

2016 VICE-CHANCELLOR'S AWARDS FOR EXCELLENCE NOMINATION FORM



THE UNIVERSITY OF
SYDNEY

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Award: Outstanding Teaching			
Nominee(s) (up to 5 per award) Date	Faculty/School/Department/Unit	Signature	
<ol style="list-style-type: none"> 1. Andrew Crisp, School of Mathematics and Statistics 2. 3. 4. 5. 			
Nominator: Associate Professor David Easdown	Seconded by: Professor Jacqui Ramagge		
Faculty/School/Department/Unit: Mathematics and Statistics	Faculty/School/Department/Unit: Mathematics and Statistics		
Signature:	Signature:		
Date: 9 September 2016	Date: 9 September 2016		
<p>Consideration for the Deputy Vice-Chancellor (Indigenous Strategy & Services) Indigenous Education Strategic Awards. The award is open to Indigenous and non-Indigenous staff of the University who have made an outstanding contribution to the University's Aboriginal and Torres Strait Islander strategy.</p> <p>Does the nominee wish to be considered for this award as well? Yes No N/A (delete as appropriate)</p>			
<p><i>Please note that each answer below should be around 250 words and no longer than 500 words.</i></p>			

Overview of achievements justifying award:

Andrew Crisp is the most outstanding and effective teacher I have come across in three decades as an educator. I have witnessed, in my own roles coordinating First Year and Summer School, Andrew's absolute dedication and devotion to students, their learning and their well-being. We have so much to learn from Andrew's example. I am in awe of the depth and breadth of material of the highest quality concerning Andrew's interactions with students, and it is a huge challenge to produce a summary that does justice to the profound and long-lasting contributions he has made to student learning.

With his characteristic enthusiasm and generosity, Andrew agreed, at one day's notice in March, to lecture an overflow stream of MATH1002, due to larger than expected enrolments, with the expectation of teaching for four weeks only. His lecture group remained full, and he was asked to continue teaching till the end of semester. I wrote to these and other students about the possibility of nominating Andrew. Within an hour my inbox was filled with amazing tributes. The responses appear at the following link:

<http://www.maths.usyd.edu.au/u/de/AndrewCrisp/StudentTestimonialsSeptember2016.html>

Reading these one is profoundly moved by the extent, depth and variety of positive effects and outcomes from Andrew's interactions with students, as a lecturer, tutor and mentor, in a huge variety of contexts. It is especially moving to read tributes by students that have learning difficulties or phobias associated with mathematics.

I have compiled comprehensive lists of comments that refer explicitly to Andrew in course evaluations. Andrew has taught in every semester and Summer School since 2008. This collection can be viewed at the following link:

<http://www.maths.usyd.edu.au/u/de/AndrewCrisp/AndrewCrispComments2009-2016UnitOfStudyEvaluations.html>

Several points stand out:

- The approbation and absence of negative comments is astonishing. Andrew has some special ability for connecting with each student. Students know instinctively that Andrew is there for them, cares about them, and has a remarkable facility for conveying sophisticated mathematics in a way that relates to their own experience and instils confidence. This comes from Andrew's complete absence of arrogance, his meticulous preparation and thoughtfulness related to his own experiences as a student, and his starting point that, if a student has difficulty understanding, then the fault lies primarily with the educator.
- Andrew lectures mainly as part of a team, with other outstanding educators that themselves have received awards or other forms of recognition. Without fail, Andrew receives the highest number of comments, all positive, by several orders of magnitude compared to the others.
- Likert scores are close to or higher than 4/5 in courses in which Andrew is involved. It is clear from comments that scores are brought up to high levels because of Andrew's contributions. When Andrew is the sole lecturer, all scores are over 4/5, and some are 5/5.
- There are many comments related directly to Andrew's exemplary tutoring and activities outside lectures.

David Easdown, Nominator.

Excellence or quality of contribution. Please describe the excellence or quality of contribution relevant to the award, including evidence or referring to evidence available in University systems wherever possible.

Andrew Crisp is universally admired and his exemplary contributions appreciated by students, evidenced by material at the following links:

<http://www.maths.usyd.edu.au/u/de/AndrewCrisp/StudentTestimonialsSeptember2016.html>

<http://www.maths.usyd.edu.au/u/de/AndrewCrisp/AndrewCrispComments2009-2016UnitOfStudyEvaluations.html>

Clinton Boys taught alongside Andrew and writes:

I found Andrew to be an extremely dedicated, professional and joyful teacher of mathematics. He would find wonder and amazement in all corners of the textbook, bringing it all to life on the blackboard with a very original, enthusiastic and often humorous style. He was universally appreciated and admired by all students in the classes we taught together. I can think of no other member of the sessional staff that I worked with in my 5 years teaching at Sydney more deserving of recognition for their teaching efforts than Andrew.

Andrew's term-time teaching is part of a team, often with enrolments over 1500 students. Likert scores are consistently high, close to or above 4/5 on most questions. One may ask, to what extent are these high ratings due to Andrew? Student comments provide evidence that Andrew is primarily responsible.

One can further test this hypothesis by looking at scores for units of study for which Andrew is the sole lecturer. At the recent Summer School, Andrew taught MATH1002 (98 students, 26 respondents), as sole lecturer supported by five tutors, and MATH1004 (11 students, 6 respondents) as sole lecturer/tutor, with the following scores for MATH1002 and MATH1004 respectively:

- 1 Overall, I was satisfied with the quality of the teacher(s): **4.46** and **5.00**
- 2 The work has been intellectually rewarding: **4.35** and **4.60**
- 3 I developed relevant critical and analytical thinking skills: **4.15** and **4.67**
- 4 I have had good access to valuable learning resources: **4.31** and **4.67**
- 5 The assessment tasks challenged me to learn: **4.19** and **4.83**
- 6 I have been guided by helpful feedback on my learning: **4.04** and **5.00**
- 7 Tutorials/seminars helped me learn: **4.31** and **5.00**
- 8 Staff were responsive to students. **4.31** and **5.00**
- 9 Learning outcomes were clear. **4.46** and **5.00**

Students made many favourable comments, for example, for MATH1002:

- Andrew Crisp is a phenomenal lecturer... cannot speak more highly of his ability to captivate his audience with succinct (clearly well planned) lectures.
- lecture notes and verbal explanations very clear and interesting... detailed and packed with tips and tricks to go about the subject with ease... enthusiastic and dedicated to the subject... students take interest and do not get bored... extremely helpful and friendly.
- amazing teaching ability... enthusiastic and caring, and makes the unit enjoyable... one of the best lecturers in my degree so far!!

and for MATH1004:

- Andrew Crisp is the best maths teacher I have ever had... very knowledgeable, enthusiastic... provides different perspectives to ensure all students understand
- lecturer excellent, content presented in a clear and coherent manner, combination of tasks and notes effective to optimise learning... thoroughly enjoyable
- very encouraging and helpful... clear and concise... definitely recommend this unit

Novelty or distinctiveness of the contribution. Please describe the novelty or distinctiveness of contribution relevant to the award, including evidence or referring to evidence available in University systems wherever possible.

Andrew's style is unique and distinctive. When I consulted class representatives as First Year Director (2012-2014), the respect and reverence towards Andrew was striking, and far beyond anything directed towards the other academic staff (even when that was positive or even glowing). Andrew puts his heart and soul into his classes. As First Year Director, I emailed Andrew on 30 April 2012:

Before I forget, saw class reps today for MATH1001/1002 and they were so pleased with your lecturing and enthusiasm, and online notes, your board work, and generally how successful you are in engaging with the class. There were also several comments of appreciation for your important work as a Duty Tutor, remarking particularly about your clarity and patience. Thanks very much from all of us.

Whenever there were USE surveys, his teaching always eclipsed that of colecturers in terms of perceived quality by the students. How does Andrew create this magic? I asked him, and paraphrase here some of his answers:

- Andrew always tries to understand any underlying dynamics that might create or contribute towards strain, anxiety, demoralisation or sense of shame. This is individual in character and Andrew uses gentle and empathetic encouragement to liberate students, in a supportive environment, by helping them build confidence and recognise their strengths. They come to realise that they are in fact capable of working through problems and ideas that previously paralysed them.
- Mathematics is inherently difficult and mistakes are opportunities for learning, not signs of internal failings. Andrew constantly imagines himself as a student and draws from and relives his own memories. He rewrites his lectures from scratch, and takes nothing for granted, regardless of how often he has taught the material before. He emphasises the value of thinking deeply about simple things.
- If a student does not understand, Andrew views the problem, fault or responsibility as lying primarily with the educator. As a consequence, he looks for and finds new and multiple approaches and pathways for seeing or reaching the same outcomes or conclusions.
- Andrew is meticulous in his preparation, exploring trees of hypothetical possibilities before even reaching the classroom, thereby enabling responsiveness and seamless interactions with all of his students, regardless of backgrounds, abilities or attitudes.
- Andrew arrives well before classes begin and writes up self-contained summaries of previous material. He has complete technical mastery, not only of the mathematics, but of the facilities of teaching spaces and how to use them for best effect. He produces recordings and notes of the highest quality that are relied upon by many more students that are unable to attend classes in person.
- Mathematics has evolved and been built by the greatest minds over millennia and conveys ideas and notions that are surprising, beautiful, powerful, creative and often unintuitive. Andrew aims to bring this alive for students and provide context so that they have a personal stake in mathematics and can see how the universe is intricately connected by a common language that serves and empowers them.

David Easdown, Nominator.

Cumulative impact of contribution, including over a sustained period of time. Please describe the cumulative impact of the contribution relevant to the award, including evidence or referring to evidence available in University systems wherever possible.

The cumulative effect of Andrew's contribution (2008-2016) is extraordinary, in considering the number of students with whom he has interacted and his pivotal role in progression through their degrees. Andrew has influenced thousands of students, in large and small class settings, in every semester and Summer School since 2008. Most of these students take mathematics as a requirement of Science or Engineering degrees. Many find mastery of mathematics problematic and are relieved and grateful to encounter Andrew's guidance at a sensitive or critical stage of their development. A snapshot of this ongoing and profound effect can be seen from testimonials gathered recently at the following link:

<http://www.maths.usyd.edu.au/u/de/AndrewCrisp/StudentTestimonialsSeptember2016.html>

The School has had severe staffing difficulties from about 2010 to 2014, and more recently with burgeoning enrolments requiring extra lecture streams at short notice. Andrew is one of the mainstays in First Year and Summer School and has lectured and tutored willingly in a wide variety of units and contexts, and also served as a Teaching Fellow from 2010 to 2012, with exemplary outcomes.

As a Teaching Fellow, Andrew singlehandedly revised and created materials for MATH1111 Introduction to Calculus, at the same time supporting the unit as a tutor and emergency lecturer, for which he received many appreciative comments in course evaluations. MATH1111 is the School's most problematic unit, as almost all of the students have limited mathematical experience, a negative attitude or severe learning difficulties or phobias associated with mathematics. Andrew's intervention a few years ago has had a profound ongoing effect.

Andrew's skills were first recognised in 2008, by Jenny Henderson (then Pro-Dean and supervising tutor training in our School), who appointed him as a tutor and writes:

From hearing his presentation at the tutor training session and reading complimentary reviews of his tutoring skills, I believe that Andrew is a very gifted, natural teacher who is able to strike up a wonderful rapport with his students. He is an excellent explainer of concepts and I think this stems from his own personal approach to learning, which involves deep concentrated thinking to link new concepts to existing knowledge.

Andrew made such an immediate impact that he was appointed as a lecturer at Summer School in 2009, and reappointed every year since then. Andrew has subsequently been one of the most sought after term-time lecturers. He often works with Bob Crossman, with over 35 years of lecturing experience, who writes:

I am intimately familiar with Andrew's massive teaching contribution. In 2013 we were the only two [MATH1002] lecturers and were responsible for all the lecturing, assessment and associated administration for the massive class (over 1500 students). The students flock to his lectures and love him to bits! He is passionate about his teaching and very approachable, patient and generous of his time and spirit. He has the happy knack of looking at the teaching content from the perspective of the student and presenting it with clarity, enthusiasm and timing.

Please insert up to two additional Statements of Support (of up to 500 words), not compulsory:

The full list of student testimonials can be viewed at the following link:

<http://www.maths.usyd.edu.au/u/de/AndrewCrisp/StudentTestimonialsSeptember2016.html>

The following two testimonials are notable because they elevate and recognise Andrew's contribution well beyond the classroom and even beyond the University of Sydney, and demonstrate the spontaneous yet deep connections Andrew makes with students:

I would love to support this nomination for Andrew Crisp. I am a little out of the ordinary for a first year student. I am 46 and already have a bachelor and master degree from UTS and UNSW. I am preparing for a career change from the finance industry to maths teaching. So, having had to present to audiences numbering in the hundreds myself, and having substantial experience listening to lecturers at other universities and professional presenters in finance, I am probably a pretty harsh critic. However, even before I knew of the position Andrew was put in last semester, I was very impressed with his lectures.

I undertook Linear Algebra in Semester 1, but I wasn't actually enrolled in Andrew's lectures. I came across Andrew's recorded lectures when I needed a bit of extra understanding in the early weeks. I found myself returning to his recorded lectures throughout the semester for reinforcement of my understanding. I also snuck into one or two of his lectures during the semester!

It is difficult to articulate exactly what makes a good teacher, but Andrew definitely has 'it'. Andrew speaks and presents in a very clear, methodical manner, at an excellent pace. He conveys a true interest and expertise in the subject, without any arrogance, which makes it very engaging. You notice this particularly when you listen to his recorded lectures. I really appreciate the little pauses he takes. It makes learning so much easier when it is calmly paced. Andrew is also very organised, for example, making sure the notes were available before the lecture, which really improves the learning experience. He also knows how to use the visual and audio technology without fail, which is incredibly helpful for students both in the lecture and those relying on recordings.

My time at Sydney uni has been short so far, but Andrew's lectures have impressed me the most compared to both my lectures at Sydney and those at UTS and UNSW. I would like Andrew to know that he is having a great influence on students - even those he may not see!

Julie Fox [received Friday 2 September]

Andrew Crisp brings an exceptional passion and vigour to mathematics. As a first year student this year, I have often been intimidated when approaching lecturers following class. Indeed, it was this same jittery feeling I had when I walked up to Andrew, textbook open, ready to nervously stutter my question and sprint away once he had finished talking. However, Andrew brought a fervour of empathy at such a question. He was patient and explained the solution concisely as I continued bombarding him with follow up questions. After I had exhausted such questions I sprinted away, not out of fear, not feeling a sense of doubt but ready to tackle the next exercise.

I do recruitment for our University and frequently talk about my own experiences to prospective year 12 students. It's my experience with Andrew and other teaching staff, where I feel like I am sprouting intellectually, not the Hogwartsy sandstone, that brings out the magic at the University of Sydney.

William Zhou [received Thursday 1 September]

