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DEPARTMENT OF AGRICULTURAL AND RESOURCE ECONOMICS
COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

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Dear Incoming MS Students:

We are looking forward to your arrival here at UC-Davis this fall. This letter describes our expectations of your preparation *prior* to beginning coursework in the fall. It also provides some suggestions for review this summer if you do not meet these expectations or you feel you need to brush up on some material.

Econometrics

The department has two different options for econometrics. Those who have enough econometrics in their background might consider the year-long PhD sequence in econometrics, which consists of ARE/ECN 239, 240A, and 240B. The emphasis here is much more on the underlying theory in preparation for second-year PhD-level field courses in econometrics. This option would be appropriate for students who are likely to continue on for a PhD and who have very strong quantitative backgrounds, including courses in linear algebra, probability theory, econometrics and statistics.

The second, and more common, option is the MS econometrics sequence which, beginning this year, will include two courses: ARE 256 in the Fall and ARE 298 in the Winter. This sequence emphasizes a mix of econometric theory and applications and is more closely tied to applications of relevance for the MS courses that follow: 214, 258, and 275, for instance, and empirical work, such as might be appropriate for a Master's thesis. The MS econometrics sequence also requires a good background, but mainly in applied statistics. Undergraduates in the Managerial Economics major at UC Davis are required to take 2 statistics courses and one econometrics course. The statistics courses thoroughly cover the first 12 chapters in Caniglia's *Statistics for Economists: An Intuitive Approach*, while the econometrics course (various texts are used) covers linear regression. We assume you will be familiar with this material *prior* to the fall quarter. Basic familiarity with linear algebra will also be important for the MS econometrics sequence. A course in linear algebra is not a formal prerequisite, as we will review key matrix algebra concepts in the first weeks of 256.

To make sure that you are prepared for the fall, we suggest that you make sure you are familiar with the first nine chapters of *Statistics for Economists: A Beginning* by John Floyd. The first seven chapters cover essential statistics, while chapters eight and nine cover linear regression. The text is available for free download at: <http://www.economics.utoronto.ca/jfloyd/stats/ecstats.pdf>

Finally, the first part of the text for 256 also covers much of the same ground. We're using the 3rd edition of Christopher Dougherty's *Introduction to Econometrics*: <http://www.oup.com/uk/orc/bin/9780199280964/>. There are a number of good econometrics books. This one was chosen for readability and affordability.

Micro-theory

The MS program provides intensive training in micro-economic theory. In addition to two quarters of micro-theory (204A and 204B), you will take a course in optimization and linear programming (252) and applied micro analysis (258). In preparation for this coursework, you should be very comfortable with multi-variate, differential calculus and have had a calculus-based, intermediate micro-economic theory course at the undergraduate level using a text such as Perloff's *Microeconomics: Theory and Applications with Calculus*. The text that you will use in 204A and 204B is Nicholson's *Microeconomic Theory: Basic Principles and Extensions*.

Math Review Course

The first day of classes is Thursday, September 22. A three-day math review course will be offered from Monday, September 19 through Wednesday, September 21 from 1-3 pm in our conference room (2102 SS&H). This course will review key mathematical concepts underlying optimization theory. While this course is voluntary, we strongly encourage you to attend.

Have a great summer and we look forward to seeing you in September.

Regards,

A handwritten signature in black ink, appearing to read 'SRB', written in a cursive style.

Stephen R. Boucher
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Chair, Graduate Administrative Committee
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