Career News

Issue 7, 2016

aitken COLLEGE In Mind and Spirit

RMIT Folio Preparation Courses

RMIT's portfolio preparation and career discovery courses are designed to help students create a winning portfolio to apply for art and design courses at TAFE and university. These types of courses also provide an overview of the industry, the study options available and the selection procedures.
Upcoming courses include:

- Illustration: Styles and Techniques
- Career Discovery in Fashion and Textiles
- Portfolio Development in Fashion and Textiles
- Portfolio Preparation in 3D Product Design
- Portfolio Preparation in Graphic Design - Level 1
- Portfolio Preparation in Graphic Design - Level 2
- Portfolio Preparation in Interior Decoration
- Portfolio Preparation in Visual Merchandising

For more information visit:
https://shortcourses.rmit.edu.au/content_page.php?page=high_school_students&cbs=d6774160d59b8bb90fee679696deedc9

Science in the City Lab Tour

Curious about Science at RMIT? Students and parents are invited to visit the RMIT state of the art laboratories to learn more about RMIT courses and the research and training facilities available to students. Find out more about the wide range of single and double degree Science courses available at the city campus. The event will take place on 27th June, 11:00am - 2:00pm.

For more information or to register visit: https://www.rmit.edu.au/events/all-events/tours/2016/june/science-in-the-city-lab-tour/.

New double degree in Chemical Engineering and Pharmaceutical Sciences

From Semester 1, 2017, RMIT will be offering a double degree in Chemical Engineering and Pharmaceutical Sciences. The four year degree will be offered across the City and Bundoora campuses.

For more information visit: http://www.rmit.edu.au/study-with-us/levels-of-study/undergraduate-study/honours-degrees/bh122/#pageId=overview.

University of Melbourne Dookie campus

University of Melbourne students don't just learn the science behind agriculture; they get real world experience at the 2,440 hectare Dookie campus. Take a flyover tour with this video:
https://www.facebook.com/fvasunimelb/videos/1124669024252652/?_cldee=Y2JvcmdAYWl0a2VuY29sbGVnZS5lZHUuYXU%3d&utm_source=ClickDimensions&utm_medium=email&utm_campaign=ER_My_Melbourne_May_2016_EDM

Recently Ms Gibbs and I attended three very informative presentations at the University of Melbourne. The following summarises their content:

Bachelor of Agriculture presentation

By Ms Ros Gall: Dookie Campus Director and Director of Agriculture
Faculty of Veterinary and Agricultural Sciences

2016 intake: 193 students into first year.
53% of these students were from metropolitan Melbourne (70% from metropolitan and outer metropolitan Melbourne).
Very few students studying the degree have a farming background.
The message the Agriculture Faculty would like to get across is that Agriculture **does not equal** Farming.
Less than 10% of graduates go into farming jobs on graduation, most go into highly technical, professional roles.
More than 50% of the students are female.
Salary of an Agriculture student after 3 years of study on graduation: $55 – 60,000

Many students start Agriculture as a pathway to Veterinary Science. Once they learn more about Agriculture very few decide to continue to post graduate Veterinary Studies. They learn there are many other animal related professions to consider. Veterinary Science is not a profession to enter to earn high salaries. After 7 years of study, on graduation, Veterinarians have a starting salary of approximately $45,000. In addition they have the highest CSP debt of any course – CSP fees are huge.

In Australia today there are less than 100,000 commercial agriculture units, therefore a very small number of people are involved in production. These days, however, every good famer uses consultants to bring expertise into their production. For example, consultants who specialise in Nutrition, Agronomy (soil science), Chemicals and Pharmaceuticals and who are able to provide expert, scientific, technical input. There are also many work opportunities with Machinery, Engineering, Fertiliser and Feed companies. Many farmers now use precision agriculture – GPS, auto steer tractors, variable rate fertilisation, etc. all requiring expert input. Agriculture graduates also work in banks and as traders for large multi national companies.

About one third of agriculture jobs are in metropolitan areas; one third in large regional cities (Geelong, Shepparton, etc.) and one third in small regional towns.

Students have a much better idea of how important food production is. Arming yourself with a degree that is flexible and dynamic, focusing on what you enjoy, what you find exciting and what you see are the challenges for the future is the best way to plan for a future where many jobs are not yet invented. There are new jobs coming online all the time. It is important to remember that we all eat every day and we will continue to eat every day in the future. There are many many jobs available for Agriculture graduates and there are not enough graduates to fill them.

Agriculture students also learn team work, leadership and communication skills; they attend regular field trips and weekly workshop sessions and work with industry providers to work on real world problems. Theory in action is demonstrated. Engaging with the Bachelor of Agriculture curriculum to be an Agricultural Scientist is as much about exploring ways of thinking, ways of behaving and ways of knowing as it is about the knowledge base per se.

2016 Clearly – In: 70.15; prerequisites: English (study score of 25) and one of Maths Methods (25) or Further Maths (30). The Clearly-In is expected to rise with the increase in demand for the course.

Dookie is the largest commercial university farm in the southern hemisphere. Agriculture students are able to spend a semester at the Dookie campus.

The Diploma of General Studies at Dookie: a pathway to Agriculture, Science and Design. It provides the required Maths skills, is a CSP course; usually a minimum ATAR of 50 is required for entry and students get credit for 6 or 7 out of 8 subjects for Agriculture or one semester credit for the Bachelor of Science. The course is 1 year and the students are nurtured. They live in onsite accommodation at Dookie. Nearly 100% of students successfully transfer to another University of Melbourne course; so it provides an excellent pathway.

Mechatronics presentation

By Professor Chris Manzie
Department of Mechanical Engineering, Assistant Dean (Research Training)
Mechatronics Discipline Coordinator, Melbourne School of Engineering

Mechatronics is the interface between computers and Mechanical Systems.

The new Masters of Mechatronics at Melbourne was developed after review and consultation with industry.

There is also a new Bachelor of Science stream in Mechatronics Systems. It is described as a balanced undergraduate programme with:
1 /4 Computer Science
1 /4 Electrical Engineering
1 /4 Mechanical Engineering
1 /4 dedicated Mechatronics

Problem based learning is embedded in all years of the Bachelor degree.

The Science major streams into the 2 year Masters of Mechatronics which also has a balance between Computing / Electrical / Mechanical.

In the first year of the Masters, core concepts are covered; in the second year students are able to mostly take electives and specialise in an area of Mechatronics which interests them. In final year, 1 /4 of the year should be spent in industry undertaking a real world Mechatronics project. There is also a Mechatronics capstone project.

Students wishing to enter the Masters programme having not completed the Mechatronics Systems stream in the University of Melbourne Bachelor of Science degree require first year Physics and first year Mathematics. It will also usually take these students three years to complete the Masters.

12% of Masters students are female – the university is hoping to improve this number.

Engineering at the University of Melbourne is growing / expanding and many more staff are being recruited – it is an exciting Faculty in which to be working and studying. In particular Mechatronics is a growth area with more and more processes and procedures being automated. Employment prospects are expected to be excellent.

TAKING ON BIG DATA

Computational Biology, a new multidisciplinary major for the Bachelor of Science in 2016, will allow students to analyse and interpret biological phenomena using mathematics and statistics.

Computational Biology presentation

By Assistant Professor James McCall
School of Mathematics and Statistics, Faculty of Science

Biology is traditionally a wet laboratory science. This is changing dramatically. Students now need to become literate in computations and mathematics to be successful in the field of Biological Sciences. Biology is transferring from an experimental to a data science.

COMPUTATIONAL	**BIOLOGY**
Mathematics	Genetics
Statistics	Microbiology
Modelling	Immunology
Algorithms	Ecology
Computer Science	Clinical Science
Programming	Biomedical Science
"Big Data"	Population health

There are now unprecedented amounts of biological information requiring computational methodologies to access and analyse. It is no longer possible for direct individual experimentation to interpret these data. Machines are needed to understand the data coming out of biology labs and this requires a completely different skill set to assist in the making of "big decisions" and to solve "huge problems".

Society aims to make rational decisions to improve the health of the planet and the population. There is an increasing need to develop mathematical models that capture the mechanisms, processes and dynamic interactions leading to biological and ecological observations. To meet these challenges there is a great and increasing demand for Computational Biologists.
Computational Biology is a truly interdisciplinary major. First and second year are a tailored package of subjects from Mathematics / Statistics, Computer Science and the Biosciences. At third year there are integrated subjects that bring together biological domain knowledge and advanced data and modelling skills and "discipline depth". Students will focus on one of these core areas in their major. Computational Biology is excellent preparation for graduate study in the field while also keeping open pathways to traditional areas of study (for example: Mathematics / Statistics, Computer Science and Life Sciences). The aim is for a Masters in Computational Biology to be developed. It is expected that Computational Biologists will be highly employable.

Where can a Bachelor of Science take me?

There is a huge range of potential careers, most of which you will probably not be familiar with. It can be a daunting task to know where to start.
The resource (below) is intended to help you get started with your research into potential careers. Discipline areas have been grouped together, rather than looking at each of the 39 majors individually. This is not a comprehensive listing of science careers, but it will give you some insight into the different ways you can use your science skills and knowledge to build your career:
http://science.unimelb.edu.au/students/careers-in-science/where-can-a-bsc-take-me?

Discipline areas:

- Chemical Sciences
- Earth Sciences
- Engineering Systems
- Environmental Sciences
- Information Technology
- Life Sciences
- Mathematics and Statistics
- Physical Sciences
- Psychological Sciences

Winter School at the VCA

Are you someone with a hidden talent and a passion for Music Theatre, Film and TV, Acting, Dance or Visual Arts? Focussed on developing a broad range of techniques, the VCA Winter School courses are perfect for developing VCE skills, preparing for undergraduate studies, having a great time and learning something that you are passionate about.

Taught by industry professionals in a workshop environment, the Winter School programmes for 15 – 20 year olds are designed to build confidence, develop new skills and enhance learning. You will have the opportunity to try something new and have fun in a friendly and supportive environment.

Winter Schools are available in:

- Theatre
- Music Theatre
- Film & TV
- Dance
- Visual Art

This is a unique opportunity for structured studio based training that can take your performing and visual arts dreams to the next level. Winter Schools are either 3 or 5 days in duration and take place between 27th June – 10th July. Places are limited. Bookings are now open at:
http://vca-mcm.unimelb.edu.au/shortcourses

VCE lectures at the University of Melbourne

The Faculty of Arts is offering a VCE Winter School. There will be lectures, seminars and tutorials in three VCE subjects: Literature, Australian History and History Revolutions. The programme is developed with VCE experts and examiners, providing students with information to excel in their VCE exams.

Literature: 27th and 28th June
Australian History: 29th June
History Revolutions: 30th June and 1st July
In the Old Arts Building, Melbourne University.

More information at: http://arts.unimelb.edu.au/engage/community-education/vce-winter-school?_ga=1.267958668.345645188.1455505180.
Book now at:
https://www.trybooking.com/Booking/BookingEventSummary.aspx?eid=186911&embed=186911 or email vce-arts@unimelb.edu.au.

Elite Sports Precinct Development at Deakin Geelong

The first stage of the new Elite Sports Precinct has opened at the Geelong Waurn Ponds campus. This provides state of the art facilities for exercise and sport sciences and physical education teaching students. It also increases opportunities for student engagement and playing community sport.

Bachelor of Criminology at La Trobe

This new degree, unlike most other criminology programmes will feature forensics (Psychology and Science) as a core component. It will also include Integrated Workplace Learning (IWL) as a part of the course, providing students with the opportunity to use their knowledge in the work place and assisting in obtaining future employment.

Design events at Swinburne

Swinburne is offering a *Discover Design* school holiday programme. It is a creative programme for students in Years 10 – 12 who would like to learn more about design careers, courses and pathways. Participants will develop a design portfolio, broaden their problem solving and design thinking skills and work in teams – just like in a real design studio.

Discover Design is run by academics who teach Swinburne's design courses so you will experience campus life first hand, meet design students and find out more about the courses on offer.

The *Discover Design* programme includes:

- Paper Lab
- website design
- portfolio development
- 3D maker experience
- motion design
- Lego Serious Play
- industry talks
- campus tours
- a closing exhibition of your work.

Participants will also take home an education pack, a certificate of completion and all of the things they create during the programme.

It will take place from 5th – 8th July (registration 9:00am for a 9:30am start on 5th July) on Level 3, Advanced Manufacturing Design Centre, Hawthorn campus. The cost is $160. Register now at. http://www.swinburne.edu.au/events/departments/health-arts-design/2016/07/discover-design-at-swinburne.php.

Spring into the great outdoors in the holidays at La Trobe Bendigo

Join in the 'experience of a lifetime' from 26th – 30th September 2016 at La Trobe Bendigo.

Experience what it's like to be an Outdoor and Environmental Education student at La Trobe through the September School Holiday Programme. This 5 day event is open to current Year 10, 11 or 12 students.

Students can select from two camps: either canoeing on the Murray River or, bushwalking and climbing at Kooyoora State Park.

The cost per student is $100 and includes food and most equipment. The trips will begin and end at La Trobe University's Bendigo Campus. Sign up here: http://www.latrobe.edu.au/outdoor-environmental-education/about.

Compiled by: C. Borg and M. Walker