

Teaching Dossier

by

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1 Personal Information

Personal Information:

- Name: Dr. Carmen Anthony Bruni
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- Degrees:
 - Ph.D. in Mathematics in 2015 from The University of British Columbia
 - MMATH in Pure Mathematics in 2010 from the University of Waterloo
 - BMATH double major in Pure Mathematics and Computer Science in 2009 from the University of Waterloo.

2 Teaching Statement (Revised)

It has been almost ten years now since I've written my first teaching statement. I felt that it was time for an update. When I first wrote my teaching statement, I was a young graduate student starting off in the world thinking I knew everything about teaching having never done any at the time. Hubris is the folly of man and yet I set out to prove to the world that I was a great teacher without having any training in doing so.

What I have realized on my journey is that I knew nothing about teaching when I started. I realized very quickly that teaching is more than just giving a good presentation. It is more than just finding the best explanation for a concept. It is more than creating great assessments and examinations that both give reasonable challenges and that push bright minds. Great teaching boils down to one thing and one thing only:

care

In one simple word, you can help a novice teacher become a world class teacher. *Care*. What should one *care* about? *Everything*. You should *care* about giving fantastic and engaging presentations. You should *care* about giving thoughtful assignments and examinations. You should *care* about giving constructive feedback. You should *care* about your student's well-being. You should *care* about *everything*!

This notion of care should go beyond the course as well. We should also care about our colleagues and strive to make them better lecturers. Throughout these last ten years, I have done my best to share my wisdom and experiences with my colleagues, with new graduate students and with my students. I have scoured the literature for information on how we learn and how to be more effective as an instructor. As a result of this literature review, I have changed my teaching practice to have more opportunities for mental recall. I have developed more analogies to help explain mathematical concepts. I have tried to be more relatable to an ever changing audience. I have thought more about where I stand in lecture, what and where I write content on a board, how much content is on a single slide, how to get more audience participation and how to encourage more students to come to class. All of these improvements I not only practice but preach to novice instructors.

I have been very fortunate in my life to be allowed to help the process of educating the next generation of outstanding thinkers. I know just how lucky I have been to be able to teach at several world class institutions. I want to continue this process of helping make mathematics more digestible. In this way though, I do not want someone reading this to think that I believe that mathematics is or should be easy. Mathematics is a constant struggle. It takes great resilience to be able to wrestle with a difficult problem for an extended period of time, especially when you feel like progress is at a standstill. It is this determination that I want to build into my students. This something I deeply care about and firmly believe - that difficult problems *can* be solved with enough patience. I want to

be there helping students through these difficult, giving suggestions as to what I did when I was in a similar situation. I want to show students that mathematics is more than just a series of routine and mundane calculations. Mathematics at its core is about *ideas*. These ideas are what will help guide this planet to the next generation of great thinkers.

3 Teaching Statement (Old)

Do mathematics justice. This simple statement contains a powerful message. We thrive on curiosity and are driven by questions. Throughout our lives, we search for the truth; and mathematics is truth-seeking.

We want our students to leave the course with knowledge in the subject. However, this is not enough. It is not enough for students to collect answers to calculations; I want them to see the broader context. I want them to realize that mathematics is much more than multiplying large numbers or computing derivatives. Mathematics is vast. It enters into every critical process involving problem solving. I want my students to appreciate the process of starting with a problem, possibly one never encountered before, formalizing it, and then solving it using mathematical tools.

This approach is challenging, but rightfully so. If every mathematical problem we faced were easily solved, there would be no reason to study or do research in mathematics. I do not do mathematics justice by teaching that it is simple. I *do* want students to struggle. Some students might take longer than others, some might need more help, some might need to be pushed, but I believe that, with enough motivation, they can all succeed!

It is vital for students to remember that they are not alone. As an instructor I am there, not to give answers, but to give guidance. I talk about my thought process and how I would begin to decipher the problem. I encourage students to work together and discuss mathematics. I push them to do what mathematicians do.

In light of this, it is not sufficient merely to read from a textbook. My class time should also give the students an idea of the big picture; of the underlying majesty. A classroom of derivative-computing machines is not the goal of calculus, any more than a classroom of tape recorders is the goal of a music class. We teach calculus for the same reason musicians teach Bach and Beethoven: so that students gain maturity and the ability to understand problems previously thought unsolvable; so that they can go forth and *create*.

My goal in class is not to show my students all of mathematics. Such an endeavour would be futile. Instead, my goal is to help my students develop their latent mathematical abilities and get them to attempt even some of the hardest problems in mathematics with confidence and vigour.

Teaching students is a rewarding and invigorating privilege. I have tried and will continue to try to give mathematics its due diligence: to show students what mathematics is at its core. I really want my students to think critically about what they have learned. I want them to succeed. I want them to understand what they are truly accomplishing, whether they are analyzing the derivative of a function or simply multiplying two numbers. I want them to realize that mathematics is deep. When they realize this, then I feel that I have done *justice* to the beauty and elegance of mathematics.

4 Education Publications

- “Authentic Experiences in Two Mathematics Graduate Student Instructor Training Courses”, (Carmen Bruni and Fok-Shuen Leung) - Submitted to For The Learning of Mathematics.
- “The Flourishing of Care in a Multidisciplinary Faculty Learning Community” (Julie A. Timmermans, Carmen Bruni, Rob Gorbet, Barbara Moffatt, Gordon Stuble, Diane Williams and Trevor

Holmes) International Journal for Academic Development Volume 23 Issue 4 (2018), 367-373.

<https://www.tandfonline.com/doi/full/10.1080/1360144X.2018.1521335>

- “From Exam to Education: The Math Exam/Educational Resources Wiki”, (Carmen Bruni, Christina Koch, Bernhard Konrad, Michael Lindstrom, Iain Moyles, Will Thompson) - Published July 14, 2016, Volume 26 issue 7 in PRIMUS (Problems, Resources, and Issues in Mathematics Undergraduate Studies).

<http://www.tandfonline.com/eprint/avS8WHryamXqUUXhtfJE/full>

5 Teaching Awards and Accolades

- **May 2013** Mathematics Department Graduate Teaching Award. Received an award from the University of British Columbia for excellence in teaching.
- **April 2013** Killam Graduate Teaching Award. Received one of five prestigious Killam Graduate Teaching Assistant Award from the University of British Columbia awarded across all graduate students in the faculty of Science at UBC for my outstanding work as both an undergraduate instructor and teaching assistant.
- **December 2012** Completed the Teaching Assistant Accreditation Program (TAAP).
- **September 2006 - April 2009** Received six outstanding teaching assistant evaluations from professors at the University of Waterloo for my role as a grader for various undergraduate courses given for timely return of assignments as well as constructive feedback.

6 Teaching Responsibilities and Practices

Below are some of my teaching related duties over the past several years. I have taught courses at UBC four times which is rare for a graduate student and is a result of special recommendations from faculty and instructors-in-charge. This includes a second year course for which I am the sole instructor of, another rarity for a graduate student. I am also currently teaching a course at Langara College in Vancouver. I created numerous documents, videos and pencasts which can be accessed directly on my webpage. After graduating, I obtained a job at the University of Waterloo where I have continued my innovation in the classroom as well as doing many outreach projects to help increase interest in mathematics. Lastly, I discuss some of my evolving course philosophies that I am continuing to improve as my students beliefs and interests in mathematics change over time.

6.1 Courses Taught

CS 116: Introduction to Computer Science 2 (Python) January-April 2017, 2019 I was an instructor for three different sections (two in 2017 and one in 2019) of a Python course for 90 students at the University of Waterloo. Lectures were two times a week for a total of 3 hours per class. My responsibilities included lecturing and curating the Piazza forums as well as creating assignments and exams in collaboration with the rest of the CS 116 team.

CS 241: Foundations of Sequential Programming January-April 2019 I was an instructor for two different sections of a first course in compilers for 80 students per section at the University of Waterloo. Lectures were two times a week for a total of 3 hours per class. I was primarily responsible for creating the final exam (assessments in this course largely remain unchanged year over year).

CS 137: Programming Principles September-December 2017, 2018 I was an instructor for two different sections of a first year C programming course for Software Engineers teaching 140 and 120 students respectively in each term I taught the course at the University of Waterloo. Lectures were two times a week for a total of 3 hours per class. I was primarily responsible for all assessments and examinations.

CS 245: Logic and Computation May-August, September-December 2018 I was an instructor for five different sections of a first course in logic teaching 35, 40, 43, 89 and 90 students per section at the University of Waterloo. Lectures were two times a week for a total of 3 hours per class. I was primarily responsible for creating some assignments and examinations for the course.

CS 136: Elementary Algorithm Design and Data Abstraction January-April 2018 I was an instructor for three different sections of a first year C programming course for Computer Science students teaching 61, 67 and 76 students respectively at the University of Waterloo. Lectures were two times a week for a total of 3 hours per class. I was primarily responsible for some assessments and collaborating with colleagues about the examinations.

MATH 135: Algebra for Honours Mathematics Students: September - April 2016, September - December 2017 I was an instructor for six different sections (two per term) of an algebra proofs course for 60 students at the University of Waterloo. Lectures were four times a week for a total of 4 hours per class. My responsibilities included lecturing and curating the Piazza forums.

MATH 1174: Calculus I - Economic and Business Applications: January - April 2015 I was an instructor for a differential calculus course of 38 students at Langara College. I created quizzes, assignments and midterms for the course as well as provide support for struggling students. Lectures were twice a week for a total of 4 hours.

MATH 210: Introduction to Mathematical Computing: January - April 2015 I was an instructor for a 55 student mathematical computing course at UBC where I taught students how to use Python and Sage software via Sage Math Cloud to solve mathematical problems. I created assignments, midterms and the final examination for this single section course. All content was being delivered on Sage Math Cloud including assignments, learning goals and lecture notes. Lectures were thrice a week for a total of 3 hours. There was also a one hour lab where students used on campus computers and received direct feedback from me on their work.

MATH 103 - Integral Calculus for Life Sciences: January - April 2013, 2014 I was an instructor for one of six sections of this course on two separate occasions. This course was a three credit course (one four month term) in integral calculus for life science students at UBC. Lectures occurred twice a week for a total of three hours. Classes consisted of 85 students.

MATH 180 and MATH 184 - Differential Calculus with Physical Applications and Differential Calculus with Applications to Commerce and Social Sciences: September - December 2012, 2013 I was a workshop facilitator for these courses. These were four credit courses (one four month term) in integral calculus for engineering or business students at UBC. Here I would oversee the work of students during a 90 minute class as they communicate mathematics in groups in a effort to solve problems. I implemented the Socratic method while guiding students to solutions to first year calculus problems. Sections consisted of 25 students.

MATH 101 - Integral Calculus with Applications to Physical Sciences and Engineering: January - April 2012 I was an instructor for one of eleven sections of this course. This was a three credit course (one four month term) in integral calculus for science and engineering students at UBC. Lectures occurred thrice a week for a total of three hours. The class consisted of eighty students.

MATH 118 - Calculus 2 for Engineering: January - April 2010 I ran a small tutorial section where students could come on a weekly basis to ask questions and solve problems in a friendly atmosphere. This was a half credit course (one four month term) in integral calculus for engineering students at the University of Waterloo. I prepared additional problems to discuss if students requested and these problems and solutions were subsequently posted online. The tutorials ranged from five to ten students.

6.2 Mathematical Seminars Organized

Mathematics Graduate Student Teaching Seminar: January-April 2018, 2019 This has been one of my fun projects over the last 2 years. Along with Cecilia Cotton, Brian Forrest, Paul Kates, Diana Skrzydlo and Dan Wolczuk, we have worked to create a course for graduate students in mathematics looking for some authentic experiences in teaching. We created a 12 week seminar whose syllabus is included in the appendix. Students were required to make assessments, give 3 micro teaching talks, give a live practicum in front of real undergraduate students, and come to several discussion sessions about teaching. Many of the graduates of this program have gone on to deliver courses with much more confidence than if not having this sort of training.

MATH 701 - Graduate Reading Seminar in Algorithms: January - April 2014 I organized and participated in a weekly algorithms seminar with fellow graduate students. We programmed algorithms in Python and completed weekly exercises inspired by the book Introduction to Algorithms by Cormen, Leiserson, Rivest and Stein. Our final project included the creation of a cross platform cell phone game using Python and Kivy.

MATH 620E - Graduate Reading Seminar in Elliptic Curves: January - April 2012 Coordinated a reading seminar in elliptic curves. Topics were chosen by students and a once a week talk was given on select topics.

6.3 Course Material Created for Students

Most of the work in this section was inspired by my work on the Mathematics Examination Resources Wiki which is discussed later in this document.

CS 241: January - April 2019 I have created a set of course notes that can be found on (<https://cs.uwaterloo.ca/~cbruni/CS241Resources/index.php>).

CS 137: September-December 2017, 2018 I have created a collection of videos, course notes, and sample exercise problems that can be found on (<https://cs.uwaterloo.ca/~cbruni/CS137Resources/index.php>). *I also continued doing livestreams for this course.*

CS 245: May-August, September-December 2018 I have created two sets of course notes that can be found on (<https://cs.uwaterloo.ca/~cbruni/CS245Resources/index.php>).

CS 136: May-August, September-December 2018 I have curated a collection of videos that can be found on (<https://cs.uwaterloo.ca/~cbruni/CS136Resources/index.php>).

CS 116: January - April 2017, 2019 I continued with my project begun in Math 135 below and created a webpage to store files associated to my class including Python code, videos explaining harder concepts and once again doing some livestream review sessions to help student understanding. All of this can be found on (<https://cs.uwaterloo.ca/~cbruni/CS116Resources/index.php>).

Math 135: September - April 2015, September-December 2016 I created various videos, personal lecture notes and helpful summary sheets for this course during the Fall 2015 term. Students led the discussions on which topics they wanted to see videos on and I created a series of 24 videos based on their suggestions. These files can be located at (<https://cs.uwaterloo.ca/~cbruni/Math135Resources/index.php>). Also on this site, you can find some livestream review sessions I did to help students prepare for exams. I also gave many review videos, posted course notes, cheat sheets and associated links to help students succeed in this course.

MATH 210: January - April 2015 I created learning goals, assignments, midterms and exams for this course. All of the content was delivered online via Sage Math Cloud. I was the sole instructor of this course. I was also responsible for the course content which changes from year to year based on the instructors expertise. Students learnt about key concepts in programming as well as number theory

topics ranging from congruences to cryptography and select topics from linear algebra.

MATH 103: January - April 2014 I created a series of pencasts that I used as supplemental material for students. In fact, the pencasts have gone beyond this original purpose and are now included on the Math Educational Resources wiki which is discussed later in this document. The files can be easiest located at (<https://cs.uwaterloo.ca/~cbruni/2014Math103.php>).

MATH 103: January - April 2013 Created videos on continuous probability for integral calculus and I created a set of personal course notes that I uploaded at the course's conclusion. Both of these can be found at (<https://cs.uwaterloo.ca/~cbruni/2013Math103.php>).

MATH 101: January - April 2012 Created numerous videos on a variety of additional topics in integral calculus that were not covered in the typical course material and I published a set of course notes that I used while teaching the course. These can be found at (<https://cs.uwaterloo.ca/~cbruni/2012Math101.php>).

MATH 118: January - April 2011 Created problem sheets and solutions to these problem sheets and posted the material online for students.

6.4 Course Development

In this section, contrary to other sections, I have chosen to list the course developments I have made in chronological order to show the development from year to year.

MATH 101: January - April 2012 During this, my first lecturing position, I decided to use Piazza, an online forum where students could ask questions and get feedback from both myself and other students. Students responded well to the system and many posted numerous questions and solutions to problems. Response times were on average 23 minutes per question. I also encouraged group participation in class by asking questions and getting students to form groups in an attempt to solve the questions. I even allowed a student to come to the chalkboard and present a solution they just discovered. Overall I think this type of engagement and encouragement was good for the students and it fostered a positive learning environment. Lastly, I also uploaded notes from the course at the end of the term to aid with studying. I waited until the end of the course to upload the notes to encourage class attendance throughout the term.

MATH 103: January - April 2013 I again used Piazza to handle questions on subject material. My reasoning for this was that students responded well to this forum; they liked the quick response time and many students have told me that they feel less anxious when they observe that other students are also confused about course material. I also implemented "review session" office hours in which students could come in and have an environment where they could discuss mathematics. This change I felt was necessary due to relatively low office hour attendance. Doing this tripled attendance. I also uploaded course notes at the end of the term for students to help with final exam preparation. This was also the first term I used a document camera instead of the traditional black board style of lecturing. This last change was made so that I could have more dynamic lectures by bringing in prepared questions to ask students in class and not waste valuable class time by writing the questions on the board. This change also allowed me to lecture while seeing students faces which helps to gauge confusion levels in the audience.

PreCalculus Review Course (August 2013) I along with a colleague Vincent Chan worked with Warren Code on the Skylight-funded project "Online Educational Resources for Incoming First Year Calculus Student". This is an online, WeBWorK-based program to diagnose students' aptitude on precalculus topics and give them an interactive study guide to improve their skills. Our focus was on evaluating preexisting on-line content on precalculus topics and revise it or produce new content when it was required.

MATH 103: January - April 2014 One significant problem I noticed in the 2013 offering of this course was the apparent divide with what students felt integral calculus was and what the instructors of the course felt were important concepts in integral calculus. To close this divide, I worked on creating a comprehensive course syllabus found at (<https://github.com/cbruni/MATH-103-Syllabus-UBC->). The syllabus itself is too large to embed into this file (it is currently over 45 pages). It contains learning goals as well as sample exercises in an attempt to make explicit what students should learn from this course. This course needed a vision for students and I think this syllabus was and is a step in the right direction. I once again swapped office hours for group workshop sessions as I felt it was a very positive experience for students. I continued to use Piazza to address student concerns. This year, in contrast to previous years, I limited myself in my posting frequency and really tried to promote student interaction while answering questions as I feel students learn best from each other. I used a variety of different teaching styles this term including handouts, slide shows, group workshop sessions and document camera type lectures. I wanted to test alternate teaching methods this term to compare their overall effectiveness. Lastly, I created pencasts to help supplement class material with more concrete examples. This worked well with many other videos created in previous years and I have uploaded the content to the Math Educational Resources wiki to increase the sustainability of the files for the students. These videos and pencasts are very useful for students; many have told me that these help with individual study as they can pace the lectures as is suitable for their own learning and get the chance to see examples we otherwise would not have had time for in class.

MATH 1174 and MATH 210: January - April 2015 In these two courses, I still used Piazza to help with students questions and answers. MATH 210 is my first course where I have creative license over the content and delivery. I have been using Sage Math Cloud for students to submit their assignments. One concern I have witnessed in mathematics is how many students have avoided the use of computers in their degrees. I think learning how to use a computer to help understanding mathematics and communicating answers is extremely important and as such I have focused a lot on getting students to program properly and learn how to use \LaTeX to type up their solutions.

MATH 135: September-April 2015-2016, September-December 2016 This was the first course I taught at Waterloo which required a bit of a transition. After my first two terms teaching, I decided a place I could make a significant contribution was with the course notes. The course notes were created by Steve Furino in 2012 and needed a good edit to help tidy up some of the inconsistencies in the course. Over the summer of 2016, I went through the textbook page by page and fixed all of the typos I could find as well as improving on the writing. This project has since then evolved. Over the summer of 2017 and likely continuing into the summer of 2018, there will be a massive cross department collaboration project to help make the textbook more conducive to varying teaching styles. The project is already underway whereby we've considered some reordering of topics in order to help students better understand the flow of the topics in the course. I'm looking forward to continuing my role with this project.

CS 116: January-April 2017, 2019 This was my first term teaching this course. I've learnt a lot about how things are done in CS courses and I have a few ideas that I'm looking forward to implementing the next time I teach this course. I continued my creation of videos to help students learn content on their own time.

CO 480: May-August 2017 This course was one of my more interesting experiences. I was offered a chance to teach the History of Mathematics, a 400 level course offered to undergraduate students. This course is often seen as a 'bird course' among students - one that requires little work for a 400 level course and that they can do well in without much effort. When I taught this course, this could not have been further from the truth. The course had 4 assignments, each of substantial difficulty as well as a huge capstone project - a vignette consisting of students working in self-made groups of one to four students working on a historical mathematician. They needed to describe the time, place, person and a bit of mathematics that the mathematician contributed.

This course was a lot of work on both myself and on the students. I had no prior formal training in mathematics history so I needed to start from scratch figuring out everything that should have been in the course, creating new content that I was more familiar with as well as grading all of the assessments. The course ended up being a huge undertaking and I took a lot of risks that I do not believe the students appreciated. I think the stigma of the course really influenced a lot of their decisions. Many were underprepared - forgetting most of their first year mathematics training after only 2 years. A lot of students had to relearn the content from first year in order to be better prepared to apply it to new settings. This caused many students to feel like the workload of the course was too much.

I also wanted assignments to go beyond what was done in class - there was meant to be some straightforward questions on every assignment and some more thought provoking questions meant to guide students into high levels of Bloom's taxonomy. Unfortunately, I think I often aimed a bit too high and didn't reward students enough for taking chances. If I were to teach the course again I think I would try to make the assignments a bit more approachable and embed some more bonus marks into the assignment. I want to encourage students to do their best and if they can't get something that it is okay and their grade won't be impacted by it.

This was also the first time I gave my students a large writing component. I also forced students to learn L^AT_EX, a rather unpopular decision but one that I think we as mathematicians should be encouraging more of our undergraduate to do. The typesetting looks so much nicer than if done in any other program and mathematicians use this word processing tool all the time. If I was to do this again in the future; I think I would make this option but have a large bonus attached to those that do use the software (thus encouraging them to do this with a "carrot" instead of having students think this is being forced on them). I also didn't give as nice of feedback as I would have liked - It was hard to do this with so many students and so few TAs; not to mention our collective experiences with such a course was minimal. It is also difficult to tell a student concretely what was poor with their project - sometimes the English was an issue, other times the mathematics was poorly explained or the connections between the sections were lacking. However how one converts this into a numeric total is really vague and not well defined. Needless to say, I did not manage to help make this well-defined.

Despite all of the above, no one failed the course who finished and the grade were fairly well. My evaluations reflected poorly on myself - I think taking this course was a lot more work than I bargained for and being very new to both the subject content and to the style of course meant that I wasn't able to deliver as good of a course as I would have hoped. Despite this I think I learnt a lot from this experience.

CS 137: September-December 2017, 2018 My first teaching assignment after switching departments at Waterloo was in CS 137, a course in C programming for Software Engineering students. These students are some of our brightest students and they obtain a degree in both Engineering and Computer Science. When I took this course over, there was no slide set for this course (unusual for a first year course) and assignments had not been changed in 5 years. I decided to inject some life into this course and created a set of 10 new assignments, brand new examinations and created a slide deck based on the notes. I also introduced clickers into the course which now other courses are adopting in the Software Engineering program. I also created a set of videos which can be found publicly on my home webpage.

CS 136: January-April 2018 This is Waterloo's 1B course for non Software Engineering students in Computer Science at Waterloo. This course is a more polished course so I did not have to do much with course development. I decided this term to spend my extra resources elsewhere (for example, with my Graduate Student Teaching Program) as I felt there was more value to be extracted from my time in other places.

CS 245: May-August, September-December 2018 This is Waterloo's 2A course for Computer Science student at Waterloo. The course deck for this course is very verbose and I helped with trimming

it down to more manageable bite sized pieces for students. This term, our group of instructors also decided to use clickers for the very first time. I think the teaching experience given to students because of this decision was fantastic. Students were very engaged in the course content and I think the clickers encouraged them to come to class which is correlated with success. My colleague this term also created a workbook to help students go through some of the content on their own. I'm hoping in the near future that this course can be stabilized (it varies widely term to term based on who is teaching) and once this happens I would love to work on a book project for this course as it sorely needs a reliable textbook.

CS 241: January-April 2018 Again as this is my first time teaching the course and there is no course approved slide deck, I've spent some time working on making one. Again this is available from my public webpage.

7 Evaluating and Improving My Teaching

7.1 Professional Development

Reading Seminar in Teaching (September 2015 - Present) A biweekly reading seminar at the University of Waterloo discussing different topics in teaching education. Participants choose papers and then give a talk on the topic and lead a one hour long discussion group. Read "Make it Stick", "Teach Like a Champion 2.0" and "How to Teach Mathematics". In the 2018-2019 school year, we turned our reading seminar into a talk-based session with 12 speakers volunteering from all 6 departments.

Threshold Concepts Seminar (October 2015 - April 2017) A monthly reading seminar at the University of Waterloo discussing threshold concepts in our courses across disciplines. Participants read selected papers in threshold concepts and discuss them as a group on a monthly basis.

Teaching Seminars (September 2011-April 2015) A once a month seminar that showed new techniques in mathematical teaching. Speakers spoke about the new techniques they have implemented in class and how they are using modern technology to drive the classroom. Topics in the past included clicker use, Piazza, Livescribe pencasts, the TAAP beta course mentioned below and a live panel of educators discussing the current teaching state at UBC.

Reading Seminar in Teaching (September 2013-April 2014, September 2014 - April 2015) A once a week reading seminar at The University of British Columbia that discussed different topics in teaching education. Participants chose papers and then gave a talk on the topic and led a one hour long discussion group.

Teaching Assistant Accreditation Program (TAAP) Coach (January 2014 to April 2014) With Vincent Chan, a fellow graduate student, we coached a team of 6 students at a total of twelve hours a week through a series of activities geared towards improving teaching skills amongst graduate students. This course was the same one that I participated in during the months of September-November in 2012. See below for more details.

TAAP Beta Course (September - November 2012) This was a three month beta offering of a TAAP course. Here, a group of four participants spent time improving our teaching abilities. There were two parts to this TAAP accreditation. The first was a book club portion where we read "How Learning Works: Seven Research-Based Principles for Smart Teaching" by Ambrose et al. This was a great opportunity to see different research techniques in a practical setting and discuss some of the recent research results in a mathematical context.

The second half of the course was divided into two components, an online activity and an in class activity. Each week half the participants would make an online activity for the group and the other half would create an in class activity. Examples of the online activities we had included creating blog

posts, developing Mathematica applets (which were used in the winter term of 2013 in courses taught at UBC), discussing video blogging as a learning tool and discussing some possible free alternatives to the clicker devices commonly used in science courses at UBC. The online component additionally involved reading a second book “What the Best College Teachers Do” by Ken Bain. The in class activity involved a participant giving a lecture to the other classmates using the techniques developed from the texts above as well as their own personal experience. We gave lectures using worksheets, having the class participate in board work and by giving traditional lectures to see how effective different styles would be in a classroom setting.

We created a blog and a scrapbook of ideas to implement in future offerings of undergraduate courses. A scrapbook is a collection of ideas for teaching we individually accumulated over the course of a term. These scrapbooks are available for our reference to assist and improve our future teaching. The blogs were intended for us to discuss our ideas of teaching, to reflect upon our previous experiences and to extrapolate on how we can use ideas from this course in future courses. Finally, this dossier was also a component of the course and has evolved into the document you see today.

TAAP - Teaching Assistant Accreditation Program (September 2010 - September 2012) A series of seminars (now a full course as mentioned above) based around teaching and improving mathematical teaching skills. This accreditation program in its first form consisted of three primary components. First was the completion of MATH 599, a teaching course designed to gauge whether or not students were capable and ready to take control of their own class. This course is described in more detail below. Secondly, participants needed to complete nine hours of seminar participation. Third, a student must complete a math ISW (see below). Lastly, there was a 10 hour component in which a student needed to perform a teaching service. I worked under Professor Greg Martin creating new linear algebra problems for a linear algebra course and evaluating the effectiveness of an automated system such as WeBWork in this environment.

Math Instructional Skills Workshop (ISW) (December 2010) A four day workshop for improving teaching skills. Each day we focused on skills to implement while teaching and with our small group of four participants, we would give a brief ten minute lecture and have some discussions based on what we saw. With our feedback, we left the workshop, worked on another lecture and the next day gave another ten minute lecture followed by feedback time. The key idea of the workshop was giving and receiving useful feedback on our lecturing style and then using this feedback to further develop our teaching. Many of the participants in the workshop experimented with different ways of teaching which offered a nice change from the usual blackboard lecturing style we see so often in mathematics.

MATH 599 - Mathematics Teaching Techniques (September - December 2010) This course was and is a prerequisite to teaching UBC mathematics classes. A student must successfully complete this pass or fail course before being recommended to teach. In this course, we discussed how to teach mathematics effectively and using different techniques in the classroom. Students gave two minute, fifteen minute and fifty minute lectures and the latter was delivered to a live undergraduate audience. Throughout, feedback was paramount coming from both our peers and from our instructor, Professor Fok-Shuen Leung.

7.2 Evaluation of Other’s Teaching Practices

Mathematics Graduate Student Teaching Seminar (January-April 2018, 2019) This is mentioned elsewhere in this dossier but I choose to repeat it here. I’ve watched several graduate teach mini lectures as well as lectures in front of live classrooms. I have given them ample feedback and suggestions on how to improve.

Teaching Circles (September-December 2018) In a seminar organized by Jordan Hamilton, I went to see three different instructors teach and was visited by 3 others as well and we discussed our teaching practices as a group. I visited talks by Andrew Belatos, Ryan Trelford and Mukto Akash and was

visited by Dan Wolczuk and Diana Castaneda Santos.

Teaching Triangle (September-December 2017) In a seminar organized by Monica Vesely, I went to see two different instructors, Alice Gao and John Simpson, teach and was visited by them as well. We discussed some of our teaching philosophies as well as some techniques for improvement with our teaching.

Killam Award Committee Member (September 2013 - April 2014) I was an award committee member to help choose Killam award winners at UBC. The award is given to outstanding teachers at the university level. Duties included visiting each nominee's lecture and evaluating their teaching performance. This information was used as a group to determine a winner for the Killam award. For more information, visit <http://science.ubc.ca/faculty/awards/killam>.

7.3 Selected Talks in Education

- *Lessons Learned from a Graduate Student Seminar (December 2018)*
Canadian Mathematical Society Winter Meeting, Vancouver, Ontario.
- *Online Adventures! (June 2018)*
Canadian Mathematical Society Summer Meeting, Fredericton, New Brunswick.
- *Classroomless Classrooms (December 2017)*
Canadian Mathematical Society Winter Meeting, Waterloo, Ontario.
- *Mathematical Housing: Downsizing a First Year Proofs Course (December 2016)*
Canadian Mathematical Society Winter Meeting, Niagara Falls, Ontario.
- *Patterns and Sequences (November 2016)*
Grand River Valley Mathematics Association Meeting, Waterloo, Ontario
- *Patterns and Sequences (August 2016)*
CEMC Math Teachers' Conference, Waterloo, Ontario
- *The Math Exam/Education Resource (December 2014)*
Talk held at the CMS Winter Session in Hamilton Ontario.
- *Reading Seminar in Teaching, "Solving America's Math Problem" (November 2014).*
Teaching Seminar at UBC.
- *The Math Exam/Education Resource Poster Session (April 2014).*
Poster session held at the Carl Wieman Science and Education Initiative end of term event.
- *The Math Exam/Education Resource (February 2014).*
Teaching lunch series talk held at UBC.
- *Reading Seminar in Teaching, "Academic Motivation in Calculus" (February 2014).*
Teaching Seminar at UBC.
- *Reading Seminar in Teaching, "Where learning starts? A framework for thinking about lectures in university mathematics" (November 2013).*
Teaching Seminar at UBC.
- *TAAP Beta Course (March 2012).*
Teaching lunch series talk held at UBC.

7.4 Books and Articles

I have read many books and articles on teaching. The following lists gives a sample of those I have found to be influential. They are organized by how they have influenced my teaching practices.

Influences on Lecturing

- "The Teaching and Learning of Mathematics at the University Level" by Michèle Artigue
- "What the Best College Teachers Do" by Ken Bain
- "Twenty Terrible Reasons for Lecturing" by Graham Gibbs
- "How to Teach Mathematics" by Steven Krantz

- March 2011 AMS Notices - Many assorted articles on teaching are in this issue of the AMS Notices.
- “Where learning starts? A framework for thinking about lectures in university mathematics” by David Pritchard
- “Lesson Plays: Planning Teaching Versus Teaching Planning” by Rina Zazkis, Peter Liljedahl and Nathalie Sinclair

Influences on Curriculum

- “The Calculus Concept Inventory - Measurement of the Effect of Teaching Methodology in Mathematics” by Jerome Epstein
- “An Evaluative Calculus Project: Applying Bloom’s Taxonomy to the Calculus Classroom” by Gizem Karaali
- “The Aims of Education” by Alfred North Whitehead
- “Who Needs Mathematicians for Math Anyway?” by Sandra Stotsky November 13, 2009 (in the City Journal)

Influences on Research on Student Learning

- “How Learning Works: Seven Researched-Based Principles for Smart Teaching” by Ambrose et al.
- “Academic Motivation in Calculus” by Asia Matthews, Carolyn Hoessler, Leo Jonker, Denise Stockley
- “Purposes and Methods of Research in Mathematics Education” by Alan H. Schoenfeld

8 Contributions Outside the Classroom

8.1 The Math Educational Resources Wiki 2012-2015

The Math Educational Resources wiki located at http://wiki.ubc.ca/Science:Math_Exam_Resources or the updated standalone version at <http://www.Math-Exam-Resources.com> is a project that began in 2012 designed to help upload past UBC math exam solutions for free online. Since its inception, the resource has evolved from a project that started as an exam bank to a project that can now be used throughout the term to help students learn mathematics. With over 1500 solutions to undergraduate mathematics problems, this resource is the culmination of many hours of effort by its volunteers consisting primarily of graduate students. I have contributed to the wiki as a solution writer, as a wiki gardener, by giving presentations on the wiki and proof reading solutions. In 2013, we decided to create an official wiki committee. From September 2013 to December 2013, I was the wiki’s senior advisory member. From January 2014 until present, I have been the wiki committee head with Bernhard Konrad. In 2014 we were given a “Flexible Learning TLEF” grant from the University of British Columbia to help with the sustainability of the wiki project and to start to measure its effectiveness of student learning.

The project has helped students study mathematics with over 1.3 million page clicks to date. The site includes videos to mathematical content with permission from author PatrickJMT and includes some of my own personal pencasts created for topics in integral calculus. Students can vote on the difficulty of problems so that future generations of students can assess how easy or hard a given exam was. This also helps instructors evaluate how difficult exams were from student’s perspective. Current course syllabi are also online and exam questions are organized by topic as well so that students can use these to study throughout the term and not just at exam time.

The focus was for courses taught at UBC, but the exam resource is available to the world and can be accessed online for free. Past students have told me how useful the exam resource has been while studying for exams. This resource has a lot of global potential and as it continues to evolve will no doubt help students everywhere learn mathematics.

8.2 Math 135/CS 116 Resources Page 2015-Present

When starting my lecturer position at the University of Waterloo, I decided to create a webpage based on my work with the Math Educational Resources Wiki above. I worked to create an open resource online at <https://cs.uwaterloo.ca/~cbruni/Math135Resources/index.php> and the first spinoff project for CS 116 at <https://cs.uwaterloo.ca/~cbruni/CS116Resources/index.php>. On these sites, I've created a plethora of resources including lecture notes, review videos, tutorials, cheat sheets, recordings of my livestreams done on Twitch and many other interesting bits of information. This project prompted people to ask me for a similar project in CS 116.

The project to date (combined) has well over 80,000 page views in its 16 months of being tracked. The project garners usage even in terms when I'm not teaching the course. In fact, anecdotally, I've had high school students approach me at special outreach events commending me on my site and how they've learnt a lot from the resources posted there (which was never my intention but is extremely humbling to have people come up to you and say thank you for the resource).

8.3 CS Outreach Committee September 2016-August 2017

I was one of the committee members aiding with coming up with ideas for outreach for students with an interest in computer science. Our committee has successfully organized a CS outreach day which hundreds of students attended.

8.4 Other Volunteering Experiences

Math Mania, November 2014 Volunteered at a mathematics exhibition where grade 6 and 7 students in the Vancouver region came to explore mathematical ideas through the context of games.

Lord Byng Opportunity Fair, November 2013 Volunteered at an occupation fair helping to advertise careers in mathematics at a local secondary school. Students interacted with the volunteers via games and other mathematical puzzles to help promote interest in mathematics.

Mathematics Contest Marking 2012, 2013 In April of 2012, I helped with the marking of the annual University of Waterloo Euclid contest intended for grade 12 students. Thousands of student's across the country write these contests and volunteers from across the country gather and mark the contests. In December 2012 and 2013, I helped mark the Canadian Open Mathematics Contest, a contest intended for students in grades 8 to 12.

Euclid Day 2012 On May 17th in 2012, I was a participant in the Euclid Day festivities as a tour guide. Top students were invited to UBC for a day of activities based on their Euclid mathematics contest performance.

9 Appendix

In this section, I present some supporting evidence for this dossier. The first subsection involves comments I have kept from Piazza posts and e-mails I have received from students. These unedited e-mails were unsolicited and were given at the conclusion of courses I taught. Since the e-mails were not intended to be used for the purposes of this document, I have intentionally kept them anonymous.

Next, I have included a series of supporting documents. First, my unedited teaching evaluations from UBC and the University of Waterloo in reverse chronological order showing a development of my teaching. Following this is a series of letters also in chronological order. The first and fifth are letters I received from the Dean of Science at UBC in regard to my teaching term from January to April 2012 and 2014. The second is a letter from the vice provost stating that I was a recipient of the Killam award. Third is a letter from the associate dean of curriculum and learning acknowledging my Killam

award. Fourth is a letter of appreciation for my role as a committee member of the Killam prize for faculty of the University of British Columbia.

9.1 Information From Students

9.2 Random Email

A student sent me this on March 30th, 2019:

How's it going lately? I am **redacted** from your CS 136 class in Winter 2018. Almost a year ago has been one of the lowest points in my life when I failed to transfer to CS. You gave me the motivation and advice to keep going, and to keep on pursuing my passion, and when you said that I don't have to be in CS to do CS jobs you are totally right! I followed your advice and build a few side projects in the past year and participated in a Hackathon where I won. There were many hard times where I wanted to give up, but I just can't let myself give up on my dreams. Now I have secured an Internship position as a Software Engineer Intern at Tokopedia which is one of the largest e-commerce unicorn Startup in South East Asia. This is only the beginning of something great, and I will continue to work harder to achieve better in the future. I might not be in this place today without your advice and motivation a year ago, and I really want to take the time to thank you for guiding me through my hard times. Stay Awesome Carmen!

9.2.1 CS 241

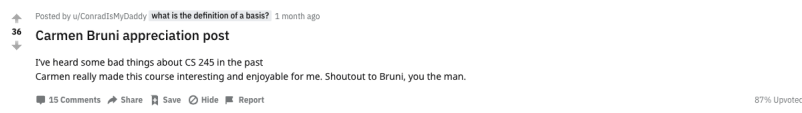
From January 2019 on Piazza:

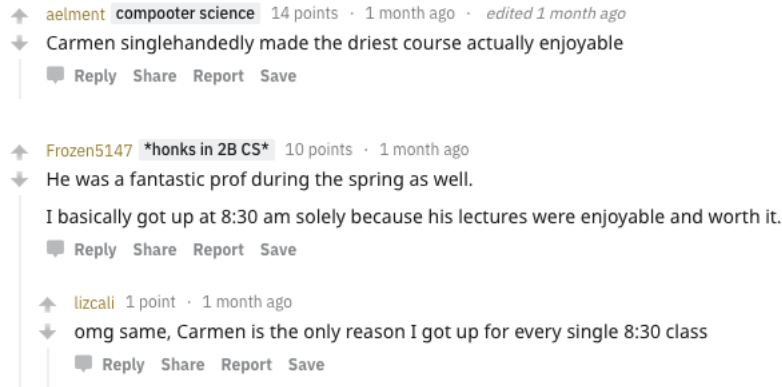
The screenshot shows a Piazza poll interface. At the top, it says 'poll' and '101 Views'. The title is 'Carmen Bruni Appreciation Post'. The text of the poll reads: 'Our instructor told us today in class that Carmen has posted all the notes for the lectures. I just wanted to say thanks. It's so much easier to learn when you can focus on the material taught instead of scrambling to write down notes. It also helps to know there's no holes in our notes. Thank you Carmen for always coming in clutch <3 Is Carmen a God?'. There is a 'Submit' button and a message 'You have not yet voted.' Below that, it says 'Re voting is not allowed. Select your vote and click submit to register your vote. Your name will not be visible to anyone.' At the bottom, there is a progress bar showing '45 (100% of users)' and a question 'Is Carmen a God?'.

9.2.2 CS 245

On Reddit (slightly edited to remove rude comments):

https://www.reddit.com/r/uwaterloo/comments/a44p8m/carmen_bruni_appreciation_post/

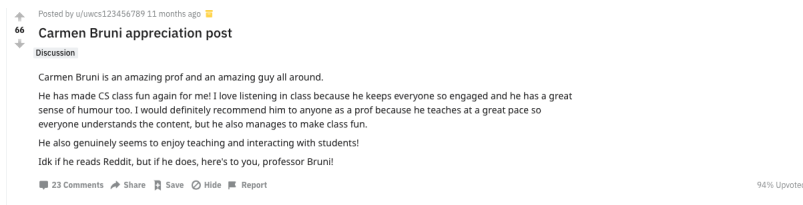




9.2.3 CS 136

Also on Reddit:

https://www.reddit.com/r/uwaterloo/comments/7yi8jn/carmen_bruni_appreciation_post/



9.2.4 MATH 135

A quote that was “liked” 40 times on Piazza:

Thank You to Carmen Bruni!

I wanted to thank Carmen Bruni who has, in my opinion, gone beyond what was expected of him as a professor. He is constantly providing extra resources and help to all M135 students and has simplified my learning experience. Thank you!

9.2.5 MATH 103

I just wanted to thank you for all the work you put into helping us with the coursework and making it as interesting and engaging as possible. Over the winter break, I was thinking that 103 was going to be my last math class ever but now, I’m considering trying out a 2nd year course. During the term, I came to really like integral calculus despite occasional WeBWork frustration and some not-so-great midterms. Your extra support during the review sessions showed how much you cared about us as students and helped me to survive the term.

Thank you for a great semester and enjoy the summer break!

Once again, thanks for all your help this semester. I’m sorry I couldn’t get by this week, but I just wanted to drop off a small token of my appreciation for your excellent teaching, and the one on one help. As a TA, I understand that while it may be your job, there are still other things to be done.

Just wanted to thank you for helping me with math this term and for being an engaging and passionate professor. Thank you for a great semester, it was a pleasure to be one of your students.

Hi Carmen,

We wanted take the time to thank you for an amazing term! You have been an amazing professor to us and thank you for your patience as we know we take up a lot of your time!

Anyways thanks again! Wish you the very best!

9.2.6 MATH 184 Workshops

Having had the privilege of working with some truly inspirational instructors, it is no small thing that I hold Carmen among the best of them. His teaching prowess goes beyond knowledge of, or even a passion for Math. What sets Carmen apart from other instructors is his sincere desire to be of aide to his students. Never before have I come across someone so genuinely interested in the welfare of others. Always generous and ever patient, he has been instrumental in nurturing both success and an interest in a subject matter which, for the majority of my life, I have done my best to avoid. I can say it has been a pleasure and a privilege to have had the opportunity to work with him, and I continue to do so to this day.

9.2.7 MATH 101

Hi Carmen,

Thank you for being such a great Math 101 professor this term. Your class was BY FAR the most enjoyable one I've taken in my short university career and I hope you continue to teach with such great enthusiasm and effort!

So once again, thank you, and I really hope I'm in one of your classes again!

Hello Carmen,

I was in your math class this semester, and I may or may not have stayed up until midnight to check my math grade. And I passed! I'm actually in my third year of UBC and I can say without a doubt this course took more work than any of my other courses. This includes upper level genetics and chemistry.

I don't really have an agenda in emailing you, other than to thank you for helping me pass this and making math as enjoyable as possible. I LOVED piazza. It helped me feel a little less pathetic when I can see other people up at 3am trying to do WeBWork. In class when I/others asked questions, you were very thorough and made sure we understood (without making us feel bad), which helped a lot. What helped me most was doing hard problems in class, where you would give us 30 seconds to try and answer it. Not because I would know the answer, but that it gave me time to realize I had no clue how to answer the question and that I needed to learn what you were teaching.

Anyway, I have no general message besides being giddy that I passed.

Thank you for a wonderful semester.

9.3 Mathematics Graduate Student Teaching Seminar

On the next two pages, you can find a copy of the syllabus I have used for the teaching seminar course I created with my colleagues Brian Forrest, Diana Skrzydlo and Dan Wolczuk.

New Seminar Proposal

Teaching Techniques for Mathematicians

Purpose

The purpose of this seminar is to be an introduction to teaching mathematics. Students generally come into a graduate program with limited to no experience teaching an undergraduate course in mathematics. This course will help these research candidates to be able to structure a course from start to end. The hope is that this seminar will not only improve Master and Ph.D. students' teaching ability but also their presentation skills which will be necessary skills in their academic careers. References include "How to Teach Mathematics" by Krantz and "Learning to Teach and Teaching to Learn Mathematics" by DeLong and Winter.

Outline and Course Work

Week 1: Introduction week.

- 10 minutes of introductions (who is involved, how this came to be etc.);
- 10 minutes CTE will come in and give a brief spiel of who they are and what role they serve at the university. Ideally, they would bring in schedules of seminars they offer that students can attend.
- 10 minutes: 'What is good teaching?' (Group discussion); Learning Outcomes .
- 60 minutes. one video, discuss as groups (Think Pair Share; write a list of pros and cons) and then maybe give an example of the Think Pair Share with the Wason Selection Task.
- <https://youtu.be/9621LfW-8Jo>
- <http://collegemathvideocases.org/cases/index.php>
- <https://youtu.be/GtP6CUEHDhY>
- Wason's Selection Task

Week 2: Presentation Skills

- 10 minutes about the micro-teaching component for this seminar. See Handout/Below.
- 40-50 minutes Dan Wolczuk will give a presentation on presentation skills. Topics include using a loud voice (paralanguage, pitch, pauses, intonation, annunciation.), knowing your lines, movement and positioning, eye contact, body language (where to stand, open facing, interested in subject).
- 30 minutes continuing our discussion from the previous week on the Socratic Method and technologies in the classroom.
- Get participants for homework to create an assignment that they will discuss in Weeks 4 and 5 for their course. (Instructions distributed in an email)

Week 3: Micro Teaching (1 of 3).

This will be our first micro-teaching session. Participants will break down into small groups of 4 (three participants and one professor) where they will conduct a small 15 minute lecture followed by 10-15 minutes of feedback on what worked and what didn't.

Week 4: Assessments Part 1

Dan will give a 30-40 minute talk on Bloom's Taxonomy, feedback and assessments. Brian and Diana will discuss some aspects of their assignments and exams. Participants will create mock assignments and discuss some of the pros and cons of these in the next week. Questions for participants include:

- What do you want students to get out of your course?
- What are student's perceptions of things?
- How do first year students differ from other years?

Week 5: Assessments Part 2

This is a follow up to Week 4. Participants can discuss their assignment problems they created and discuss with peers on what would work and what would not work. Participants by this point will need to have had a discussion about their practicum with their instructor. Depending on Week 4, maybe we might need to discuss exam creation as well.

Week 6: Micro Teaching (2 of 3). See Week 3 for details.

Week 7: Visit a Lecture Week.

Participants will go and visit a lecture this week where we observe one (or several) faculty members. Ideally this will correspond to the course where you will be doing your practicum. Focus participant's attention on the audience in large classrooms:

- What are the students doing?
- How are they responding (or not responding) to what the instructor is doing?
- How are they asking questions?
- How are they interacting with their peers and with the instructor?
- Is the instructor using any novel technology?

Week 8: Round Table Discussion.

This will be a follow up to the previous week discussing the aspects of the lecture they witnessed. Ideally we'll have a round table discussion or break into smaller groups depending on the number of participants. Leading questions include:

- What were students doing while the lecturer was presenting?
- What novel techniques did you see that you want to incorporate in your teaching?
- Did anything go wrong in the lecture? How did the instructor react?
- Did the instructor bring a water bottle? (Can be a useful teaching tool)
- Did the instructor ask for questions? How long did the instructor ask for questions? Did they ask the audience questions?

Week 9: Micro Teaching (3 of 3). See Week 3 for details.

Week 10: Practicum

The practicum will consist of the participant lecturing at a real live classroom. Participants will first consult with an instructor about the content of the material and will present a lecture in front of a live audience. The practicum should be attended by one or two professors (optionally: can be attended by a small group of students as well). Lectures should be followed by a debrief.

Week 11: Scenarios

- 10 minutes: Start with a brief personal reflection on the practicum
- 40 minutes: Small panel discussing teaching for the first time.
- 40 minutes: Dealing with scenarios: How to deal with student complaints, how to help students in distress, putting together a LEARN page, creating a syllabus, other borderline cases/issues, managing TAs, dealing with Piazza (Socratic method).
- Can discuss online resources, teaching online, handling unresponsive colleagues, Metacognition, Student Misconceptions, etc.

Week 12: Wrap Up and "How to Get A Job".

Discussed next steps for participants including CVs, teaching dossiers, teaching statements and so on.

Learning Outcomes: By the end of this seminar, students will be able to

- Present mathematical material to undergraduate students with confidence
- Discuss current research in mathematics education, for example, active learning techniques, blended learning, flipped classrooms and others.
- Analyze and critique others teaching styles. Also, debate and discuss ways to improve.
- Analyze current teaching practices and compare to what is being done by others and other faculties.
- Prepare a teaching statement.
- Plan a teaching dossier, that is, begin and consider what activities students can do to help improve their teaching abilities over their graduate school career
- Be able to create a new course with concrete learning objectives, assignments and tests
- Create a marking scheme for an assignment problem
- Discuss advantages and disadvantages to alternative methods of education
- Become more effective teachers.
- Identify and avoid poor teaching practices

9.4 Other Documents

I've omitted my raw scores from online as they contain student comments which were not made to be publicly accessible - From CS courses I have averaged a score of 4.5/5 at the University of Waterloo. This data can be made available upon request.

THE UNIVERSITY OF BRITISH COLUMBIA



Faculty of Science

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Office of the Dean

July 13, 2012

Carmen Bruni
Department of Mathematics
University of British Columbia
Mathematics Building, Zone 2

Dear Carmen:

During my review of the student evaluations of Faculty of Science teaching for Winter 2011 (Term 2 and Full Year), I was delighted to see the very positive evaluations of your teaching in MATH 101.211. In this course, you earned superior numerical ratings and received positive written comments that clearly indicate that our students value your teaching skills and while I recognize that student evaluations are only one measure of teaching quality, they are an important measure. On behalf of UBC, the Faculty of Science, and our students, I thank you for your dedication to teaching and student learning. Our students and I appreciate your efforts and commitment to making UBC a great university.

Best Regards,

Simon Peacock
Dean, Faculty of Science

*Carmen -
Great job and wonderful
student comments - "best
instructor imaginable"!*

Thx.

CC: Dr. Michael Bennett, Head, Department of Mathematics



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OFFICE OF THE PROVOST

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Phone 604 822 0206
Fax 604 822 8118
Email anna.kindler@ubc.ca

Professor Anna M. Kindler
Vice Provost and
Associate Vice President Academic

April 12, 2013

Mr. Carmen Anthony Bruni
BSMT, 1616 – 64th Ave., West
Vancouver, BC V6P 2P1

Dear Mr. Bruni,

Re: 2012/2013 Killam Graduate Teaching Assistant Awards

It is my great pleasure to advise you that you have been selected as a recipient of the 2012/2013 UBC Killam Graduate Teaching Assistant Award. This recognition is given each year to a small number of graduate students who have made an outstanding contribution to teaching and learning at UBC. With over 2000 Teaching Assistants working at the university, winning this award is a remarkable achievement.

I would like to take this opportunity to thank you for your dedication and effort invested in supporting our undergraduate students. Your energy, enthusiasm and diligence in fulfilling your teaching responsibilities have made a positive impact on the quality of the learning environment at UBC.

The Killam GTA Award carries with it a \$1,000 prize and a formal certificate. The monetary award will be deposited directly into your account. Should you not have a direct deposit, a cheque issued in your name will be mailed to the address provided by your Faculty. The award of the certificate will take place at a reception on May 6th, 2013, 3:30 – 5:00 p.m., and will be hosted by the Provost's Office.

If you have any questions about this process, please contact my Executive Assistant, Jola Holt at jola.holt@ubc.ca, or at 604-822-5611.

Please accept my sincere congratulations on receiving this prestigious award, and best wishes for the future.

Sincerely,

Anna M. Kindler
Vice-Provost and Associate Vice-President Academic

Cc: Dr. David Farrar, Provost and Vice-President Academic
Dr. Simon Peacock, Dean, Faculty of Science
Dr. Michael Bennett, Department Head



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April 29, 2013

Carmen Bruni
Mathematics Department
121 Mathematics Building
Zone 2

Dear Carmen,

Congratulations on winning a 2012/2013 Killam Graduate Teaching Assistant Award! The Committee members had a difficult time choosing the award winners from amongst a dedicated and talented group of candidates, but your abilities as a teacher clearly stood out.

Teaching Assistants play a valuable role in the Faculty of Science undergraduate programs and I encourage you to continue your excellent work as a teacher beyond your current role as a TA. Best wishes for your studies and future endeavors.

A letter has been sent to you from the Vice President and Provost's Office to confirm receipt of your prize.

Yours sincerely,

A handwritten signature in blue ink that reads 'Ian Cavers'.

Dr. Ian Cavers,
Associate Dean, Curriculum and Learning

cc: Mike Bennett, Head, Mathematics Department
Simon Peacock, Dean, Faculty of Science



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April 8, 2014

Carmen Anthony Bruni
Department of Mathematics
1984 Mathematics Road
Zone 2

Dear Carmen,

I would like to convey my sincere thanks for your service on the Faculty of Science Killam Teaching Awards Committee 2013-2014. You have played an important role for the Faculty in our efforts to acknowledge exceptional teaching by our faculty, and I very much appreciate the time and energy you spent evaluating the nominees for the Killam teaching prize. I hope you enjoyed the chance to visit the classrooms of the nominees and to discuss the relative merits of different teaching approaches with colleagues on the Committee.

The Committee did an outstanding job in selecting the winners and I look forward to acknowledging them at convocation. A lunch in honour of the winners will be held early in the fall term to which you will be invited. We will contact you regarding the time and place of the luncheon.

Thank you again for giving us so generously of your time to serve on this committee.

Sincerely,

A handwritten signature in blue ink that reads 'S. Peacock'.

Simon Peacock, Dean
Faculty of Science

CC: Martin Barlow, Acting Head – Department of Mathematics



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July 15, 2014

Carmen Bruni
Department of Mathematics
University of British Columbia
Mathematics Building, Zone 2

Dear Carmen:

Congratulations on earning excellent student evaluations for your teaching of MATH 103 in term 2 of the 2013-2014 academic year! Your strong numerical ratings and positive student comments clearly show that our students appreciate your commitment to teaching and their learning. I recognize that student evaluations are only one measure of teaching quality, but they are an important measure. On behalf of UBC, the Faculty of Science, and our students, I thank you for your dedication to quality teaching and student learning. Your commitment to quality teaching is one of the reasons that UBC ranks among the world's very best universities. Thanks!

Best Regards,

Simon Peacock
Dean, Faculty of Science

Great job! Thanks!

CC: Dr. Michael Bennett, Head, Department of Mathematics