Course Description: In this course we will develop the Neoclassical Growth Model and then use it as a tool for economic analysis. We will start by studying the Malthusian model and theories behind the Industrial Revolution. We will compare the implications of these models to data and introduce some simple extensions, including adding human capital. We will also discuss the successes and limitations of our models in explaining cross-country income differences. Time permitting, we will look at models of human capital investment and consider the implications of policy.

Learning Outcomes:

• Students will understand the forces underlying stagnation in the Matlhusian model, and identify the strengths and the weaknesses of various theories behind the Industrial Revolution.

• Students will understand how relative risk aversion and the desire to consumption smooth are linked in CES preferences, and what the implications are as risk aversion and/or the desire to consumption smooth changes.

• Students will be able to set up the firm’s and the household’s problem within the Neoclassical Growth Model, and then derive and interpret the corresponding Euler equation.

• Students will define and characterize a competitive equilibrium, and link the resulting allocation with that of the benevolent social planner using the welfare theorems.

• Students will understand what it means to calibrate the Neoclassical Growth Model.

• Students will be able to perform comparative statics exercises on the balanced growth path allocation in the Neoclassical Growth Model, and understand the transitional dynamics of the economy in the Neoclassical Growth Model as it converges to a balanced growth path.

• Students will be able to use the Neoclassical Growth Model for growth accounting, and will be able to evaluate the model based on balanced growth path predictions.
Prerequisite Note: The prerequisites for this course are Economics 2261A/B (Intermediate Microeconomics), Economics 2221A/B (Intermediate Macroeconomics). You are responsible for ensuring that you have successfully completed all course prerequisites, and that you have not taken an anti-requisite course. Lack of pre-requisites may not be used as a basis for appeal. If you are found to be ineligible for a course, you may be removed from it at any time and you will receive no adjustment to your fees. This decision cannot be appealed.

If you find that you do not have the course prerequisites, it is in your best interest to drop the course well before the end of the add/drop period. Your prompt attention to this matter will not only help protect your academic record, but will ensure that spaces become available for students who require the course in question for graduation.

Text: There is no required text for this course. You are responsible for all content covered in lecture and any material posted on OWL. Note that I do not supply class notes.

Grading:
- Midterm 1 25%
- Midterm 2 25%
- Homework 10%
- Final 40%

Exams: There will be two midterms held in class. The first will be October 7, and the second November 11. The final exam date and time is TBA. The exams will be closed book and closed note, and electronics free. All the exams are cumulative. There will be no make-up mid-term exams. If a student misses a mid-term due to sickness or other acceptable excuse the student must present an official document justifying the absence and the weight of the exam will be added to the final exam. In cases of lack of justification for the absence, a grade of zero will be attributed to that exam.

Homework: There will be three homework assignments, due October 2, November 6, and December 2. The homework assignments must be submitted by the START of the class period in which they are due. Assignments turned in once class has started will not be accepted. Assignments will not be accepted by email. The lowest score will be dropped. Because there are only three assignments, they are substantial. Do not leave them to the last minute.

Bonus Quizzes: At the start of class every Tuesday, there will be a short, one question quiz based on the lecture from the last class. There will be 10 in total, beginning on September 16, with no quiz on days with midterm exams. If you complete 8 or more correctly, you will be given a bonus two points on your final grade. If you complete 4 or more correctly, you will be given one bonus point on your final grade. There are no makeup quizzes.

Class Conduct:
1. Please turn off and put away all electronic devices during class. You will get much more out of this course if your attention is on the lecture, and students who are multitasking are a distraction to me.

2. Attendance does not directly play a role in your grade. However, students who do poorly in this course are almost always students who have weak attendance records. If you miss class, get notes from a classmate. Do not come to office hours for a repeat lecture, or help with material you missed in class.

3. The syllabus and your class notes are full of information. Please consult these for answers to frequently asked questions.

**Registration Note:** You are responsible for ensuring you are registered in the correct course. If you are not registered in this course, the Department will not release your marks until your registration is corrected. You may check your timetable by using the Login on the Student Services website at https://studentservices.uwo.ca/secure/index.cfm. If you notice a problem, please contact your faculty academic counselor right away.

**Preliminary Outline:**

1. Introduction to the Class

2. Introduction to Growth - Facts

3. Malthusian model

4. Theories of the Industrial Revolution

5. Basic Model
   a. Households
   b. Firms
   c. Aggregate Resource Constraint
   d. Competitive Equilibrium
   e. Characterization of Equilibrium

6. Social Planner
   a. The Social Planner’s Problem
   b. Characterization of the Social Planner’s Problem
   c. The Welfare Theorems
   d. Steady State Analysis
   e. Dynamic Analysis

7. Neoclassical Growth Model
a. Social Planner’s Problem
b. Balanced Growth Path
c. Calibration
d. Comparative Statics
e. Transitional Dynamics
f. Convergence

8. Evaluating the Neoclassical Growth Model:
   a. Growth Accounting
   b. The Productivity Slowdown

9. Endogenous Growth Models
   a. The Ak model
   b. Human capital

10. Human capital
    a. Measurement Across Countries
    b. Explaining Income Differences Across Countries
    c. Model of Higher Education Choice
    d. Modeling the Interaction of Primary and Higher Education Investments
Please Note
Department Policies for 2014 – 2015

Remember that the University expects all students to take responsibility for their own academic Programs. Also remember to check your registration to make sure you are enrolled in the correct courses.

1. Guidelines and policies for the Faculty of Social Science and the Department of Economics are posted online in the current Western Academic Calendar at http://westerncalendar.uwo.ca.


3. **Cheating as an academic offence**: Students are responsible for understanding what it means to “cheat”. The Department of Economics treats cheating incidents very seriously and will investigate any suspect behavior. Students found guilty will incur penalties that could include a failing grade or being barred from future registration in other economics courses or programs. The University may impose further penalties such as a notation on your official academic transcript, suspension or expulsion.

4. **Plagiarism**: Students must write their essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge it by using quotation marks where appropriate and referencing with footnotes or citations. Plagiarism is a major academic offense (see Scholastic Offence Policy in the current UWO Academic Calendar at http://westerncalendar.uwo.ca/2014/pg113.html). The University of Western Ontario uses software to check for plagiarism and students may be required to submit their written work in electronic form. Those found guilty will have penalties imposed as noted in point 3.

5. It is Department of Economics policy that **NO** assignments be dated, stamped or accepted by staff. Students are responsible for submitting assignments in class or to the instructor during office hours.

6. When appealing a mark, students should refer to the University’s Procedures in the current UWO Academic Calendar (http://westerncalendar.uwo.ca/2014/pg112.html). Please note the relevant deadlines.

The Department will not consider any appeal unless an attempt has been made to settle the matter first with your instructor. If after this discussion you remain dissatisfied with a grade or other decision, you may proceed with a written appeal (e-mails are not acceptable) to the Undergraduate Director in Economics, stating the reasons for your appeal. A useful form and checklist is provided at (http://economics.uwo.ca/undergraduate/program_counselling/responsibilities_policies.html#appeals).
7. Systematic adjustments of a class grade distribution (either up or down) can occur in Economics courses. The fact that grades have been adjusted is not grounds for an appeal.

8. Note the following add and drop deadlines:

   Last day to **add** a full course or First term half course:
   **Friday, September 12th, 2014**

   Last day to **drop** second term half course without academic penalty:
   **Wednesday, November 5th, 2014**

9. Faculty of Social Science policy states that oversleeping or misreading an exam schedule is not an excuse for a make-up. This rule applies to all mid-term tests and final exams in the Department of Economics.

   **Policy Regarding Makeup Tests and Final Examinations**

   *Academic Accommodation will not be granted automatically on request. You must demonstrate by documentation that there are compelling medical or compassionate grounds before academic accommodation will be considered.*

   If you decide to write a test or an examination, you must be prepared to accept the mark you earn. Rewriting tests or examinations, or having the value of the test or examination reweighted on a retroactive basis, is not permitted. Book airline flights after you know the dates of your final examinations. Airline flights must not conflict with test or final exams.

   If you are requesting a makeup test for a midterm or a final examination, unless medically incapable, notify your instructor by email or phone, preferably prior to the scheduled date of the test, but definitely within **24 hours** of the date of the test or exam. Failure to follow this procedure may result in denial of a request for academic accommodation or result in a grade of zero. Set up an appointment as soon as possible to meet personally with your instructor. If the instructor is not available, you may send an email message, copying the Undergraduate Coordinator at econugrd@uwo.ca (Social Science Room 4075). **Notifying your instructor of a missed test or exam does not automatically entitle you to a makeup test.**

   Students who seek a makeup test or examination must provide medical or other relevant verification that their absence from a regularly scheduled test or examination is beyond their control. Documentation must support your reasons. Medical documentation should be given to the Academic Counselling Office of your home Faculty **as soon as possible (preferably within 24 hours of the test)** if you know you may not be able to write your final examination on the scheduled day and time. Failure to follow this procedure, or to provide supporting documentation, may result in denial of a request for academic accommodation or result in a grade of zero. If your documentation is not acceptable, you will be given a zero for the missed test.

   For personal illness, if you consult Student Health Services regarding your illness or personal problem, you should request a Student Medical Certificate from the physician. If
you were seen by an off-campus doctor, obtain a certificate from his/her office at the time of your visit. The off-campus medical certificate form must be used and can be found at: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf. Notes stating "For Medical Reasons" are not considered sufficient.

For any other circumstances, if you are not sure what documentation to provide, ask your Academic Counselor. If your documentation is judged sufficient, the academic counselor will issue a Recommendation for a Special Examination (a single form for midterms or a triple color form for final examinations). Once you have this form, contact your instructor as soon as possible to make arrangements. Even if approved from your home faculty Academic Counselor, there is no guarantee that you will be allowed to write the makeup test and exam.

For final examinations, you need permission from your home Faculty Counselor, your instructor, and the Department Undergraduate Director. Failure to follow this procedure may result in an examination grade of zero. You must ensure that the Special Examination form has been signed by the instructor and Department Undergraduate Director and that the form is returned to the Academic Counseling Office for approval without delay. Make-up final examinations, if permitted, will be written within one month of the end of the exam period.

Policies Regarding Academic Accommodation

Information about the Faculty of Social Science’s policies regarding academic accommodation is found on its website at http://counselling.ssc.uwo.ca/procedures/havingproblems.asp or in Social Science Room 2105. Your “Academic Rights and Responsibilities” are also outlined in the current UWO Calendar at http://westerncalendar.uwo.ca/2014/pg111.html. Claiming that “you didn’t know what to do” is not an acceptable excuse for not following the stated procedures.

Policy Regarding Class Attendance

If your instructor views your class attendance as unsatisfactory, you can be prohibited from writing the final examination. If there is intent to make use of this University policy, you will be notified in writing.

Statement on Mental Health and Support Services

If you or someone you know is experiencing emotional/mental distress, there are several resources here at Western to assist you. Please visit http://www.uwo.ca/uwocom/mentalhealth/ for more information and a complete list of resources, as well as how to obtain help.