

VICTORIA UNIVERSITY OF WELLINGTON
Faculty of Commerce and Administration

Economics

ECON 305

1/3 2005

**Macroeconomics: Growth, Cycles and
Sustainability**

Course Information

Lecturers

Dr Geoff Bertram (course co-ordinator) geoff.bertram@vuw.ac.nz RH 423 (ext. 5814)
Professor Viv Hall viv.hall@vuw.ac.nz RH 401 (ext 5081)

Timetable

Lectures: Tuesday 12.40-2.30 pm in GB LT3, and
Friday 1.40-2.30 pm in RH LT2

Tutorials: Weekly on Tuesdays and Wednesdays at the following times and
rooms:

Tuesday 9.30-10.20 am in RLWY 222
Tuesday 10.30-11.20 am in RLWY 125
Tuesday 3.40-4.30 pm in RLWY 222
Tuesday 4.40-5.30 pm in RLWY 221
Wednesday 9.30-10.20 am in RLWY 224

Terms Tests: Friday 22 April 4.30-5.20 pm.
Friday 20 May 4.30-5.20 pm.
(Note that you must sit – not pass - both tests to get Terms).

Course Description

This course assumes a basic knowledge of the macroeconomic models taught in ECON 202, and moves on to consider formal market-clearing ("Walrasian") models, dynamic macroeconomic theories of growth and business cycles, systematic discussion of the microeconomic foundations of new-Keynesian macroeconomics, stability issues, and open-economy modelling.

The first half of the course provides an introduction to closed-economy and open-economy market-clearing macro models, real business cycle theories and models, and theories of economic growth. The aim here is to make students familiar with major theoretical developments in macroeconomics during the past two decades, flowing from the so-called "new-classical" or "real business cycle" perspective.

The second half discusses new-Keynesian macroeconomic models. Key issues in this area will be price and wage stickiness; the consequences of assuming imperfect competition and

quantity rationing in goods and labour markets; explanations for unemployment; stability issues and transition dynamics in macroeconomic models; and some introductory open-economy modeling.

Tutorial Programme and Assignments

In each of the weekly tutorial sessions, with the exception of the first tutorial, the discussion will be led by class members, under the guidance of the tutor. A roster of dates for presentations will be drawn up at the first tutorial and from time to time after that. All tutorial participants are expected to prepare for each tutorial and to be in a position to discuss the topic with the student presenters, but only the presenters will be required to submit their written answers for assessment.

Each student will have three tutorial assignments marked, at least one from each half of the course. In order for their assignment answers to be marked, students must participate in the relevant oral presentation. Assignment answers will be covered in tutorials; so-called “model answers” will not be provided on Blackboard. Assignment topics will be distributed in class.

Assessment and Terms Requirements

Students’ final grades will taken as the greater of:

either: tutorial assignments (20%)
two one-hour tests (15% each)
final examination (50%)

or: final examination (100%)

Terms (“mandatory course requirements”) are satisfied by students completing in writing, and verbally presenting, three tutorial assignments to a satisfactory standard, and sitting both tests.

Textbooks and Recommended Reading

There are two prescribed texts for the course:

Williamson, Stephen D., *Macroeconomics* (second edition), Pearson Addison Wesley 2005.

Carlin, W and Soskice, D *Macroeconomics and the Wage Bargain* Oxford: Oxford University Press, 1990.

Useful supplementary texts are:

Bénassy, Jean-Pascal, *The Macroeconomics of Imperfect Competition and Nonclearing Markets: a Dynamic General Equilibrium Approach*, MIT Press 2002 (challenging)

Blanchard, Olivier, *Macroeconomics* (third edition), Prentice-Hall 2003 (this was last year's ECON 202 textbook so many of you will have copies to which you are encouraged to refer back).

Heijdra, B. and Van der Ploeg, F., *Foundations of Modern Macroeconomics*, Oxford University Press 2002 (strongly recommended to students with good maths as an excellent up-to-date treatment of the course material, which would be the textbook if it were a little less hard going)

Scarth, W., *Macroeconomics: An Introduction to Advanced Methods*, second edition, Dryden Press, 1995 (a difficult but very rewarding advanced textbook, especially recommended for mathematically strong students).

Farmer, Roger E A, *Macroeconomics* (second edition), South-Western, 2002.

Additional reading will be prescribed for each topic from other books and from the journal literature.

GENERAL UNIVERSITY POLICIES AND STATUTES

Students should familiarise themselves with the University's policies and statutes, particularly those regarding assessment and course of study requirements, and formal academic grievance procedures.

Class Representatives

A class representative will be chosen by course participants at the beginning of the course. Class reps play a vital role in the University community, liaising between staff and students to represent the interests of students to the lecturers, and liaising between VUWDSA and the class. If you are willing to put yourself forward for this position please advise the course coordinator.

Student Conduct and Staff Conduct

The Statute on Student Conduct together with the Policy on Staff Conduct ensure that members of the University community are able to work, learn, study and participate in the academic and social aspects of the University's life in an atmosphere of safety and respect. The Statute on Student Conduct contains information on what conduct is prohibited and what steps can be taken if there is a complaint. For queries about complaint procedures under the Statute on Student Conduct, contact the Facilitator and Disputes Advisor. This Statute is available in the Faculty Student Administration Office or on the website at: www.vuw.ac.nz/policy/StudentConduct.

The policy on Staff Conduct can be found on the VUW website at: www.vuw.ac.nz/policy/StaffConduct.

Academic Grievances

If you have any academic problems with your course you should talk to the tutor or lecturer concerned or, if you are not satisfied with the result of that meeting, see the Head of School or the Associate Dean (Students) of your Faculty. Class representatives are available to assist you with this process. If, after trying the above channels, you are still unsatisfied, formal grievance procedures can be invoked. These are set out in the Academic Grievances Policy which is published on the VUW website:

www.vuw.ac.nz/policy/AcademicGrievances.

Plagiarism

Victoria University defines plagiarism as the copying of ideas, organisation, wording or anything else from another source without appropriate reference or acknowledgement so that it appears to be one's own work. This includes published and unpublished work, the Internet and the work of other students and staff. Plagiarism is an example of misconduct in the Statute of Student Conduct. Students who have plagiarised are subject to a range of penalties under the Statute. See the website: www.vuw.ac.nz/policy/StudentConduct.

Students with Disabilities

The University has a policy of reasonable accommodation of the needs of students with disabilities. The policy aims to give students with disabilities an equal opportunity with all other students to demonstrate their abilities. If you have a disability, impairment or chronic medical condition (temporary, permanent or recurring) that may impact on your ability to participate, learn and/or achieve in lectures and tutorials or in meeting the course requirements, then please contact the Course Coordinator as early in the course as possible. Alternatively you may wish to approach a Student Adviser from Disability Support Services to confidentially discuss your individual needs and the options and support that are available. Disability Support Services are located on Level 1, Robert Stout Building, or phoning 463-6070, email: disability@vuw.ac.nz. The name of your School's Disability Liaison Person can be obtained from the Administrative Assistant or the School Prospectus.

Student Support

Staff at Victoria want students' learning experiences at the University to be positive. If your academic progress is causing you concern, the following staff members will either help you directly or quickly put you in contact with someone who can.

| Staff | Faculty | Room number |
|----------------|-----------------------------------|---------------------------|
| Sue Dover | Student Support Coordinator, FHSS | 2 Wai-te-ata Road |
| Kirstin Harvey | Law | Old Gvt Building room 103 |

Liz Richardson Science and Architecture and Design Cotton Building room 150

The Student Services Group is also available to provide a variety of support and services. Find out more at www.vuw.ac.nz/st_services/ or email student-services@vuw.ac.nz.

VUWSA employs two Education Coordinators who deal with academic problems and provide support, advice and advocacy services, as well as organising class representatives and faculty delegates. The Education Office is located on the ground floor, Student Union Building, phone 463 6983 or 463 6984, email education@vuwsa.org.nz.

READING GUIDE TO ACCOMPANY LECTURES

Week 1: Introduction and Measurement Issues

Williamson, Stephen D., *Macroeconomics* (second edition), Addison Wesley, 2005, Chs. 1, 2, 3.

Barro, Robert and Vittorio Grilli, *European Macroeconomics*, Macmillan, 1994, Ch. 1 (pp.1-21).

Farmer, Roger E A, *Macroeconomics* (second edition), South-Western, 2002, Ch. 3.

Lucas, R.E., "Understanding Business Cycles", in Lucas, R E, *Studies in Business-Cycle Theory*, Cambridge, MIT Press, 1981, pp. 215-239 (ss. 1, 2).

Kim, K., R.A. Buckle and V.B. Hall, "Key Features of New Zealand Business Cycles", *The Economic Record* Vol. 70, March 1994, pp. 56-72.

Hall, Viv B and C John McDermott, "Regional Business Cycles in New Zealand: Do they exist? What might drive them?", mimeo, November 2004

Crosby, M. and G. Otto, "Real Business Cycle Models: An Introduction", *The Australian Economic Review*, 3rd Quarter 1995, pp. 55-70.

Weeks 1 and 2: A Static Optimisation – Market Clearing Model of the Macroeconomy

Williamson (2005), Chs. 4, 5.

Weeks 2, 3, 4: An Intertemporal Optimisation – Market Clearing Model of the Macroeconomy

Williamson (2005), Chs. 8, 9.

Weeks 4, 5: A Monetary Intertemporal Model

Williamson (2005), Ch. 10.

McCandless, G. and W. Weber, “Some Monetary Facts”, *Federal Reserve Bank of Minneapolis Quarterly Review*, Summer 1995, pp. 2-11.

Week 5: Market Clearing Models of the Business Cycle

Williamson (2005), Ch. 11.

Lucas, R.E., “Understanding Business Cycles”, in Lucas, R E, *Studies in Business-Cycle Theory*, Cambridge, MIT Press, 1981, pp. 215-239.

Crosby, M. and G. Otto, “Real Business Cycle Models: An Introduction”, *The Australian Economic Review*, 3rd Quarter 1995, pp. 55-70.

Weeks 5, 6: The International Economy

Williamson (2005), Ch. 13.

Kim, Kunhong, Viv B. Hall, and Robert A. Buckle, “Consumption-smoothing in a small, cyclically volatile open economy: Evidence from New Zealand”, mimeo, 22 September 2004.

Otto, Glenn, “Can an Intertemporal Model Explain Australia’s Current Account Deficit?”, *The Australian Economic Review*, 36 (3), September 2003, pp. 350-359

Milesi-Ferretti, G. and A. Razin, “Persistent Current Account Deficits: a Warning Signal?”, *International Journal of Finance and Economics*, Vol. 1, 1996, pp. 161-181

Collins, S., F.N. De Simone, and D. Hargreaves, “The Current Account Balance: An Analysis of the Issues”, *Reserve Bank of New Zealand Bulletin*, Vol. 61 No. 1, March 1998, pp. 15-34. <http://www.rbnz.govt.nz/research/bulletin>

Week 6: Economic Growth

Williamson (2005), Chs. 6, 7.

Young, A., “The Tyranny of Numbers: Confronting the Statistical Realities of the East Asian Growth Experience”, *Quarterly Journal of Economics*, 110, 1995, pp. 641-680.

Bollard, Alan, “New Zealand’s Potential Growth Rate”, Address to Canterbury Employers’

Chamber of Commerce, 28 January 2005. <http://www.rbnz.govt.nz/speeches>

Week 7: IS-LM and Mundell-Fleming in the small open economy

Carlin, W. and Soskice, D., *Macroeconomics and the Wage Bargain*, Oxford University Press, 1990, Chapter 2 pp.28-43,65-68; Chapter 7 section 7.2 pp.180-188; Chapter 9.

Heijdra, B. and Van der Ploeg, F., *Foundations of Modern Macroeconomics*, 2002, Chapters 2 and 11.

Scarth, W.M. *Macroeconomics: An Introduction to Advanced Methods*, Dryden Press, 1996, Chapter 2.

Blanchard, O., *Macroeconomics*, Prentice-Hall, 2003, Chapters 18-21 (revision).

Week 8: The Neoclassical Synthesis in the Closed and Open Economy

Carlin, W. and Soskice, D., *Macroeconomics and the Wage Bargain*, Oxford University Press, 1990, Chapter 1, Chapter 2 pp.43-64; Chapter 3; Chapter 7 section 7.2 pp.180-188; Chapter 9.

Findlay, R. and Rodriguez, C.A., "Intermediate Imports and Macroeconomic Policy Under Flexible Exchange Rates", *Canadian Journal of Economics* 10(2):208-217, May 1977. [Posted on Blackboard].

Scarth, W.M. *Macroeconomics: An Introduction to Advanced Methods*, Dryden Press, 1996, Chapter 3.

Other material on the AS-AD debate for those interested:

Rao, B.B., *Aggregate Demand and Supply: A Critique of Macroeconomic Modelling*, Macmillan & St Martin's Press, 1998, especially Chapters 5, 7, 8.

Colander, D., "The Stories we Tell: A Reconsideration of AS/AD Analysis", *Journal of Economic Perspectives* 9(3):169-188, Summer 1995.

Colander, D. (ed), *Beyond Microfoundation: Post Walrasian Macroeconomics* Cambridge, 1996, Parts 1 and 2.

Lim, S. "Teaching AD-AS Models: Institutions and the Asian Crisis", *New Zealand Economic Papers* 35(2):254-269, December 2001.

Barro, R. and Grilli, V., *European Macroeconomics*, 1994, Chapter 21.

Week 9: Quantity-Constrained Models in Closed and Open Economies

Carlin, W. and Soskice, D., *Macroeconomics and the Wage Bargain*, Oxford University Press, 1990, Chapter 5.

Heijdra, B. and Van der Ploeg, F., *Foundations of Modern Macroeconomics*, Oxford University Press 2002, Chapter 5.

Cuddington, J.T., Johansson, P-O and Lofgren, K-G, *Disequilibrium Macroeconomics in Open Economies* Blackwell, 1984, Chapters 2 and 3 [Library 3-day issue].

Rankin, N., “Quantity-Constrained Models of Open Economies”, Chapter 1 in Van der Ploeg, F. (ed) *The Handbook of International Macroeconomics*, Blackwell, 1994.

Week 10: Imperfect Competition in Product Markets

Carlin, W. and Soskice, D., *Macroeconomics and the Wage Bargain*, Oxford University Press, 1990, Chapters 6, 7 and 18.

Heijdra, B. and Van der Ploeg, F., *Foundations of Modern Macroeconomics*, Oxford University Press 2002, Chapter 13.

Dixon, H., “Imperfect Competition and Open Economy Macroeconomics”, Chapter 2 in Van der Ploeg, F. (ed) *The Handbook of International Macroeconomics*, Blackwell, 1994. [Advanced treatment for the mathematically confident.]

Week 11: Imperfectly-Competitive Labour Market Models

Carlin, W. and Soskice, D., *Macroeconomics and the Wage Bargain*, Oxford University Press, 1990, Chapters 8, 11, 17.

Heijdra, B. and Van der Ploeg, F., *Foundations of Modern Macroeconomics*, Oxford University Press 2002, Chapters 7 and 8.

Maloney, T., and Savage, J., “Labour Markets and Policy”, in Silverstone, B., Bollard, A. and Lattimore, R. (eds) *A Study of Economic Reform: The Case of New Zealand*, North-Holland, 1996, pp.173-213. [On Blackboard.]

Week 12: An Open-Economy Conflicting-Shares Macro Model

Carlin, W. and Soskice, D., *Macroeconomics and the Wage Bargain*, Oxford University Press, 1990, Chapters 10-14.

REFERENCE CHART

The Greek Alphabet and English Counterparts

| <i>Greek</i> | | <i>Name</i> | <i>English</i> | |
|-------------------|-------------------|-------------|-------------------|-------------------|
| <i>Upper Case</i> | <i>Lower Case</i> | | <i>Upper Case</i> | <i>Lower Case</i> |
| A | α | alpha | A | a |
| B | β | beta | B | b |
| Γ | γ | gamma | C | c |
| Δ | δ | delta | D | d |
| E | ε | epsilon | E | e |
| Z | ζ | zeta | Z | z |
| H | η | eta | Y | y |
| Θ | θ | theta | - | - |
| I | ι | iota | I | i |
| K | κ | kappa | K | k |
| Λ | λ | lambda | L | l |
| M | μ | mu | M | m |
| N | ν | nu | N | n |
| Ξ | ξ | xi | X | x |
| O | ο | omicron | O | o |
| Π | π | pi | P | p |
| P | ρ | rho | R | r |
| Σ | σ | sigma | S | s |
| T | τ | tau | T | t |
| Υ | υ | upsilon | U | u |
| Φ | φ | phi | F | f |
| X | χ | chi | - | - |
| Ψ | ψ | psi | G | g |
| Ω | ω | omega | W | w |

Macroeconomic Theory

TERMS TEST 2

Answer any TWO questions.

All questions are of equal value.

Time Allowed: ONE HOUR.

1. In the neoclassical-Keynesian synthesis model, unemployment can exist only when the real wage is above the walrasian market-clearing level. Explain how this conclusion is reached, and what the implications are for the relationship between the real wage and the level of employment over the course of the business cycle.
2. Why does the price-determined real wage (PRW) locus shift up when the economy's competitiveness deteriorates?
3. In an "efficient bargains" model of the labour market, organised labour bargains with employers over the volume of employment offered as well as over the real wage rate paid. Assuming that the representative firm is an imperfect competitor in its product market, construct an appropriate labour market diagram to show (i) how the agreed wage/employment bargain will be determined and (ii) how the bargained real wage would move over the course of the business cycle.
4. In the Findlay-Rodriguez model, the two key equations are

$$q(p, ep^*) = C(q) + I(r) + X(e) - MC(q, e) - MR(q, ep^*) \quad (\text{goods market})$$

$$\bar{M} = kpq(p, ep^*) \quad (\text{money market})$$

Suppose there is a sharp exogenous increase in the demand for money (an increase in k in the money-demand equation). What effect would this have on output, the price level p , and the exchange rate e ? Illustrate using the GG/MM diagram.

5. In the Malinvaud quantity-rationed model, aggregate demand in the goods market will be increased by an increase in the real wage rate, provided that the economy starts with "Keynesian unemployment". Show how this result is derived.



EXAMINATIONS — 2004
MID - YEAR

ECON 305

**MACROECONOMICS: GROWTH,
BUSINESS CYCLES AND
SUSTAINABILITY**

Time Allowed: **THREE HOURS.**

Instructions: Answer FOUR questions, TWO from Section A and TWO from Section B.
All questions are of equal value (each question is worth 25 marks)

SECTION A

1. Using the intertemporal approach discussed in Williamson (2002), show how a temporary improvement in total factor productivity of a small open economy affects its output, expenditures, real interest rate, and the current account balance.
2. Using the intertemporal approach discussed in Williamson (2002), discuss how the effects from a permanent increase in government consumption differ from those resulting from a temporary increase in government consumption.
3. What are the key business cycle regularities with respect to the relationship between aggregate output and the money supply? Discuss how those regularities are explained theoretically in the Real Business Cycle model discussed in Williamson (2002).
4. Suppose government policies successfully influence people to save a higher fraction of their income. Does this increase the economy's growth in the long-run, steady state? Using the Solow model of economic growth, carefully explain your answer.



EXAMINATIONS — 2004
MID - YEAR

SECTION B

5. “The effect on interest rates of the wealth effects of a government deficit can be offset by an adjustment of monetary policy. A policy of allowing the money supply to rise in line with increased demand for money will produce an equilibrium at y_{BB} with the interest rate unchanged” (Carlin and Soskice p.188). Using a closed-economy IS-LM framework, explain how wealth effects could flow from a government deficit and why monetary expansion might be necessary to enable the economy to reach a stable long-run equilibrium.
6. “In the Classical model, output is determined by the labour market. In fixprice-Keynesian and neoclassical-Keynesian models, employment is determined by the goods and money markets.” Explain this distinction, evaluate its validity, and discuss its implications for monetary and fiscal policy.
7. Consider an economy with a floating exchange rate and free international capital mobility, which relies on imports of intermediate goods. Using EITHER the Findlay-Rodriguez model OR the relevant Carlin-Soskice model, trace the effects that an expansionary fiscal policy would be predicted to have on output, the exchange rate, and the balance of payments current account.
8. Suppose that a surge of labour militancy shifts the bargained real wage (BRW) sharply upwards. What effects would this have on output, employment, the inflation rate, and the competitiveness of a small open economy with a floating exchange rate but zero capital mobility? Show how the outcome may differ depending on whether the monetary authorities hold the growth rate of the nominal money stock fixed or allow it to change to accommodate inflation.
