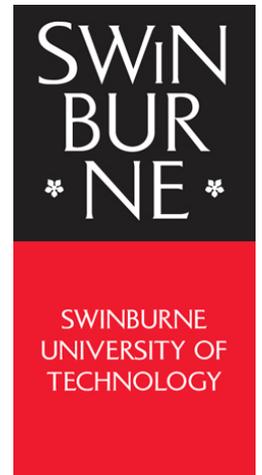**Transcript**

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Venus Liao

Good afternoon. Welcome to this Swinburne webinar series on a Friday afternoon. My name is Venus Liao. I'm the Regional Recruitment Manager from Swinburne University. I'm responsible for all international student recruitment.

I hope you're all well and safe.

Thank you for joining us today for virtual training on Swinburne's Fast Track in IT, the Master's of IT with specialisation of professional computing and network system. This is part of the webinar series I am running from the month of May to July.

On your right-hand side are the panellists for today's webinar, Professor Sebastian Ng, Department Chair for Computer Science and Software Engineering, and Mahdi, the International Recruitment Manager from the Faculty of Science, Engineering, and Technology at Swinburne University.

Sebastian is a senior member of the Australian Computer Society - ACS, the professional accreditation body for ICT professionals, with 45,000 members in Australia wide. He will be sharing with us today about how COVID-19 have impacted on this course and how are we as the university preparing our students in dealing with the impact of global pandemic and future scenarios, also projection on emerging jobs in IT and professional computing.

If you have any questions during the presentation, please type your questions in a Q&A box at the bottom of the screen. At the end of the webinar, we will leave 5 to 10 minutes to go through the questions together. If we can't answer your questions today, please feel free to contact Mahdi or your regional recruitment managers from Swinburne University.

Without further ado, I would like to introduce today's presenter, Professor Sebastian Ng, Department Chair for Computer Science and Software Engineering at Swinburne University.

Thank you, Sebastian.

SEBASTIAN NG

Thank you, Venus. I hope you can all hear me. Yes? Very good. Sorry. I can't see your face, but I believe that I must know many of you. I hope. And so I would like to say hello to all my friends here.

And we cannot travel recently, so we can only talk to you through the air. So hopefully we can catch up face to face very soon.

So without going any further, I would like to start my presentation by telling you something so exciting in our world. So we all know that these days we won't be able to live a normal life without information and communication technologies. This is particularly important during this time of the pandemic, right? As we know, we have all these restrictions that we cannot do what we did in the past. In particular, we have to exercise social distancing, and we cannot get together face to face.

So how can we go further in our life like this? So the IT actually make these possible. You can imagine, if we had this pandemic, say, 20 years ago, it is the time that we may not even have the mobile phone so popular. Internet is not so reliable. What can we do? Before, we just get up from bed and scratch our head and think, oh, there's not much we can do. We probably have to go back go back to bed, and that whole day becomes so non-productive.

However, the life has changed. The world has changed. I show you this slide because these are what I call the four emerging areas in IT that is so critical. Without this, our business, our life, will be much more miserable. And of course, if I asked some of you what are the names that will come up in your mind if you think about IT today, these are the four areas that I think you can always remember, cloud computing, on the left-hand side, and then big data. And then we move into the right, AI, which stands for Artificial Intelligence. And on the bottom right-hand corner, you can see the lock here, and this is showing the cyber security.

So these four areas are so exciting that recently a lot of students and even practitioners, they are so eager to learn and try to equip themselves with this knowledge so they can actually either get into the industry or excel themselves in the industry. So I am not going to go into each of these in very detail because each of these can be a one-hour talk, easily. I hope I do have a chance to run a webinar with you all and further explain to you about these four areas.

But they are not rocket science. Many of you already know about these. For example, cyber security. We've heard about so many threats, so many intrusions of other people's computer systems. And of course, these are what we call the bad guys, right?

What we are teaching our students to do is to defend our computer system, to make sure that they are not vulnerable for other people attack. Big data, everybody knows these days. Businesses are all data driven. All decisions are relying on the analysis of these large volume of data.

AI, well, I'm sure you all heard about the image recognition, the machine learning, the natural language processing, all this. Cloud computing, you probably all heard about Amazon's, Microsoft Azure, all these cloud services, which means we don't even need to have our server locally. Everything, all our data, is just right in the cloud. So we can get our information or data at anytime, anywhere in the world.

Think about this, 10 years ago, not many people can imagine that this is possible. But now this just becomes the norm of our IT world. So my biggest questions to our friendly councillors is, why students have to study IT and computer science? And I'm sure you will have a very good answer for them. And I will always tell anyone that if you're really looking for a good job, IT and computer

science, you've got nothing to lose because this is where the trend is. This is what the employers are looking for in the next 10 years or even longer.

Around the world, everybody agreed that there would not be sufficient qualified, capable professionals to serve this industry. The world has changed. The business model has changed. IT and computer science graduates are no longer only working for a software company. They actually work for every kind of company that you can imagine, all kinds of business.

You think about it. Every business will have to be supported by IT in the future from now already, and even more in the future. So our future of IT is actually very, very promising.

Venus just mentioned about the COVID-19. And we all know how damaging the COVID-19 is to our business, to our lives, everything. But with the COVID-19, I have to say, if we look at it from the more positive side, it's actually made people and business walk out of their normal comfort zone.

What I mean is in the past, a lot of companies or people, they are not confident to use IT to help them in business or in their normal life. But now we don't have a choice. We have to do it, right? So we just have to do it.

So everybody now becomes sort of expert in using a lot of these tools. For example, I can now say that-- you ask yourself, how many online meetings that you are doing every day now, right? In the past, you probably only do it once a month or once a week. But now you probably do online meetings or online conversations pretty much the whole day, right?

So that's changed. And we communicate by all these electronic media and resources. So the old business model has changed. And even our lifestyle has changed a lot. So everybody would just agree and reconfirm again and again from all kinds of statistics that in the next decade, IT will just go even faster than it was, that it is now, because we are more relying on these technologies. And people are getting used to these technologies much, much more.

if you look at LinkedIn or any job advertisement website, you will see that the top listing jobs, many of them IT related, right? So if you are studying in this area, or even if someone already working in this area-- they try to retrain themselves-- they are all looking at a very promising prospect in their career. So I just want to point out that to be an employable graduate, students need to choose the right course and, of course, choose the right university to study.

What is more important is when students finish their study, they have to be very, very ready for jobs. These days, industry wants to hire someone who are equipped with sufficient knowledge and skills that they can perform immediately for the company. They don't have the luxury to train their employees anymore. Rather they want to see their employees are performing to the standard that they want to see. So it is actually very critical for students to pick the right course with the right universities.

So let me just go to the ICT at Swinburne because this is, in fact, the theme of our talk. This is a snapshot of what courses that we are offered as Swinburne related to IT. And today I am particularly focusing on the two courses on the right-hand side of this slide, the Master of IT Professional Computing and the Master of Science Network Systems. This is simply because these two master

courses are very specially designed to fast track bachelor graduate [...] becomes a very competent IT professional within two years study in Australia and with Swinburne.

So all our ICT courses at Swinburne will be offered under the school of Software and Electrical Engineering. The two departments that are mainly responsible for these courses are the Computer Science and Software Engineering Department, on the bottom left-hand side. And I'm looking after that particular department. That's why I'm here.

We also have the Telecommunication, Electrical Robotic and Biomedical Engineering Department. And they are running the course Master of Science Network Systems So we are, the fact, that the most important part of the university offering ICT courses.

So what is ICT? When someone talk about ICT, of course, this is a very, very broad spectrum, right? So these five green words are those that will come up to our mind immediately because these are what we call the emerging areas, emerging technologies. But of course, at the same time, we do train students in all different areas.

When we talk to the industry people, every industry employers told us that students must have a very strong basic background. They can't just do something like cloud computing and nothing else. This is not going to help them to find a job.

They must have a very strong basic background and build on that with some expertise specialty. Like, for example, some of them specialise in cloud computing. Some of them specialize in cyber security. So at Swinburne, we design our courses to make sure that all our students will cover a very broad base, but be a very solid ground. And then they will specialise in some areas based on their interest. And that means they are well trained for the jobs that they want to join.

Well, this is just showing you some category of what kind of careers that an ICT graduate can do. Of course, you can see these job positions everywhere. And I have to say these job titles are becoming longer and longer. There are even some job titles that I have never seen in the last few months, and then they suddenly appear. So new jobs are creating in the ICT area pretty much every day, every week, every month.

So what do ICT these professionals do? Basically, what we are saying is they are too-- there's a broad spectrum. But students can always focus on either the software or network, or they can focus on the business technologies.

Both areas are providing very good job opportunities. It all depends on whether you as ICT professional, whether you are more interested to pursue the technical task or more kind of human-related task, right? And both of them are equally important in the ICT industry.

At Swinburne we try to categorise our study discipline based on software, networking, and business technologies, like this. So this is just to give you some ideas of when you counsel the students or parents, you can always ask them which particular areas that you are interested? And then you can drill down to the correct study discipline for the students.

So each of these area have some standard discipline and that lead to a different career different positions. And you can see, these are just some normal job titles that they were advertised to recruit

these graduates. So I am going to talk about these two programs in more detail because both of these programs are two years long and only 12 units all together, from start to finish.

In other words, all student admitted into either one of these two courses, they already have received some hidden credit exemptions into a 2-year 16-unit master's. We don't claim that because we already designed these courses very carefully so that it can satisfy the Australia qualification framework requirement as a level-9 master degree by just completing 12 units in these courses. And even better, each student can spread these 12 subject units into two years as full-time study, which means that they can plan their study in the way that they want.

Now, each of these blocks listing underneath the course name are what we call the specialisations. All students enrolled in one of these two courses, they will have to choose one of the specializations listed here because as a master graduate, they must show some specialties in their study. We do not want students to graduate with just a very broad skills and no expertise to claim.

So we have to request every student must choose a specialization under the course. And the good news is both degrees and, in fact, all IT courses at Swinburne, we are very recognized by the industry and also professionally recognized by the Australian Computer Society. So for the Master of IT Professional Computing, as I mentioned before, this is only 12 units. So the normal study pattern for a student is to do three units per semester and repeat this for four semesters.

So 3 times 4 becomes 12. So they fulfill that two years full-time study by finishing 12 units at Swinburne. The entry requirement for this is IT background. Students must come with IT-related study in the undergraduate.

So as I mentioned, there are six specialisation. Students will choose one of those specializations from one of these. So we do have this pamphlet around. So this is also available on the website, so feel free to just let us know if you want electronic copies or even paper copies. If you want this, we can always provide this to you.

And one of the good things about our courses is all the study units are available on the website. For example, on the right-hand side of this slide, you can see we call this the course planner, right? Students can actually see very clearly what are the units that they will study. Although these course planners show three years, but student only is doing two years, as you can see, because this course planner is for the August intake.

So there are only a four semesters altogether, which make up two years of study. And there are 12 units listed there. So it is very easy as a counselor that you can tell in very detail what will be the course structures, what are the unit study in each of these courses. And all our information available on the website, so please feel free to contact us if you want any information of our course.

Master of Science--

Venus Liao

Sebastian, just to give you a heads up, under five minutes to go.

Sebastian Ng

Very good. Thank you. Thank you, Venus. So the Master of Science Network Systems is also having the same course structures as the Master of IT Professional Computing. So it's 12 units with 4 semesters, so altogether they are 12 units in 2 years. So the only entry requirement into a Master of Science Network Systems is student must have a bachelor's degree related to STEM.

Now, STEM stands for Science, Technology, Engineering, and Mathematics, which mean provided the undergraduate is related to science, technology, engineering or mathematics of related area, they are eligible to go into the Master of Science Network Systems. Again, we have separate flyer for the course. Now, what is our strength? I think everyone will agree that Swinburne historically, we are one of the best universities in relating our course to the industry.

Our courses are all advised and designed and co-developed by industry experts, right? Some of you may be also even have met Chris before. He is our chair of the course advisory committee. He is also one of the very famous entrepreneurs in terms of running the IT business.

His company, called PaperCut, has offices all over the world. And he is the key person leading us to make sure our courses are preparing graduates for the jobs in the next 5 to 10 years. We are not talking about now. We are talking about several years down the track when students graduate.

Our courses are build we with the industry internship project. So students have the opportunity to work in the real world as part of this study, right? And we have a lot of areas that we are organising these student to work as an intern. It's actually not an intern. It's actually a real industry project. They are applying their study in the real world.

And when students finish the internship project unit study at Swinburne, we have statistics showing that these students have a much, much higher graduate employment statistics, which means they already put themselves into the industry. And that's why they can get their first job in Australia within a very short time after graduation. The other very distinguished features of our courses, every student must complete a capstone project, at least one.

And these capstone projects are very industry related. The product they produce are actually something the industry people are looking for. They can promote themselves, advertise themselves, by showing their capstone project work to the prospective employers.

We have just a long, long list of industry partners that we have been working together. These industry partners help us to design the courses, take our students as interns, and also offer capstone project opportunities to our final-year students. In terms of infrastructures, we are probably one of the best-equipped universities in Australia.

We have very, very powerful supercomputers. If you haven't seen a supercomputer before, you can see some of these photos here. This is the Swinburne supercomputers. Normally you'll have a chance to go into rooms to see this. That's why I took the photo and show you here.

Our Cisco lab is another highlight of our facilities. The Cisco lab here is probably one of the best Cisco equipment labs in university environment. This Cisco system can be configured to a system even more complex than a shared market's computers, or the network.

So you can see students are trained in a real-world setting. The complexity is so close to the industry that students skills can be applied to the real world immediately, as soon as they graduate. In terms of graduates, it is mentioned we are doing very well.

Our students are very happy, very satisfied with our course. Why? Because they study very happily during the two, three years with us. And as soon as they graduate, they got their dream jobs. So what else they want to get from the study?

Just to end up, we also do world-class research, right? Any student who is interested in doing research, we are very happy to nurture and develop their research career and becomes academia in the universities or in the higher education. Recently, Swinburne computer science has been ranked by the Australian-- by the academic ranking of world universities as the top 125, right?

Think about if you are studying IT computer science at Swinburne, you are graduating within the top 125 universities across the whole world. So how prestigious it is. So I think, Venus, you will have to stop me because we need to give you some time for questions. Thank you very much, Venus. I know I go a bit over time.

Venus Liao

 Well, thank you very much, Sebastian, for a great presentation on MITPC and Network Systems. We are now opening up for questions. Please feel free to type your questions in the Q&A box at the bottom of your screen. Yeah. And we have a question. It came through from Tina. "Hi, professor. In MITPC, the student has to take some units related to enterprise network server administration and secure networks. Do you recommend that students still take this CISCO certification (CCNA/ CCNP/CCIE)? Or will some parts of Cisco certification components be taught during the program?

Sebastian Ng

Yeah, I know the question already. Good.

Venus Liao

 Perfect. Thanks.

Sebastian Ng

Now, first of all, that enterprise network server unit is a Microsoft unit rather than Cisco unit. The Cisco units are actually in another suite course, network and switching, routers, principles. But it is correct. All our networking students, they will do at least either the Microsoft suite or the Cisco suite or both.

So the question is, whether they should do some prior training? And I always say there's no harm to do it. There's always no harm to do it because first of all, it will give you some taste of that field. And then you come. We will look at your results, look at your record. We talk to you.

And if you can demonstrate enough knowledge in the fundamental level, we can actually escalate student to go faster. We talk about fast track here. For example, even though there may not be enough unit a student can go to become a full Cisco engineer, CCNP, but if the student have been

some preliminary level, we could actually shift the study sequence much faster. We can fast track the student and get the student to the higher, more advanced level within the two years.

So we start them at a higher level. And they can finish at a higher level. And that's the beauty of Swinburne courses.

Venus Liao

Wonderful.

Sebastian Ng

I hope that answered the questions.

Venus Liao

Thank you very much, Sebastian.

Sebastian Ng

Yes.

Venus Liao

[...]

Sebastian Ng

Any more questions?

Venus Liao

Keep the questions coming. We're just waiting for more questions to be coming in.

Sebastian Ng

Very good. So Mahdi, I heard that you mentioned about some scholarships for the course, right? Perhaps maybe you can talk a bit about the scholarships.

Mahdi Shariatian

Sure. Sebastian, thanks for that. We do offer a very generous 30% scholarship for our Master of IT Professional Computing. So as long as the student meets the academic criteria or WAM requirement they receive the scholarship in their offer letter. For the Master of Science Network Systems, they receive at $2,500 scholarship if they have above 70% in their undergraduate or the previous qualification.

Sebastian Ng

Wow, this is very attractive.

Mahdi Shariatian

That's amazing.

Sebastian Ng

I have to say this is probably the best value of money.

Mahdi Shariatian

Yes, absolutely.

Venus Liao

 Also, tell us if the program-- if both programs are available for August intake.

Sebastian Ng

Yes. Yes, it is.

Mahdi Shariatian

Both are, yes, for all students, onshore and overseas.

Sebastian Ng

Yep.

Venus Liao

 We have 110 participants today joining us at the live session. We haven't seen any more questions coming in. And we are at 2:31. So we might bring the session to close. And if you have any questions after the webinar has finished, you could always contact one of us from Swinburne University.

And I'd just like to thank you, Sebastian, for your presentation on Swinburne IT and Professional Computing and also thank you to all of our participants around the world for tuning in today.

Today's presentation will be emailed to you after the webinar. And remember, we are offering a very, very attractive STEM scholarship and also our Linked In scholarship for any of the students that are currently offshore taking Swinburne program online for the remaining 2020 intakes.

Join us at our next webinar next Wednesday on 22nd July at 2:00 PM to hear about international student employability support at Swinburne University. The invitation for this webinar will be sent out to you today.

Thank you all very much and have a nice weekend, everyone. Stay home and take care for those ones joining us from Melbourne. See you soon. Bye-bye, everyone.

[END OF TRANSCRIPT]