investigation into how fly ash can be used in a similar way to rice husk ash, as an alternative ingredient for concrete. Fly ash, derived from burning coal, is a common waste material in Australia.

Concrete production offers a means of recycling these waste products that would otherwise be discarded.

Over 100 final year engineering and IT design projects were on display at the recent Endeavour Expo. Over the course of 2014 student teams were able to put the theory of their studies into practice in order to create unique solutions to real-world problems. Some of the projects included a portable brain-scanning device to assist epilepsy research, a fully functioning micro-brewery, a robot that can fight fires, and a device that transcribes music directly from a guitar.

The expo was visited by school students from around Victoria, along with University of Melbourne staff and students and industry representatives. The event included a keynote address from Intel’s Director of Interaction and Experience Research, Genevieve Bell, who stressed the importance of increasing the participation rates of women in engineering and technology.

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Training voices to be exciting, colourful and free

Liz Banks-Anderson speaks with singing teacher Anna Connolly about training vocalists to win prizes while staying connected to their creative purpose.

Anna Connolly can recall the specific moment aged 26 when she felt the thrill of teaching people to sing. “A fellow young artist asked for some help with a particularly hard aria. I remember trying several things with her and then all of a sudden I felt in my own body what was needed – it was just like pieces of a puzzle falling into place.”

“Sometimes when articulated what was required in a way she understood, heard the enormous and immediate difference it made to her sound, and saw the joy on her face when she did. Then I was hooked,” Ms Connolly says.

This philosophy has served Ms Connolly well over her 30-year teaching career. As a Senior Lecturer in Voice, she has taught 84 finalists and 37 national singing competition winners, with more than a dozen of the latter hailing from the Melbourne Conservatorium of Music and the Victorian College of the Arts.

The latest was this year’s winner of Herald Aria, 27-year-old VCA and MCM alumna soprano Kathryn Radcliffe, the ninth student of Ms Connolly’s to win the prestigious award.

“Stories in Stone

In 1908 Englishman and amateur scientist Ernest Westlake travelled south from Southhampton to collect stone implements and interview Tasmanians, many Aboriginals, about native language, history and culture. In 2014, the meticulous digitisation of his entire collection of papers was awarded the prestigious Mander Jones Award.

Gabrielle Murphy reports.

Rebe Taylor is a historian with a background in the performing arts. Her acting career was launched when, at the age of seven, she played the role of the child Sylvia Vickers in Neil Armfield’s film version of For the Term of His Natural Life. And so began a serendipitous association with Tasmanian history.

After completing a Masters of Arts at the University of Melbourne and PhD at the Australian National University, Dr Taylor drew on the research conducted in both theses to write her first monograph, Unearthed: The Aboriginal Tasmanians of Kangaroo Island. Published in 2002, the book won the SA Premier’s non-fiction award, and was short-listed for two other national prizes.

Now this year, Dr Taylor and colleagues from the University of Melbourne’s eScholarship Research Centre, Director Gavan McCarthy and Senior Research Archivist Michael Jones, have won the Mander Jones Award for their annotation and presentation of over 8000 images that represent a significant contribution to our knowledge and provide insights into the voices of family members.

“The project was a collaborative and cross-disciplinary one between history and archiving,” she says.

“Digital archive guides and history are often confined to a single collection, and do not always capture that archive in its entirety. The final decision is very subjective and significantly to our knowledge and provide insights into the voices of family members,” she says.

“Preservation meets enquiry to allow for independent searches of over 8000 images that are informed by more than 40,000 words of scholarly history writing.”

Commentators including Stephen Weldon, director of the Isis Bibliography of the History of Science, have recognised in Stories in Stone a fascinating resource and exemplar of the increasing trend now burgeoning on the web.

“Stories in Stone demonstrates a shift in the way history is told,” Dr Taylor says. “There is an increased interest in using technology to engage people with history in an accessible way. This is a key component of the project, which seeks to provide a resource that is both informative and engaging.”

“Stories in Stone provides an undeniably rich, and argument for a larger geological collections including 13,033 Tasmanian Aboriginal stone implements.

“The meticulous archival investigation, which was carried out under the auspices of the University of Melbourne Library and the Australian Centre in the School of Historical and Philosophical Studies, resulted in the compilation of an online guide and history of the entire collection.

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Dr Taylor says: “Gavan McCarthy digitised the 1908 records with me at the Pitt Rivers Museum, and in 2008 Michael Jones joined the team, captur- ing the Westlake Archive housed at the Oxford University Natural History Museum.”

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A changing relationship to work: Gen Y focussed on freedom and flexibility

Laura Soderlind and Susannah Woodward look at the millennial generation’s changing attitudes to work.

The world of work is changing. Spending 30 years in the same job, with the same company in a nine-to-five culture that ends with the golden handshake for a 60-year-old retiree is just not going to happen any more.

Jobs of the future will look very different from 20, even two years ago and it’s not just the way we work and what we will be doing at work that’s changing – there is now an increasing transformation in the relationship we have with our work as well.

So how are different generations prepared for these changes? As a University, how can we ensure our graduates are ready for a new world of work when the jobs they’ll be working may not exist yet? What can they expect from work?

In a time when competition for jobs is increasingly globalised and the labour market is relatively unstable, how can students be equipped with the skills to maintain sustainable careers in a rapidly changing, ‘always on’ environment? And what will future workplaces look like?

Tom Eames, Master of Architecture student from the Melbourne School of Design says one of the largest changes he anticipates is that with technological changes, we won’t need physical workplaces any more.

“We used to be dictated by hard wires, your phone point, your data point, your power point. These all locked people into offices and positions,” he says. “Now things are wireless. Teamwork isn’t so much based on physical space, with people now communicating on Skype or connecting via mobile phones.”

This is one of the unending challenges facing architecture. Architects must design for a future they don’t yet know.

“What we do is look into the future. We’re designing something which past generations had never even thought of imagining. We’re in partnership with those people.”

Eames believes the archetypal office is changing and that in the future the idea of an office, or a workplace, may be a thing of the past.

“This is one of the main differences we see between the generations,” he says. “They’re focussed on freedom and flexibility in work relationships. They want to work where they feel comfortable and they want to have the freedom to work at home if they choose.”

The up and coming ‘millennial’ generation are characterised by their need for autonomy and continual professional development. They are more focused on freedom and flexibility in work relationships. They want to work where they feel comfortable and they want to have the freedom to work at home if they choose.


The University of Melbourne Graduate, whose future expectations of work include being part of a close-knit team where work relationships contribute to overall life enjoyment.

“I don’t want to be a slave to doing Task A and Task B. Work flows into every other part of life. If you’re having a poor time at work, and that’s where you’re spending most of your time, you don’t feel excited to come to work every day. It can add so much more to your life if you enjoy coming to work.”

This attachment to work, and the development of cultures and social groups which blend work and personal lives, implies that the employer is rapidly losing power when it comes to hiring and firing employees and that there is a shift from the career-for-life, to chop-and-change jobs based on personal interest, values and life-goals.

The desire for freedom and flexibility in work is a key trait of this new generation. A 2013 study by Millennial Branding and ODesk (https://www.odesk.com/info/spring2013/onlinework-survey) found that over half of the working Gen Ys surveyed had quit their jobs to pursue independence and work for themselves.

This need for autonomy and continual personal development may stem from the ability of younger generations to focus less on job titles and more on the transferrable skills they have.

Mr Callahan, who has recently found a role as a Recruitment Consultant in Sydney, says that work should be able to deliver an enriching and broadening experience and believes that these days, managers need to have a level of understanding and empathy towards their employees.

“I would hope my manager would have a high level of understanding of the complexity of people in workplaces,” he says. “The most important skill of a manager is the ability to handle people. You can be a fantastic person in your selected field, but as a manager, if you don’t have the ability to relate to people and understand them it’s going to be very difficult.”

Professor Peter Gahan, Director of the Centre for Workplace Leadership at the University of Melbourne says leaders and managers have to be aware that global connections now take place through technology.

“Contemporary workers are checking their emails from home late at night, and they want to work in teams and be part of the big picture,” says Professor Gahan. “People are able to compare their salary, job benefits and workplace online, something which past generations had never been able to do.”

Workers are also much more focussed on their own success than the previous generation and they have no hesitation in negotiating work terms with their employer.

Millennials are going to live longer than any previous generation, and they will work longer than any previous generation as the retirement age and access to pensions gets pushed back. Enjoying your job is moving up the list of employee priorities. After all, it’s what people are doing for 75 per cent of their time.

“The world has changed significantly in the past 10-20 years and will change more rapidly still,” Mr Callahan says. “The world of work is the unknown, it’s scary, but at the end of the day you have to be aware and adapt. Otherwise you become a dinosaur very quickly.

“You always have to be willing to learn.”

Nursing is changing as fast as the science and technology that is the foundation of health professions. Liz Banks-Anderson reports on how specialised nursing training is enhancing the nursing workforce's skills base.

Nursing isn’t what it used to be, with technology and highly personalised medical interventions calling for an increased need for nurses with specialist rather than generalist knowledge.

There are also new opportunities developing that require an advanced level of specialisation, with new roles evolving for nurse practitioners and advanced practice nurses now required. Associate Professor Marie Gerdtz, from the Nursing program at the University of Melbourne, says these areas of specialisation in nursing will only become more important in future.

“Cancer remains a major cause of mortality and morbidity in developed countries, including Australia,” she says. “There is a need for specialist nursing roles to provide care for both in-patient and outpatients, and Emergency Department presentations are increasing each year by three to nine per cent.

In many areas of specialisation, nurses must now have completed a graduate certificate in that area of specialisation,” says Associate Professor Gerdtz, who is also Academic Co-ordinator for the Graduate Certificates in Nursing Practice. She says that to combat these workforce requirements and changes, a new Graduate Program in Nursing Practice will kick off at the University of Melbourne in January 2015.

A collaboration between the Department of Nursing and four major hospital services, the program will be the vehicle for these frontline health services to upskill their nursing staff, in order to meet community expectations of the most advanced medical care available.

The program aims to increase the number and quality of specialist nurses working in metropolitan and regional precincts, including Parkville, via a partnership model of education delivery.

Areas where specialist nurses are needed today include cancer and palliative care, critical or intensive care, paediatrics and emergency. Advanced training will increase specialist nursing skills and in turn, support hospitals to develop a workforce responsive to their changing needs,” she says.

“This program also importantly offers career progression for nurses into an advanced role that extends their scope of practice,” Associate Professor Gerdtz says.

“By the end of the specialty of mental health nursing, the department will continue to offer the Graduate Diploma in Nursing Practice (Mental Health), and will also introduce the program through the Australian College of Mental Health Nurses.”

“The nurse of the future will need to have an in-depth understanding of core concepts in applied pathophysiology (which is the study of how the body responds to disease), and to be able to understand patients’ presenting signs and symptoms.

“This knowledge is fundamental to nurses being able to accurately conduct assessments, monitor patient safety and contribute to multi-disciplinary care planning,” Associate Professor Gerdtz says.

“Specialty nursing practice knowledge exists within a rapidly changing, highly technical environment. Teaching specialists within partner hospitals are ideally positioned to deliver the clinically based subjects within the course,” Associate Professor Gerdtz says.

The program will also facilitate stronger engagement between nursing academics of the University of Melbourne and clinicians in the health service which will provide greater opportunity for collaborative research.

“Our new program is unique in that it is part of the Victoria University Bachelor of Applied Pathophysiology taught as an intensive summer school. Areas of specialisation are focused on what is on offer in the Parkville Precinct and in Melbourne’s north-west – primarily population growth and expansion in emergency and critical care services.

“It represents a new model of thinking about how bioscience can be applied to specialist areas of nursing practice and informs all aspects of nursing work.”

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watching penguin parents arrive on shore at dusk is an amazing experience, but even more amazing is their next task: finding their own mates and chick(s) among the assemblage of black and white, and fluffy grey. By Andi Horvath.

K ing penguins breed on sub-Antarctic shorelines of the southern hemis- sphere where the colony head count can be in tens of thousands or more. On land the male and female of each pair take turns at incubating the egg on their feet, and going fishing. Yet they manage to find their way back to their partners among the huge crowds.

It would have to be like trying to find your partner in a section of the MCG where everyone is wearing black and white Collingwood jumpers, matching beanies and yellow flippers.

You don’t have a seating location but you know they are somewhere in this area of over 10,000 identically dressed, noisy fans, who are all on the look-out for partners and kids. So how do the penguins find their partners in a large throng?

Dr Peter Dann is Director of the Penguin Foundation, research manager at Phillip Island Nature Parks and an Honorary researcher at the University of Melbourne.

He says that studies have shown the adults and chicks find each other acoustically.

“That means penguins call out to each other and rather amazingly can recognise each other’s calls among the noise.

“It’s called the ‘cocktail party effect’, a term used by scientists who first explored the ability for discernment of certain sounds amid a range of background noises in King penguins.

“Imagine yourself at a noisy party. If your name is being mentioned in a conversation across the room it’s likely you’ll pick that up, just as if you can filter, but also scan for recognisable sounds.

“In our research we’ve watched adult King penguins in conversation on Heard Island, and one of my masters students explored parent-chick vocal recognition in Little penguins in a maze.

“The results showed that parents could recognise the sound of their own chick, and this is an adaptive feature ensuring a penguin feeds its offspring and not someone else. Interestingly, the chicks appeared not able to recognise their parents. Its possible the chick’s vocabulary and acoustic abilities have yet to develop,” Dr Dann says.

Penguins are particularly suited to such research because unlike many other bird species in which males and females look distinctly different, penguin look like clones.

“Male penguins tend to be slightly bigger and have slightly longer, deeper beaks than females,” Dr Dann explains, “and they perform a ‘courtship’ display in front of nesting burrows.

“Observations suggest the quality of his burrow may be a factor in the female’s choice. Bigger male penguins are popular with females, possibly because this suggests they’re good fishers. A deeper voice may also help make them more attractive, and being fatter could be another attractive trait.”

Voice also asked Dr Dann about penguin navigation, as they have been known to cover large distances, sometimes in the dark.

“Like other migrating birds scientists suspect they have an ability to sense and use magnetic fields for navigation, as well as celestial cues. But penguins also use landmarks. We have seen it with the Phillip Island penguin population: when one of the three light towers at the Penguin Parade has blown a bulb they will land onshore at a predictably different point. In the wild there is suggestion they use the stars as a landmark. And if it’s foggy they will wait ‘til the fog lifts before they come ashore. We think this is because they cannot see any landmarks on the shore to orientate them to their tracks.”

One of Dr Dann’s current research projects with Victoria University researcher Professor John Orbel is focused on developing a new way of cleaning wildlife fouled by oil spills, using a finely ground magnetic powder.

“Sadly there seems to be an oil spill every few weeks somewhere in the world so this is a global problem. Current methods use hot water and detergents which disrupt the animal’s waterproofing requiring post-cleaning periods of weeks for recovery and hot water is not always available.

“We’re working on a finely-ground magnetic powder that will remove oil more efficiently and effectively. It works for fur seals, and marine iguanas, as well as penguins and we’ve very excited at this better approach to caring for damaged wildlife.”

www.penguinfoundation.org.au

www.zoology.unimelb.edu.au

www.mdhs.unimelb.edu.au

H ave you ever wondered?

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Faces in the crowd: how do penguins identify their chicks?

Photo: Phillip Island Nature Parks

Watching penguin parents arrive on shore at dusk is an amazing experience, but even more amazing is their next task: finding their own mates and chick(s) among the assemblage of black and white, and fluffy grey. By Andi Horvath.
A new Master of Entrepreneurship will get under way in 2016 – a collaboration between the Faculty of Business and Economics, the Melbourne School of Engineering, and Ormond College, where the newly created Wade Institute to house the program will be situated. Master of Ormond Rufus Black reflects on the role of entrepreneurial education in fostering a creative, commercial mindset in Australia.

Australia has a compelling need for a generation of entrepreneurs who will create the new businesses, wealth and jobs to replace those currently being lost, and to provide a broader base to our economy as the mining boom wanes.

Creating this generation of entrepreneurs has received a major boost with a $10 million gift to create the Wade Institute for Entrepreneurship. The Institute is to be based at Ormond College and will offer a brand-new and highly innovative one-year University of Melbourne Master of Entrepreneurship degree for no more than 60 students in a single cohort. It is intended that this practical degree will produce graduates who are “start-up ready.”

The new Master’s degree is the result of the collaboration between the Faculty of Business and Economics, the School of Engineering and Ormond College, and is an integral part of the University of Melbourne’s commitment to creating a vibrant entrepreneurial precinct.

Behind this substantial gift is the very successful, but low-profile, entrepreneur, Peter Wade. Originally from Geelong, Peter knows first-hand the changes sweeping through the Australian economy. He has watched the decline of manufacturing and heavy industry in and around his hometown and how Geelong has reinvented itself several times to meet the challenges it has faced.

“Traditional manufacturing is disappearing,” Peter has said. “Even service jobs, whether they are in call centres or law and accounting firms, are going offshore. "Technology is disrupting “business-as-usual” and even those who work for others will need to be more entrepreneurial and innovative to help create Australia’s future.

“We are a smart nation but still too few of our great ideas are generating the future of our economy.”

Peter has been involved in supporting education for a while now and says he has enormous faith in the extraordinary talent of young Australians.

He is keen to see budding entrepreneurs equipped with the skills they need to take that talent and use it to create value, opportunities and jobs for Australia’s future.

It seems students are also very keen to be equipped with these skills.

Professor Leisa Sargent, Head of the Department of Marketing in the Faculty of Business and Economics, and one of the leaders of this collaboration, observes that there is a very strong desire among young Australians to create their own businesses, with market research conducted by her department finding 55 per cent of university students have starting their own business as a career goal. She sees a distinct generational shift in what students want to do with their lives.

The Dean of Business and Economics, Paul Kofman, and the Dean of Engineering, Iven Mareels, who have been leading this work for the University, are both keen to emphasise how the new Master of Entrepreneurship will be tailored to what emerging entrepreneurs need in order to get going.

Professor Mareels’ faculty runs the very successful Melbourne Accelerator Program and he says helping students to get real businesses going means educators have learned a lot about what students really need.

While the new Masters program will be very practical, facilitating students to create a pop-up business by mid-year and to pitch their start-up plan for real venture capital funds at the end of the course, it is also very rigorous. Both deans see this as vital, and key to Professor Kofman’s stated aim of dramatically increasing the likelihood of students being successful as entrepreneurs.

For the University of Melbourne, the Wade Institute and the new Master of Entrepreneurship degree are an integral part of its mission to create a leading entrepreneurial precinct. The University of Melbourne Vice-Chancellor, Glyn Davis, has observed that universities contribute to their societies in a range of important ways, and that as a world-leading research university, Melbourne recognises the centrality of translating discoveries and ideas into new products and services that will add value to Australia and the world.

Professor Davis says the University has been working to create the ’entrepreneurial ecology’ that is necessary for these efforts to succeed. The Wade Institute and the Master’s program will make an important and ground-breaking contribution to these efforts.

The Chair of Ormond College Council, Andrew Michelmore, has recently announced that Dr Peter Binks is to be the foundation Director of the Wade Institute. Dr Binks was formerly CEO of the Sir John Monash Foundation, and brings to the role experience in the world of commercialising science, having formerly led Nanotechnology Victoria, also a wealth of experience across the corporate sector from his roles at McKinsey, Telstra, and BHP.
Making a difference in Uganda

Advances in nanomaterials changing the way the world works

Andi Horvath speaks to physicist Ken Crozier about the radical changes to many industries based on advances in nanomaterials.

Nanomaterials are materials whose constituent units have at least one dimension between one and 100 billionths of a metre. That’s 1000 to 100,000 times narrower than a human hair, and nanomaterials can be seen only using powerful microscopes.

Today’s nanomaterials are sometimes used in new hi-tech surface innovations such as self-cleaning windows, invisible barcodes and paint resistant coatings. What’s exciting about materials that can be turned into nanomaterials is that they exhibit a new range of physical properties at the nanoscale. For example a tablespoon of flour is unreactive to a flame, but a fine cloud of flour can ignite and cause an explosion.

Another example of a nanomaterial is the Lycurgus Cup, a beautiful 4th century Roman glass goblet housed in the British Museum. Scientists have identified that its glass contains gold and silver nanoparticles. It is possible this arose from accidental contamination of the glass. When the cup is backlit it glows a deep red, while when it’s illuminated from the front it reflects a milky green hue. In other words, nanomaterials consisting of gold or silver dust have properties very different from clumps of gold and silver.

This is at the heart of why the creation of new nanomaterials is so exciting. Ken Crozier is a professor of Physics and Electronic Engineering and works at the intersection between optics and nanomaterials. He has recently published a paper on a breakthrough in the understanding of nanomaterials that can be used to sense minute quantities of chemicals in air and water.

“We are in an exciting era of optics as we can now sculpt and engineer materials on the nanoscale,” Professor Crozier says.

“These materials can in turn be used to produce new optical technologies. Light interacts with nanoparticles in surprising ways. For example, if we shine light onto a pair of gold nanoparticles separated by a small gap, then the light will be concentrated in the gap.”

“When we began our study, there were two competing theories as to what would happen as the gap is made narrower and narrower. We developed a method to fabricate gold nanoparticles separated by gaps with very precisely controlled dimensions. This allowed us to find which theory was correct.”

“This type of information could be important for engineers and scientists working in the nanomaterial industry because it could allow them to design structures with higher performance, in this case light concentration,” Professor Crozier says.

“Faster computer chips and the Internet are two contributors to globalisation, and for both of these, advances in optics have been crucial. Who knows what even more dramatic changes will be in store due to the development of optical nanomaterials?”

www.physics.unimelb.edu.au
A green living learning design school

Sustainability expert Dr Dominique Hes profiles the University of Melbourne’s newest and greenest building.

**THE UNIVERSITY OF MELBOURNE**

**DECEMBER**

**9**

**A green living learning design school**

**Sustainability expert Dr Dominique Hes profiles the University of Melbourne’s newest and greenest building.**

The new Melbourne School of Design is the University’s first 6-Star Green Star building, and is already inspiring students and industry through this achievement and the demonstrated fact that the building was completed in advance of its contract. This new academic centre for the built environment will continue to inspire as it wears its heart on its sleeve, making its performance transparent and open to research.

Buildings, like people, require a period of time to get to know one another, to get comfortable and predictable; it is expected this will also be the case with the new Melbourne School of Design. It is purposely designed to connect to its users, from the information provision to the design of the circulation to allow people to enjoy the light, views and displacement ventilation. This is evidenced across the works of American photographer Richard Avedon.

Richard Avedon People, a new exhibition at the Ian Potter Museum of Art at the University of Melbourne, celebrates the work of American photographer Richard Avedon (1923 to 2004), renowned for his achievements in the art of black and white portraiture.

Avedon's masterful work in this medium is revealed in an intimate assembly of 80 photographs from 1949 to 2002. Known for his exquisitely simple compositions, Avedon’s images express the essence of his subjects in charming and disarming ways. His work is also a catalogue of the who’s who of 20th-century American culture. In the show, instantly recognizable and influential artists, celebrities and countercultural leaders including Bob Dylan, Truman Capote, Marilyn Monroe, Elizabeth Taylor, and Malcolm X, are presented alongside portraits of the unknown. Always accessible, they convey his profound concern with the emotional and social freedom of the individual.

“Richard Avedon was one of the world’s greatest photographers,” says Ian Potter Museum of Art Director, Kelly Gellatly. “He is known for transforming fashion photography from the late 1940s onwards, also his revealing portraits of celebrities, artists and political identities. “People may be less familiar, however, with his portraiture works that capture ordinary New Yorkers going about their daily lives, and the people of America’s West,” Ms Gellatly says.

“Richard Avedon People brings these lesser-known yet compelling portraits together with his always captivating iconic images. In doing so, the exhibition provides a rounded and truly inspiring insight into Avedon’s extraordinary practice.”

Avedon changed the face of fashion photography through his exploration of motion and emotion. From the outset, he was fascinated by photography’s capacity for suggesting the personality and evoking the life of his subjects. This is evidenced across the works in the exhibition, which span Avedon’s career from his influential fashion photography and minimalist portraiture of well-known identities, to his depictions of America’s working class.

Avedon’s practice entered the public imagination through his long association with seminal American publications. He commenced his career photographing for Harper’s Bazaar, followed by a 20-year partnership with Vogue. Later, he established strong collaborations with Esquire and The New Yorker, becoming staff photographer for The New Yorker in 1982.

Richard Avedon People is the first solo exhibition of Avedon’s work to be displayed in Victoria following showings in Perth and Canberra. The exhibition career was curated by the National Portrait Gallery’s Senior Curator, Dr Christopher Chapman, in partnership with the Richard Avedon Foundation over the course of two years.

*Richard Avedon People*
6 December 2014 to 15 March 2015

**Mae West, actor, with Mr. America, New York, 1954** Photograph by Richard Avedon © The Richard Avedon Foundation (Not to be used in social media)

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Indigenous students get the opportunity to RISE

Stav Psonis speaks with health economist Anthony Scott about research designed to inform decision-making about attracting GPs to rural practice.

Having access to basic medical care provided by GPs is a service that Australians living in metropolitan areas take for granted. In rural and remote areas, it has been difficult to attract and retain doctors. What can be done to address the shortage of doctors in country practice?

Published this month in Social Science & Medicine, a study led by University researchers is the first in Australia to identify the types of incentive programs likely to influence the majority of GPs to remain longer in rural areas.

Lead researcher Professor Anthony Scott from the Melbourne Institute of Applied Economic and Social Research, says the study has found a locum relief scheme together with an increase in GP retention payments and the rural skills loading, are the most important factors to improve the retention of rural doctors.

“We know doctors are likely to leave rural practice after the first two years, even though incentives to attract and encourage doctors to stay in rural areas have been in place for decades,” Professor Scott says.

Existing retention grants are based on an ‘average GP and rural area’ model which aims to compensate rural GPs based on where they are located.

“There has been no empirical research to date that evaluates the effectiveness of the existing ‘one size fits all’ retention policies,” Professor Scott says.

“Our study examines the role of new incentive packages in retaining rural GPs, by exploring their preferences for the different types of incentives that may be available. When we understand what motivates doctors, we can use those findings to guide the design of retention policies,” he says.

The survey of 1604 rural GPs was conducted in 2009 as part of Australia’s national longitudinal survey of doctors, the MABEL study – Medicine in Australia: Balancing Employment and Life. This study was conducted through the Centre of Research Excellence in Medical Workforce Dynamics, which is funded by the National Health and Medical Research Council. The MABEL study aims to improve our understanding of doctors’ work preferences and how this may impact Australians’ access to health care.

Participants in the study were presented with a series of incentive packages and asked to identify those incentives most likely to influence their decision to stay in rural areas.

The survey found nearly two-thirds of rural GPs were likely to stay in rural practice longer if the new incentive packages were available, compared with the existing policies. A locum relief scheme would have the largest impact on improving the retention of rural doctors, followed by an increase in retention payments and a 10 to 20 per cent rural skills loading, especially for GPs working in rural hospitals.

Importantly, one quarter of rural GPs were not influenced to remain in rural practice by any of the incentive packages presented to them in the survey. Those GPs are likely to be older, have no dependent children and are practising in a larger rural area with less frequent on-call needs.

Professor Scott says this finding suggests a ‘one size fits all’ policy for rural incentives may not be optimal, as it has no impact on the decision of some GPs to remain in rural practice.

“Designing schemes to encourage doctors to locate and stay in rural areas requires an understanding of the various factors that motivate doctors’ decisions. Our study has shown the types of incentives that are likely to keep GPs longer in rural areas, so looking at what motivates doctors can help policy-makers design more effective future retention schemes,” he says.

www.melbourneinstitute.com

Building the allure of a country practice

Trinity College student mentor Amba-Rose Atkinson, with Natasha Kh Ozi and Tenelle Francis, both from Yramala School Studio. Photo: Richard Timbury.
Learn a new language: a sign of the times

An extraordinary level of demand for sign language courses has prompted the MGSE to significantly expand opportunities for students to pursue them. By Lisa Zilberpriver.

LEARNING AND TEACHING

If you want to learn a new language, the common wisdom says the best way is by immersing yourself in it – for example, by moving to live in a region, a country where no one speaks anything else.

But how do you immerse yourself in a language that isn’t spoken by a majority anywhere? And what do you do if most classes that are available to you are taught by non-native speakers?

That is the situation usually faced by students who want to learn Australian Sign Language – or Auslan.

In the face of growing demand for quality, immersed education in Auslan, the Melbourne Graduate School of Education has teamed up with the Northern Melbourne Institute of TAFE to offer intensives taught wholly by deaf teachers.

“Intensive” means all the students are immersed in the language, the visual language, the body language, facial expressions. Some signs are included in there, but actually, they’re learning deaf culture and the approach to deafness and Auslan,” says Ross Onley-Zerkel, NMIT course co-ordinator and teacher.

The course was offered in response to a high volume of requests from students studying a broad subject called Auslan and Visual Communication at the MGSE.

“That subject is about all different aspects of deafness including cochlear implants and noise-induced hearing loss and a whole range of different things,” explains MGSE course co-ordinator Ms Julie Leigh.

“Two weeks of the twelve weeks are always about Auslan and the deaf community, and in the feedback at the end of semester, students invariably say “I wish we could have more Auslan,” Ms Leigh explains.

“We really expected perhaps 20, maybe 60 students to enrol in this intensive, and we just had this incredible interest.

“The numbers just grew and grew and grew,” says Onley-Zerkel. “So many students enrolled – it was like they were just lined up and waiting to do the course.”

Enrolments finally had to be capped at 175 students, with scores more turned away, as plans were put in place to consider offering two courses in 2016.

Ms Leigh says the immense popularity of Auslan may be due to its usefulness.

“Deaf people would certainly say in their experience that when two deaf people who speak different sign languages meet, they’re able to communicate, whereas each other a lot more easily than two speakers of different spoken languages because of that underlying gestural and visual communication,” she says.

“They can bridge those communication gaps often a lot more easily than we can with spoken languages.”

However, according to Ms Leigh, it may also be the pure visual appeal of the language that makes it so attractive to students.

“I think it’s a very beautiful language; it’s really gestural and expressive. I think people find it so interesting that you can convey all the subtleties and abstract concepts of spoken language and that can all be done in a signed language,” she says.

Another teacher from the intensive, Stephanie Linder, was never formally taught to sign. Instead, she picked it up at school, from other kids.

Even though nowadays Auslan is offered as a Language Other Than English subject at Victorian high schools, Linder says fundamental improvements need to be made to the way it is taught.

“I try to avoid teaching Auslan through the English language because they’re so completely different as languages,” she says.

“Traditionally, it’s always been the case that people are trying to teach Auslan using English, and I try and separate the two languages and develop students’ experiences to try and get them to think differently and not rely on English,” Linder explains.

“I use visual cues like pictures and try and immerse them in that visual frame of mind so that they can link concepts together rather than linking a concept to English and then learning the Auslan for it.”

It is critical that students learn Auslan from deaf teachers, according to Linder, and she is not alone in that view.

“We need to get qualified deaf teachers in schools because that is the foundation of the language that is going to develop among students,” she says.

“It should be deaf people who deliver Auslan teaching,” Onley-Zerkel agrees.

“If you’re learning Japanese or Chinese or Italian, it’s best to have an actual native speaker deliver that training program or that class – same with Auslan,” he says.

In the meantime, students who took the Auslan winter intensive are doing their part to bring the language to the wider community. For her assessment task, Phoebe Imms created a series of videos aimed at introducing kids to Auslan using the visual methods taught by Ross and Stephanie.

Her classmate, Alma Schonken, took the opportunity to develop an entire system for creating new signs to express difficult concepts in physics.

Both are determined to further their knowledge of Auslan and to spread the word – no matter whether it’s spoken or signed.

Watch a story about the Auslan intensive in the latest episode of the University’s vodcast, Visions.

www.education.unimelb.edu.au

Watch an episode of Visions covering the rise in interest in Auslan teaching - www.visions.unimelb.edu.au

The interface between medicine and engineering is growing ever stronger and clinicians are using new technologies to improve outcomes for patients. University of Melbourne experts have joined forces with the rehabilitation staff at the Royal Melbourne Hospital (RMH) to work with patients recovering from stroke or other nervous system injury. Annie Rahilly reports on the hands-together approach to this important initiative.

RESEARCH

Stroke can be a debilitating and life-changing experience, not just for the person who has endured the stroke, but also for families and carers.

Functional recovery of the upper limb after stroke or other nervous system injury continues to be one of the greatest challenges faced by rehabilitation professionals.

Although many patients regain walking ability, a substantial proportion fail to regain functional use of their arms and hands.

Patients consider their loss of arm function as serious, or more serious, than their impaired walking, and have expressed dissatisfaction and frustration with the inadequate training possibilities after discharge from hospital.

Mary Galea from the University of Melbourne’s Department of Medicine at the Royal Melbourne Hospital (RMH) has dedicated much of her professional life to working with and understanding the challenges faced by people recovering from strokes.

Professor Galea believes there is a clear link between reduced upper limb function after stroke and poor health-related quality of life.

“In practice, rehabilitation of the arm is often given a lower priority than training of walking, and little time is devoted to upper limb rehabilitation,” Professor Galea says.

“Efforts need to be made towards increasing the uptake of effective interventions to improve health outcomes for patients.”

A ‘Hand Hub’, the first of its kind in Australia, based at the Royal Park Rehabilitation Centre was established to harness the use of technology as a means of exercising the affected arm and hand to maximise recovery of function.

The Hand Hub has different workstations where patients participate in active exercises using computer games specifically designed to encourage arm and hand movements.

Enter members of Denny Oetomo’s Robotics team at the Melbourne School of Engineering.

Dr Ying Tan from the MSE, Professor Mary Galea from RMH, Anastasia Peppas, ‘Hand Hub’ patient, Dr Vincent CROCHER from MSE. Photo: Peter Casamento.

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Enter members of Denny Oetomo’s Robotics team at the Melbourne School of Engineering.

Dr Oetomo, a Robotics Engineer in Mechanical Engineering is keen to explore the use of robotics to improve upper limb function and help build on the promising work of the Hand Hub.

He has introduced the Armeo robot into the Hand Hub, which is now being used successfully by patients with little or no voluntary arm movement.

Like the other devices in the Hand Hub, the Armeo uses games to motivate patients and encourage repetition of active movements.

“As part of our research we will examine data captured by the Armeo to study the recovery process, and to refine the robot’s algorithms for more effective treatments,” Dr Oetomo says.

“We are excited to be involved in this cross-disciplinary collaboration as we witness research move from laboratory to clinical practice. Our motivation is simple: seeing patients progress in their recovery.”

www.mech.unimelb.edu.au
Advancing by making mistakes

The first cohort of Bachelor of Fine Arts will soon graduate and enter the cultural professions, to share their creative visions with the world. Liz Banks-Anderson spoke with Professor Su Baker, Film and Television student Stephanie Parsons and Music Theatre graduate Alex Gibson-Giorgio to reflect on the year that was.

In Brief

Greener cities are cooler cities in summer: new guide reveals how

With the number of Internet connected devices rapidly increasing, researchers from Melbourne are starting a new project that seeks to reduce energy consumption of such devices. Led by the Centre for Energy-Efficient Telecommunications (CEET) at the University of Melbourne, the program will develop new hardware and cloud-based solutions to improve efficiency of energy consumption.

As more connected devices are used across the world through the Internet of Things, there is a need to address the demands that these devices place on energy, management and control for a vast array of items, from traffic lights, to home appliances and building components. The aim of the research project is to reduce data processing and transmission while in significant energy consumption.

CEET Director, Dr Kerry Hinton, said the new research agenda would establish Melbourne at the heart of efforts to create a sustainably networked city.

“CEET has proven leadership in understanding the complex energy requirements of the global telecommunications network. This next phase will build on that leadership, contributing to industrial solutions that ensure the unquestionable benefit of connected world do not come at an unsustainable cost,” Bell Labs Network Energy Research Program Leader, Dr Thierry Klein, said. CEET collaboration with skilled specialists would be a key factor in solving future network efficiency issues.

“Efficiency and sustainability are already significant challenges for the telecommunications industry and this will only increase as more devices are connected and more data is moving around the network. Our work with CEET is a critical part of the Bell Labs sustainability research agenda and this new research program will play a big part in how we address challenges for the global telecommunications industry in the future.”

CEET acknowledges the support it receives from the Victorian Government.

Making Melbourne a ‘20 minute city’

Cars can travel approximately 10 times further than public transport in 20 minutes, a report undertaken by the University of Melbourne has found.

The research, from the Faculty of Architecture, Building and Planning, found that even cycling gives people far greater access to areas across Melbourne than public transport within the same 20 minute period. The report is the result of an ARC Linkage Program project, Intersecting Places, led by Professor Kim Dovey and Mr Ian Woodcock focused on several diverse suburban zones in Melbourne, including Reservoir, Sunshine, Surrey Hills and Chadstone.

“Convenience and time ranked highest for survey participants when choosing whether to drive, catch public transport or cycle,” Professor Dovey said.

“The way Melbourne is designed makes everything easier for people with cars and more difficult for those who use public transport. The incentives are not in place for people to choose public transport as their main mode,” he said.

“If we want a low-carbon city then we must design one where public transport access times can at least compete with the car.”

The report suggests that in order to achieve a 20 minute city, planning needs to work in hubs 10km x 10km, with a cluster of amenities, services and businesses, so residents could reach these zones easily within 20 minutes.

The report found that often shopping malls have untapped potential for creating community hubs that are networked to make the city more accessible and liveable.

IN BRIEF

“CEET is a critical part of the Bell Labs sustainability research agenda and this new research program will play a big part in how we address challenges for the global telecommunications industry in the future.”

CEET acknowledges the support it receives from the Victorian Government.
Melbourne’s new graduate doctors

As the first cohort of the Doctor of Medicine (MD) program graduates this month, Kate Dukes speaks to four members of the class about their experience and next steps.

Dr Howarth made the most of this opportunity and intrigued by Medicare data that showed Victorian women undergoing genital cosmetic surgery had increased by 252 per cent from 2000-2011, she went on to undertake research into personal experiences of these patients from this research. “The aim of the research has been to try to develop management guidelines for general practice as none currently exists. It has been very successful with the Royal Australian College of General Practitioners commissioning the development of a toolkit for GPs to assist in their management of these patients from this research.”

This work has been presented at meetings around the world, including at conferences in England and Greece, and is currently being submitted for publication. “We even did things like bottle and sell wine to raise money.” Mr Michelmore says support from the University community was vital in getting them over the line to compete. “It was a weird, euphoric feeling – we had no idea if we were a chance of winning the race, but we were going to give it everything we had,” he says.

Rowing champions still making a splash

Rowing champions – recently celebrated the fortieth anniversary of their victory. By Brooke Charlton.

Reflecting on the victory, Mr Michelmore says the team – coached by Boat Club life-member Peter Philp – didn’t know if it had a shot at winning, let alone the gold medal. “We had no idea if we were a chance of winning the race, but we were going to give it everything we had,” he says.

Mr Michelmore says support from the University community was vital in getting them over the line to compete. “It was interesting to go back and read the list of hundreds of people who supported us, of all ages and backgrounds. I think that’s the fantastic thing about it,” he says.

“It was the first time a lightweight, all-Melbourne University crew won over so there were a lot of friends and supporters who wanted to back us. Sending the crew to Europe to train and compete for several weeks required some ingenious fundraising, according to Mr Michelmore. “We even did things like bottle and sell wine to raise money.”

Mr Michelmore describes sport plays an important part in the university experience. “Crews are made up of teams of different backgrounds and personalities, and what work is like, so it helps you learn how to engage with people, how to get them committed and working with each other,” he says. “It also teaches you about management, people skills and leadership.”

All of the crew have remained close friends and are still actively involved with the University. Mr Michelmore, a big supporter of Believe – the Campaign for the University of Melbourne, will stay on at St Vincent’s; and Dr Howarth, interested in a career in obstetrics, will start at The Royal Melbourne Hospital; Dr Harding, interested in pursuing a career in paediatrics, will start at Western Health; Dr North, considering a career in haematology, will stay on at St Vincent’s; and Dr Eaton will move back to Melbourne to start at The Royal Melbourne Hospital.

The MD opened up a new avenue to allow students to pursue such a range of opportunities and leave with a strong sense of commitment to improving the health and wellbeing of communities. Dr North feels the highlight of the course was undertaking a placement in the remote Aboriginal community of Kalukutjarra through the John Flynn Scholarship program. “I’ll never forget the people I met, and how much I learned about Aboriginal culture. It was a once-in-a-lifetime experience, and I feel very lucky to have had it,” he says.

www.mdhs.unimelb.edu.au
Visions mini documentaries
If you want to learn a new language, the common wisdom says the best way is by immersing yourself in it – for example, by going to live in a region or a country where no one speaks anything else. But how do you immerse yourself in a language that isn’t spoken by a majority anywhere? And what do you do if most classes that are available to you are taught by non-native speakers? That is the situation usually faced by students who want to learn Australian Sign Language, or Auslan. With an increased demand for this kind of learning, Visions takes a closer look at the Auslan studies being offered to future teachers in the Melbourne Graduate School of Education in conjunction with Northern Melbourne Institute of TAFE.

Available on iTunes, YouTube or via http://visions.unimelb.edu.au

Up Close Podcast
http://upclose.unimelb.edu.au
@upclosepodcast

Mind shift: How always-on digital technologies are changing the way we think
Neuroscientist Professor Baroness Susan Greenfield examines the scientific bases of how constantly-on digital environments may bring about changes in our brains. Presented by Dr Shane Huntington.

Professor Greenfield is Senior Research Fellow at Lincoln College, Oxford University and CEO of Neuro-bio Ltd, a biotech company.

December Timetable

MELANCHOLY MADNESS
MONDAY 15 DECEMBER 5PM
A Raving and Melancholy Madness by Professor Allan Young (King’s College, London). Medicine, Dentistry and Health Sciences lecture

Bookings: http://alanyoung.eventbrite.com
Enquiries: janmar@unimelb.edu.au, 8344 5509

AUDITORIUM, MELBOURNE BRAIN CENTRE, KENNETH MYER BUILDING, 30 ROYAL PARADE, PARKVILLE

QUEST FOR ICONS
MONDAY 8 DECEMBER 6.30PM
The Architecture of New Museums in Central Europe – the Quest for Icons in the 21st century by Dr Karolynna Jagodzińska (Associations of Art Historians, Poland). Arts lecture

Bookings: http://alumni.unimelb.edu.au/architecture
Enquiries: carnh@unimelb.edu.au, 8344 8957
MACMAHON BALL THEATRE, OLD ARTS BUILDING

TUESDAY 9 DECEMBER 6PM
Could Australia Really Become a Police State? by Professor Philip Alston (New York University School of Law). Law lecture

Enquiries: law-events@unimelb.edu.au, 8344 3542
LECTURE THEATRE G08, MELBOURNE LAW SCHOOL, 185 PELHAM STREET, CARLTON

MELANCHOLY MADNESS
THURSDAY 11 DECEMBER

Is Our’s a Police State?

TUESDAY 9 DECEMBER 6PM
Return to Eden?: How we “consume” nature and what it says about us
Marketing researcher Dr Robin Canniford discusses how consumers – through their pursuit of outdoor activities often involving sophisticated equipment – seek to assemble romantic experiences of nature. Presented by Elisabeth Lopez.

Dr Robin Canniford is a marketing researcher at the University of Melbourne’s Department of Management and Marketing. He’s been researching surfing culture to find out how consumers assemble romantic experiences of nature.

Coming soon:
Explaining science in a constantly shifting media landscape

Celebrated science writer and author Margaret Werthem discusses the future of science journalism and communication in the fragmented world of social and digital media. Presented by Dr Shane Huntington.

Margaret Werthem is a science writer and the author of books on the cultural history of physics.

Contagion calculation:
Forecasting and tracking outbreaks of influenza

Epidemiologist, Associate Professor Jodie McVernon discusses research into tracking and predicting the spread of influenza and other viral diseases like Ebola. Presented by Dr Shane Huntington.

Associate Professor Jodie McVernon is an epidemiologist based at the Melbourne School of Population Health.

The University has used its best endeavours to ensure that material contained in this listing was correct at the time of release. We recommend users of this listing check the information provided with the relevant faculty or department.

For latest listings visit: www.events.unimelb.edu.au

For University maps and locations visit: unimelb.edu.au/campuses/maps.html
A new Athletics Australia and University of Melbourne initiative is designed to inspire the next generation of Indigenous student-athletes, writes David Scott.

**SPORT**

**“S**port is absolutely a platform for providing Indigenous Australians with the opportu-
nity to be equals.

“We need to do more to empower Indigenous youth, and if we can show them that education and sport can work together to give them more opportunities like this, then that’s an exciting future to be part of.”

It’s language we’re all familiar with, but in this instance the statements carry further weight when uttered by Tyrone Bean.

A proud Kabi-Kabi and Bindal man from Queensland, Mr Bean has a unique insight into the intersection of sport and education; a final year Arts student at the University of Melbourne, he is also part of the University’s Elite Athlete Program, splitting his time with Colbun in the VFL.

And he will soon have the opportunity to talk about balancing success in both arenas, as one of the volunteer mentors for Athletics Australia’s Raise the Bar Academy, to be held at the University in January.

Part of the ‘Athletics for the Outback’ program run by Athletics Australia, the Academy aims to support Indigenous secondary school students in years 10 to 12 who are interested in pursuing a tertiary education and a career in the sports industry.

Among those joining Mr Bean for the program will be Australia’s fastest woman Melissa Breen, the 2014 Commonwealth Games 100m hurdles finalist and Indigenous athlete Shannon McCann, and one of Australia’s best long jumpers, Indigenous athlete Robert Crotzer.

Commonwealth Games and Australian 800m open record holder Alex Rowe (Biomedicine) is also involved, alongside World Junior Championships steeplechase representa-
tive Stella Radford.

Mr Bean has little doubt that such programs work, as the beneficiary of many equivalents in his formative years, including captaining the Australian Indigenous Football team on a tour of South Africa as a 16-year-old, and playing in Australia’s Indigenous Under 23 side as just a 15-year-old.

“Not only do you further your sporting ability and education, but you learn co-operation, lead-
ship and about different cultures. It really gets you out there, among peers who are working towards the same sets of goals and making the same sacrifices. It really drives you on,” he says.

“I’m glad I’ll have the chance to show another generation what it’s like to be an elite athlete, all the extra work you need to do, so I can try and give them the greatest opportunity to pursue their dream.

“But I’m also hoping we can inspire more Indigenous students to consider university study after school, that’s really the biggest thing. “Hard work does pay off, you just need to make sacrifices.”

Bridgid Junot, the Athletics Australia co-
ordinator of the Academy program, is hopeful experiences like Bean’s will indeed inspire the next generation of Indigenous athletes.

“We wanted to create an experience for Indigenous students that allows them to see the opportunities available to them through participating in sport and continuing education beyond secondary school.

“Many young people don’t understand that you can do both, and in fact, are often more successful when you’re able to balance the two,” she says.

“We hope to achieve this vision by expos-
ing Indigenous Australian youth to education pathways offered at the University in a non-
threatening, culturally appropriate and fun environment.”

An interest in linking sport and education runs in the family. Bridgid Junot’s husband, Carl, Junot, is the Elite Athlete Program co-ordinator for MU Sport. He says the partnership brings together many different parts of the University for a single, focused cause.

“It allows us to work closely with other units within the University – including Murrup Barak, Admissions, Trinity College and Melbourne University Athletics Club – also to work closely with a national sporting organisation,” Mr Junot says.

“Building and strengthening these rela-
tionships will help us remain among the top destinations for elite athletes wishing to study at university. But most importantly, the Academy allows our student athletes the opportunity to grow through social responsibility in a sporting sense and help develop young aspiring student athletes who may not have had the same oppor-
tunities our current student athletes had as high school students.”

For Bridgid Junot and Athletics Australia, the hope is that the program will be a launching pad for further opportunities in the future.

“It is our intention that if students are inter-
ested, they can seek additional mentorship from attending the athletes’ after-event.

“In addition, we hope to service the com-
munities from which participants come through our Athletics for the Outback program, which provides coaching education visits to remote and regional communities throughout Australia.”

It’s a move welcomed by Mr Bean, who stressed such an ongoing commitment was important for the program to be successful.

“A little analogy that I like to use with pro-
grams like this is: Sometimes you have a cloud, it comes in, rains and goes away but doesn’t really make a lasting difference. We’ve seen so many organisations do that.

“What we need is a thunderstorm, some-
ting substantial that leaves the grass ‘green’ after it’s left. Then we know a real difference has been made.”

All six former test players were awarded with ‘Legend Status’ at the induction event. This group included Roy Park, Keith Rigg, Edward a’Beckett, George Thoms, Colin McDonald and the club’s most recent test selection, (Andrew) Paul Sheahan, who played 31 tests for Australia to go alongside three one-day internationals as well as 47 matches for Victoria.

Hall of Fame selection committee member Chris Grant said all the Legends had unique stories to tell.

“Keith Rigg might have played just eight tests for Australia, but that included a century against South Africa in 1931, and he also rep-
resented Victoria 87 times. Edward a’Beckett played just four tests but his 35 matches for MUC also included the club’s first premiership.

“And Colin McDonald has a special place in club folklore, as he once opened the batting for the University, Victoria and Australia in the same season.”

Joining the Legends were William ‘Bill’ Bailey (first premiership captain), Albert ‘Bert’ Hartkopf (one test), Margaret Pickles (inaugural captain of Melbourne University Women’s Cricket Club, playing in all five winning premierships), Geoffrey Allardice (club record for most runs scored) and Ashley Robertson (club record for matches played and wickets taken).

You can find out more about the club at

http://www.mucc.com.au
COURSE INFORMATION DAY

ON CAMPUS: 17 DECEMBER
ONLINE: 18 DECEMBER

YOUR FUTURE STARTS HERE

AUSTRALIA’S NO.1 UNIVERSITY

EVENTS AND COURSES

AT THE UNIVERSITY OF MELBOURNE

CONCERTS
- Masters Recital Series
- 8 – 11 December
- Featuring performances by Master of Music (Performance) students.
- Venue: Melba Hall, Royal Parade, Parkville
- Admission: Free, check website for program and artist details
  conservatorium.unimelb.edu.au/events

PUBLIC LECTURES AND FORUMS
- Music on the Mind - Why aren’t there more one-man bands?
- Monday 9 December, 6pm
- Musical ensemble performance is a social art form in which multiple individuals coordinate their actions in order to communicate aesthetic goals. Achieving these goals requires specialized cognitive-motor ensemble skills that facilitate precise yet flexible interpersonal coordination. Presented by Assoc. Prof. Peter Keller (MARCS Institute, University of Western Sydney), this lecture will address the psychological processes and brain mechanisms that enable such coordination.
- Admission: Free, bookings essential
  Bookings: melbournrecital.com.au/enquiries: 03 9035 9400 or mlgallery@unimelb.edu.au

SHORT COURSES
- There are a wide range of upcoming short courses at the Victorian College of the Arts and Melbourne Conservatorium of Music.
- With programs for teens and adults, from novice to experienced, you can fuel the creative fire in your belly. Upcoming programs include Summer Schools and year-long part-time programs in Acting, Art, Music Theatre and Jazz Ensembles.
- More information: vca-mcm.unimelb.edu.au/shortcourses

FILM SCREENINGS
- Film and Television Graduate Annual Screenings
- 5 – 7 December & 13 – 14 December
- The annual premiere showcase of work by the School of Film and Television graduating students.
- Venue: ACMI Cinemas, Federation Square, Melbourne
- Admission: Restricted 18+, fees apply

EXHIBITIONS
- Margaret Lawrence Gallery
- 40 Dodds Street, Southbank
- Opening hours:
  Tuesday – Saturday, 12pm – 5pm
- Admission: Free
  Enquiries: 03 9035 9400 or ml-gallery@unimelb.edu.au

- Ian Potter Museum of Art
- Swanston Street, Parkville
- Gallery hours:
  Tuesday to Saturday, 12pm – 5pm
  Closed: Sunday
  Admission: Free
  Enquiries: 03 8344 0327

- Richard Avedon People
- 15 March 2015
- American photographer Richard Avedon (1923–2004) produced portrait photographs that defined the twentieth century. Richard Avedon People explores his iconic portrait making practice, which was distinctive for its honesty, candour and frankness.

- Everyday imagining: new perspectives on Outsider art
- to 18 January
- The work of Outsider artists is often interpreted as expressing a unique inner vision unsullied by social or cultural influences.

- Between artefact and text
- to 19 April
- Mesopotamia, Egypt, Greece and Rome are all great civilisations of the ancient world: each one imbued with particular linguistic, social, religious and political systems. On one level these different societies are characterised by distinctive cultural developments and unique literary traditions. On another level connections and influences are clearly discernible.