Teaching Statement

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As a graduate student at ANU, I have had the opportunity of serving as a tutor (teaching assistant) for several courses. I have been responsible for conducting independent tutorials, which are small classes alongside main lectures that are designed to provide student more interactive learning experience. In these tutorials, I would typically review lecture materials, guide students through assignment problems, and answer their questions. I would also teach supplementary materials to deepen the understanding of the subject matter. Primarily, my teaching experience has been focused on mathematics and econometrics.

In my view, the most effective teaching is characterised by the ability to ignite students' curiosity, impart novel and insightful knowledge, and foster critical thinking skills. While achieving these objectives ultimately relies on the passion and expertise of the instructor, I would like to emphasise several key principles that I have personally embraced in my teaching. These principles are summarised as follows.

Engage. I always believe that teaching is not a one-way process of lecturing, but a conversation between educators and students, where both parties inspire and learn from each other. Most of the courses I taught were during the pandemic period, which posed special challenges to teaching as everything were forced to move online. To engage the online students as much as possible, I intentionally avoid using PowerPoint slides, as they tend to create a passive learning experience akin to replaying a recording. Instead, I set up a camera that captured both myself and the whiteboard behind me. I insisted on showcasing my live writing and kept asking questions to encourage students' participation. In face-to-face teaching, I would like to foster an open and relaxed atmosphere in my classroom, so that students would find it easier to involve in the discussions. I aim to create an inclusive learning environment, by actively involving each student and presenting myself as a friendly facilitator. Nevertheless, the quality of teaching itself is the most important thing to keep students engaged.

Motivate. Teaching should inspire critical thinking and problem-solving skills, rather than mere rote memorisation. Whatever the subject I teach, I endeavour to motivate the content in a

way that sparks students' curiosity for deeper inquiries. Real-world applications are sometimes effective to contextualise technical skills. For example, in time series analysis, I emphasise how various techniques were developed to address practical problems like economic forecasting or stock price prediction. In the realm of mathematics, I like to use intriguing problems to stimulate curiosity. For instance, I would captivate students' interest by demonstrating how the Gamma function extends the concept of factorial. When tackling challenging assignments, particularly in mathematics, I would try to motivate creative problem-solving approaches, rather than providing direct solutions.

In-depth. I would like to teach additional materials slightly deeper than the course requirement. For example, in mathematical courses, I would provide proofs for theorems beyond necessary, as I believe this not only deepens students' understanding of the subject, but also enables them to appreciate the inherent beauty of mathematics. While acknowledging that this approach exceeds the scope of the curriculum, I find that students are captivated by the elegance of these proofs. On the other hand, I also emphasise the importance of grasping the big picture, rather than getting lost in technical details. When explaining economic models, for instance, while I elucidate the modelling techniques in detail, I also emphasise that these models are abstractions, intentionally simplified to highlight key economic mechanisms — modelling techniques are crucial, but comprehending the overarching framework of how the economy functions is even more vital.

Clarity. I prioritise delivering clear and well-organised content in each course. I usually commence by providing a clear syllabus that serves as a guiding roadmap throughout the teaching process. Additionally, I conclude each course with a summary of key takeaways. My teaching philosophy is that while I aim to provide in-depth knowledge for intellectually curious students, I also endeavour to offer concise and straightforward insights for those with practical focuses. When it comes to assignments and exams, my aim is to provide clear guidance on the teaching agenda and the essential knowledge and skills that the students need to acquire.

Hands-on. In certain course contexts, particularly those involving programming, a hands-on approach centred around experiential learning proves most effective. In such cases, I guide students through progressive problem-solving exercises to develop their skills. For example, when introducing beginners to programming, I often assign a seemingly simple yet thought-provoking problem: how to swap the values of two variables without employing a third variable. I find such clever challenges to be excellent catalysts for developing programming skills.

Moreover, I would like to expose students to different approaches to achieve the same outcome, discouraging using repetitive coding and encouraging creative problem-solving abilities.

Support. A dedicated teacher is always prepared to assist students in times of need. I am committed to addressing students' questions and requests, particularly in tutorial sessions designed to foster interactive learning experiences. While the constraints imposed by the pandemic have made in-person meetings challenging, I actively seek alternative means of support. I am more than willing to arrange individual online meetings with students, recognising that email exchanges can be inefficient for providing effective tutoring. Admittedly, this level of personalised attention may be impractical in larger classes. Nevertheless, in smaller class settings, I am committed to assisting each student individually whenever they need guidance.

Teaching Interests. Moving forward, I aspire to continue teaching courses pertaining to mathematics, econometrics, and specifically, time series analysis, at both the undergraduate and postgraduate levels. My previous teaching experiences have been predominantly focused on these subjects, which also align with my research interests.