Economics recommended reading list

Before arriving in Manchester for your economics masters you should do some preliminary reading to reinforce or develop existing knowledge.

As a starting point we have found that many students struggle with the highly mathematical nature of modern economics as taught at Manchester. So making sure you are strong mathematically is highly recommended. We have a pre-session Introduction to Quantitative Methods in Economics course which starts around the middle of September (https://www.socialsciences.manchester.ac.uk/study/masters/intro-to-qm/). All students should attend this and know FULLY the material on this before starting the course units properly. MSc students requirements are higher and they should also be familiar with Linear Algebra and Advanced Multivariate Calculus. Gilbert Strang of MIT as produced a substantial about of useful material in his MIT OpenCourseWare Linear Algebra course (https://ocw.mit.edu/courses/18-06-linear-algebra-spring-2010/). The mathematical appendices dealing with Sets and Mappings, Calculus, Optimisation, Constrained Optimisation, Optimality Theorems, Separation Theorems in Jehle, G., Reny, P. Advanced Microeconomic Theory. Pearson 3rd ed. (2011) are particularly useful and a good indication of the kind of material covered on the MScs.

Econometrics and using computer packages (eg R, Matlab, Python) for econometrics are also areas where some students struggle. There is a lot of useful material in Econometrics Computing Learning Resource (ECLR): http://eclr.humanities.manchester.ac.uk/index.php/Main_Page. With respect to learning R, Florian Heiss has produced a useful free online textbook (Heiss, Florian (2016) Using R for Introductory Econometrics , 2nd Edition). If you are doing the MSc some Matlab might be helpful for Macroeconomics and perhaps for your later Econometrics studies

- Macroeconomics:
    - Mathworks (Mathworks: Using MATLAB to Develop Macroeconomic Models)
    - Greenwood Jeremy & Ricardo Marto, 2022. Numerical Methods for Macroeconomists (https://www.ricardomarto.com/files/NM4M.pdf) .
- Econometrics: (https://www.kevinsheppard.com/teaching/matlab/) and for

The ECLR site is not being so well maintained and the R material is being migrated by Ralf to a Github (MS) site: https://datasquad.github.io/ECLR/index.html (and some Stats material is on Ralf's site here: https://datasquad.github.io/ralffbecker/Teaching_General.html#Interactive_Textbooks)

The mathematics pre-requisites of the econometrics units differ between the MA and the MScs with the latter requiring fairly advanced Linear Algebra and Advanced Multivariate Calculus from the start (For Linear Algebra this means knowing about Linear Independence, Matrix rank, Quadratic Forms and PSD Matrices, Moments and Distributions of Random Vectors (see for example Appendix E (and D) in Wooldridge and Appendix A in Greene) and for Advanced multivariable calculus : Evaluation and interpretation partial derivatives of scalar and vector-valued functions (See for example Appendix E in Greene)). Both the MA and MScs require substantial Multivariate calculus.

What other preparation you do might depend on your background and where you think you might struggle most. The courses are taught with the expectation that you are already familiar with certain concepts, and without doing some preparation, you are at an increased risk of failing some modules. The references listed below contain some material that is likely to be assigned to you in the first semester course units. Gaining familiarity with this material before you arrive can significantly ease your transition to postgraduate studies. What material to focus on depends on your background and where you think you might benefit the most. Below, for each of the programmes, there is a clickable link with course units listed (with other clickable links to brief module outlines) which should help guide you with content.

Looking at your own programme below (and perhaps the others) can give you a feel for what is needed.

MSc Economics: https://www.manchester.ac.uk/study/masters/courses/list/01380/msc-economics/course-details/#course-profile

Programme Director: <Xiaobing.Wang@manchester.ac.uk>

- Jehle, G., Reny, P. Advanced Microeconomic Theory. Pearson 3rd ed. (2011) (Particularly the mathematical appendices) and Mas-Collel, A., Whinston, M., Green, J. Microeconomic Theory. Oxford Univ. Press (1995).
- David Romer, Advanced Macroeconomics, 5th edition, McGraw-Hill Education, 2019 - particular chapters 2, 5, 8, 11, 12, 13 and the course includes a Matlab (ECLR: Matlab) programming component.
- William H. Greene, 2011. Econometric Analysis, 7th Edition, Pearson Higher Education Publishing Company.

MSc Financial Economics: https://www.manchester.ac.uk/study/masters/courses/list/07946/msc-financial-economics/course-details/#course-profile

Programme Director: <Igor.Evstigneev@manchester.ac.uk>;

- Evstigneev, T. Hens and K.R. Schenk-Hoppé, 2015. Mathematical Financial Economics, Springer. Front matter: http://www.evstigneev.net/mfe1.pdf and the books website https://link.springer.com/book/10.1007/978-3-319-16571-4
- Jehle, G., Reny, P. Advanced Microeconomic Theory. Pearson 3rd ed. (2011) (Particularly the mathematical appendices)
- David Romer, Advanced Macroeconomics, 5th edition, McGraw-Hill Education, 2019 - particular chapters 2, 5, 8, 11, 12, 13 and the course includes a Matlab (ECLR: Matlab) programming component.
- William H. Greene, 2011. Econometric Analysis, 7th Edition, Pearson Higher Education Publishing Company.

MSc Economics and Data Science: https://www.manchester.ac.uk/study/masters/courses/list/21299/msc-economics-and-data-science/course-details/#course-profile

Programme Director: <karim.chalak@manchester.ac.uk>

- Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani (2021) An Introduction to Statistical Learning with Applications in R, Springer Texts in Statistics, New York, USA.
- Jehle, G., Reny, P. Advanced Microeconomic Theory. Pearson 3rd ed. (2011) (Particularly the mathematical appendices) and Mas-Collel, A., Whinston, M., Green, J. Microeconomic Theory. Oxford Univ. Press (1995).
- David Romer, Advanced Macroeconomics, 5th edition, McGraw-Hill Education, 2019 - particular chapters 2, 5, 8, 11, 12, 13 and the course includes a Matlab (ECLR: Matlab) programming component.
- William H. Greene, 2011. Econometric Analysis, 7th Edition, Pearson Higher Education Publishing Company.

MA Economics: https://www.manchester.ac.uk/study/masters/courses/list/08084/ma-economics/course-details/#course-profile

Programme Director: Indranil Dutta: <I.Dutta@manchester.ac.uk>

- Geoffrey A. Jehle and Philip J. Reny, 2011. Advanced Microeconomic Theory, 3rd Edition, Prentice Hall.
- Romer, D., 2018. Advanced Macroeconomics, McGraw-Hill.
- Hoy, Michael,. John Livernois, Chris McKenna, Ray Rees and Thanasis Stengos 2011 Mathematics for Economics, Third Edition, MIT Press
- Wooldridge, J. M., 2013. Introductory Econometrics, South-Western Cengage, 5th International Edition.

Please note that whilst all our programmes are advanced technical economics masters the MSc entry requirements and programmes are substantially more demanding in terms of technical requirements.

Other contacts:

Admissions:

- Administrative issues: pgteconomics <pgt-economics@manchester.ac.uk>
- Academic issues related to admissions (eg requests to change programme): <Nick.Weaver@manchester.ac.uk>

Welcome week details: https://www.welcome.manchester.ac.uk/welcome-and-induction/your-course/economics/taught-masters/ (Please note this will be updated in due course)