In this course we will deal mainly with the traditional and the new theories of growth and their implications for development macroeconomics. We will be mostly concerned with the determinants of the wealth of nations and also the appropriate national policies to achieve sustained and stable growth. We will regard the economic machine being in motion towards its long run (steady state) equilibrium, in all its giant complexity with many interrelated markets and different agents, classes and institutions. Four sets of issues will be addressed: we will:

(i) examine the recent evidence on the stylized facts and empirical regularities of economic growth across nations;
(ii) study traditional models of growth that were designed to explain these facts through various hypotheses, and focus on the interlinkages between growth and distribution as envisaged through alternative paradigms;
(iii) study the necessary ingredients of endogenous sources of growth and look at the seminal endogenous growth models; focusing, in particular, on the role of technological change and the market structure;
(iv) study alternatives to the neoclassical vision of the economy and contrast the structure and implications of models based on Marxian and (Neo)-Ricardian growth;

The course involves a fairly heavy reading load, the completion of which is essential to understanding the issues and controversies highlighted in the lectures. The lecture material will be complemented with various hand-outs relevant to the subject matter in due course. I will highlight some of the material as of secondary interest and regard as “optional reading” during the class.

**Grading** will be based upon: (i) One midterm (40%) (*November 27, Thursday*) (ii) a Final Exam (40%) (*date to be scheduled by the Registrar’s Office, January 8 - 19*); and (iii) a finite number of homeworks and effective classroom participation (20%).

Each exam will be given only at the scheduled time, Thursday, November 27, and as scheduled by the Registrar’s Office during the Finals’ week. Should an emergency prevent you from taking either exam, if you notify me in advance and if the emergency is verified by the University’s Health Office, your grade will be based on the other remaining work in the course. Note that late homework sets will not be accepted under any exception, and no homework via e-mail attachments please!
Readings:

The following text will be followed closely, and it is advised that you purchase it:

You may also consider having the following texts in your tool-box (these are on reserve at the Bilkent Library):


In addition we will discuss all the papers listed below (except marked as optional) in class. This is *not* an exhaustible list of the papers in the subject area, though it should be useful enough for a head start.

All the course material is available either through electronic downloadable form at *Bilkent Library electronic journals database*, or via electronic links provided. It is your responsibility to make your own copies. **Note that some of the journals and sites such as the NBER and JSTOR will give you access only from a computer registered at Bilkent or from the Bilkent Library.**

For **lighter reading on economic growth**, you may wish to try the following books:


Useful, but *more advanced, texts* on economic growth include:


Other useful sources:

UN data base

Central Intelligence Agency, World Factbook

World Bank, World Development Indicators.

Summers-Heston Penn World Tables
http://pwt.econ.upenn.edu/

The World Bank and NBER also provide on-line access to other relevant datasets.


Important Links: Below is a list of web sites that I find useful.
UNCTAD—United Nations Conference on Trade and Development

International Center for Economic Growth
http://www.iceg.org/iceg_main.html

IDEAs—International Development Economics Associates
http://www.networkideas.org

CEPA—Center for Economic Policy Analysis, The New School
http://www.newschool.edu/cepa/

Bağımsız Sosyal Bilimciler İktisat Grubu
http://www.bagimsizsosyalbilimciler.org

Global Policy Network
http://www.gpn.org

Economic Policy Institute
http://www.epinet.org/

South Centre
http://www.southcentre.org/

The OECD
http://www.oecd.org/
The World Bank
http://www.worldbank.org/

The IMF
http://www.imf.org/

NBER-National Bureau of Economic Research Homepage
http://www.nber.org/

**Turkish Data Sources**
TCMB The Central Bank of Turkey
http://www.tcmb.gov.tr/

Turkish Statistics Institute, TURKSTAT
http://www.tuik.gov.tr/

Undersecretariat of Treasury, Turkey
http://www.treasury.gov.tr/

State Planning Organization, Turkey
http://www.dpt.gov.tr/dptweb/ingin.html

*Individual web sources:*
Erinç Yeldan’s (your instructor) web site:
http://www.bilkent.edu.tr/~yeldane/

Temple’s Economic Growth Resources
http://www.nuff.ox.ac.uk/Economics/Growth/

Dani Rodrik’s web site:
http://www.ksg.harvard.edu/rodrik/

Guillermo Calvo’s web site:
http://www.bsos.umd.edu/econ/ciecalvo.htm

Paul Krugman’s web site:
http://www.pkarchive.org/

Pierre-Richard Agenor’s web site
http://www1.worldbank.org/wbiep/macro-program/agenor/agenor_lectures.htm
READING LIST and COURSE OUTLINE

“I don’t really live in the actual world”
Bob Dylan.

"The challenge isn't to find occult links between Debussy and the Templars. Everybody does that. The problem is to find occult links between, for example, cabbala and the spark plugs of a car.(...) Any fact becomes important when it's connected to another. The connection changes the perspective”.
Umberto Eco, Foucault's Pendulum. P.314.

Stylized Facts and Empirical Regularities of Economic Growth
We start with economists’ observations on empirical regularities of growth and the “development facts”. We ask the main nagging question: “why in the West, and why starting in the 18th century?” Then, we will build upon a simple growth model, linking issues of technology, savings, accumulation, growth and distribution to highlight the importance of initial hypotheses and the building blocks.


Jones (2002) op. cit. Chp 1, also familiarize yourself with the technical material in Appendix A.

“The Road to Riches” The Economist, December 31, 1999 (the millennium issue).
Available in electronic reserve of the Bilkent Library, Ec453

Available online at http://mondediplo.com/2004/10/04asia

Yeldan, Erine “Stylized facts and Empirical Regularities of Growth” Chapter 2. op.cit.

Available online from the Minneapolis Fed: http://minneapolisfed.org/research/QR/QR1721.pdf

But then...
The neoclassical growth model is based on optimization behavior of consumers and producers as summarized with the marginality principle. It posits a “neoclassical” production function between capital and labor, and investigates the transitional dynamics of an essentially “savings-driven” economy. Yet, the long run (steady state) equilibrium is left unexplained. Its main feature is that distribution is primarily determined by technology, or that growth process is resolved prior to distribution. The major implication of neoclassical growth is that, subject to certain hypotheses, per capita income levels across countries should converge as they approach to their respective steady states.

Jones (2002) op. cit. Chp 2, including Appendix to Chapter 2.

Yeldan, Erinc “Modeling Growth” Chapter 3 op.cit.


Neoclassical Growth: The Golden Rule and the Golden Age of Capital

Once upon a time the Kingdom of Solowia was gripped by a great debate: “this is a growing economy, but we can grow faster”...So the King appointed a task force under the leadership of the Vezir, Oiko, to study the facts of economic life in Solowia, and to find the optimal investment rule. Oiko was heard to say,”Forget grand optimality in terms of extremums, derivatives, Lagrangeans, and Hamiltonians. Solowians are a simple people. We need a simple policy rule”.

Here, we will seek for the “optimal” rate of savings and accumulation in a neoclassical economy, and analyze the features of the “golden rule of accumulation” together with the golden age (of capital, that is).
Download from JSTOR link below:
http://links.jstor.org/sici?sici=0002-8282%28196109%2951%3A4%3C638%3ATGROAA%3E2.0.CO%3B2-I

The following reading presents/discusses the same idea from the perspective of social classes:
Available in electronic reserve of the Bilkent Library, Ec453.

**Neoclassical Growth with Inter-temporal Optimization**
The exogeneity of savings in the neoclassical model was relaxed with the hypothesis of the so-called Ramsey model of optimal consumption choice (consumption smoothing). The following texts discuss the features of neoclassical model under inter-temporal optimization. The essence of the model together with its long run implications, however, remains unchanged.


**Policy Implications of the Neoclassical Growth Model**
Easterly, Chapter 3, “Solow’s Surprise: Investment is Not the Key to Growth”

Available from *Foreign Affairs* at:

Jones, Chapter 3, “Empirical Applications of Neoclassical Growth Models”

Easterly, Chapter 4, “Educated for What?”

**Empirics of Growth**
Convergence across nations, as one of the major implications of the traditional neoclassical model, has been put to test in many papers. Below is a non-exhaustive, yet suggestive, list of what has been said thus far, for those of you who are interested in more readings in this area.


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**Ricardian Theory of Growth and Income Distribution**

*The basic characteristic of the Ricardian growth models is that distribution and growth processes are resolved simultaneously. Rather than assuming a production functional, Neo-Ricardians posit an independent investment function, and seek out long run equilibrium in terms of changing class shares, to attain a balance between aggregate savings and investment.*


Download from JSTOR link below:

http://links.jstor.org/sici?sici=0034-6527%281955%2923%3A2%3C83%3AATOD%3E2.0.CO%3B2-P


Download from JSTOR link below:

http://links.jstor.org/sici?sici=0034-6527%28196210%2929%3A4%3C267%3AROPAID%3E2.0.CO%3B2-D

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**Marxian Growth**

*The two excerpts below should give a basic understanding of the distinguishing principles of Marxian growth.*


Introduction to Endogenous Growth Modeling

Faced with many of the shortcomings of the traditional models of exogenous growth, research has focused on the determinants of growth as can be explained within the context of the economic machine. Two major shortcomings of the traditional neoclassical model were: first, the neoclassical model used to leave technological change unexplained; and second, culminating empirical evidence suggested that long run rates of growth are sensitive to economic policies pursued by the governments, and the traditional model failed to capture much of this phenomenon.

We will start with the underlying ingredients of endogenous growth and synthesize the common methods used to endogenize the standard model.


Models Based on AK, Externalities, Learning by Doing and Human Capital

One strand of endogenous growth theory relies on externalities and on the nature of technology which enables non-diminishing returns to the cumulative factor, capital.

Jones Chp 3: pp. 54-63.

Jones, Chp 8: Alternative Theories of Endogenous Growth.

The following are the seminal papers on the varieties of endogenous growth structure


Economics of Ideas and the R&D-Based Models of Endogenous Growth

R&D-driven models of endogenous growth are based on three premises: (i) technological development is the ultimate source of growth; (ii) advances in technology occur not because of chance or birth of Einsteins at random rate, but rather arises because of purposeful actions of optimizing agents in a market setting; (iii) technology is a different good than other economic goods.

Two important implications of the R&D-driven endogenous growth paradigm are that, firstly, the above three premises can not be sustained in a perfectly competitive market setting with marginal cost price taking; and secondly, changes in policy have permanent effects on the long run rate of growth. This latter implication is criticized heavily by Jones, an example of which is provided in Jones (1997) below.

A major shortcoming of the R&D-driven growth framework is that the long run rate of growth is sensitive to the size of the stock of human capital (or to population in simpler models which do not distinguish between skilled and unskilled labor) and, thus, in order to attain balanced growth, the stock of human capital has to be assumed constant over time.


Jones Chapter 4: The Economics of Ideas, and Chapter 5: the Engine of Growth


The following is a serious critique of the hypotheses implicit in the R&D-Based Growth literature:

(o) Easterly, chapters 8 and 9
Alternative Approaches to Neoclassical Endogenous Growth
The origins of many new insights: Schumpeterian growth...


The International Economy: Growth, Openness and Trade Policy Reform
(optional, to be handled as time permits)

Much energy has been put into the debate on the links between openness and growth. Empirical studies from an orthodox perspective have often claimed a negative relationship between protection and growth. However, this literature arguably suffers from serious deficiencies in terms of its analytical and conceptual propositions. The recent paper by Samuelson below gives a balanced view of the analytics of these arguments, while Rodrik draws a distinction between microeconomic distortions which would not necessarily lead to economic instability, nor warrant reductions in the long term growth) and unsustainable macroeconomic policies.

Proponents:

Book on Reserve of the Bilkent library


Sceptics of the “liberalize trade and pick up the free dollar bills laying on the streets” approach:
Download from the IMF link at: http://www.imf.org/external/pubs/ft/fandd/2006/03/hausmann.htm


With a more serious critique and strong caveats:


and, some concluding technical points


On the other hand, there is strong evidence that openness stimulates externalities: In fact, one of the implications of R&D-driven growth is that size matters. Thus, countries which are open to foreign trade can have access to the stock of foreign R&D crystallized in imports of machinery.

Helpman and Coe claim that international trade will bring fruits of productivity gains,


Diao, Roe and Yeldan argue that such gains are not automatic and call for a strategic trade policy


As in Lall and Teubal


The Role of Institutions and Socio-Cultural Factors (optional, to be handled as time permits)


**Let’s Try to Conclude**

*Finally, we will wrap things up with the following:*


As a final remark, think about the following:

**QUESTIONS FROM A WORKER WHO READS**

Who built Thebes of the seven gates?
In the books you will find the names of kings.
Did the kings haul up the lumps of rock?
And Babylon, many times demolished
Who raised it up so many times? In what houses
Of gold-glittering Lima did the builders live?
Where, the evening that the Wall of China was finished
Did the masons go? Great Rome
Is full of triumphal arches. Who erected them? Over whom
Only palaces for its inhabitants? Even in fabled Atlantis
The night the ocean engulfed it.
The drowning still bawled for their slaves.

The young Alexander conquered India.
Was he alone?
Caesar beat the Gauls.
Did he not have even a cook with him?
Philip of Spain wept when his armada.
Went down. Was he the only one to weep?
Frederick the Second won the seven Years’ War. Who
Else won it?

Every page a victory
Who cooked the feast for the victors?
Who paid the bill?

So many reports.
So many questions.

Bertolt Brecht