THOMPSON RIVERS UNIVERSITY

Course Outline

Department of Economics
School of Business and Economics

ECON 3410-3
Economics of Climate Change (3,0,0)

Calendar Description

Students investigate the climatic changes resulting from global warming and the policy actions being taken to address these problems. Topics include an overview of the science and economics of climate change; the impact of climate change on growth and economic development; the economics of stabilization including efficiency, externalities, public goods, and environmental policy instruments; inter-temporal decisions and uncertainties about the impacts of climate change; the policy responses to mitigation and adaption and their cost; international collective action and its challenges; and prominent climate policy approaches, such as the United Nations Framework Convention and the Kyoto Protocol.

Educational Objectives/Outcomes

Upon completing this course, students will be able to:

1. Analyze the economics of climate change.
2. Discuss the impact of climate change on growth and development.
3. Examine the economics of stabilization.
4. Explore the policy response to mitigation and adaptation.
5. Discuss the issues with international collective actions.

Prerequisites

ECON 1900

Co-requisites

Texts/Materials

Lord Nicholas Stem, The Economics of Climate Change: The Stern Review, Cambridge University Press, 2007.

Student Evaluation

Participation	0-20%
Assignments/quizzes	0-20%
Project	0-25%
Midterm(s)	30-60%
Final exam	30-50%

Course Topics

1. Introduction to the Science and Economics of Climate Change

2. Implications of Climate Change for Development:
   - Costs of climate change in developed countries
   - Economic modelling of climate-change impacts

3. The Economics of Stabilization
   - Projecting the growth of greenhouse-gas emissions:
   - Challenge of stabilization
   - Identifying the costs of mitigation
   - Macroeconomic models of costs
   - Structural change and competitiveness
   - Opportunities and benefits from climate policies
   - Towards a goal for climate-change policy

4. Policy Response to Mitigation
   - The role of taxation and trading
   - Carbon pricing and emissions markets in practice
   - Accelerating technological innovation
   - Beyond carbon markets and technology

5. Policy Response to Adaptation
   - Understanding the economics of adaptation
   - Adaptation in the developed world
   - Adaptation in the developing world

6. International Collective Action
   - Understanding international collective action
   - Creating a global price for carbon
   - Supporting the transition to a low-carbon global economy
   - Promoting effective international technology co-operation
   - Reversing emissions from land use change
   - International support for adaptation
   - Building and sustaining international co-operation

Other topics on climate such as discounting issues, economics of extreme climate change, the economics of geo-engineering may be covered.

Methods for Prior Learning Assessment and Recognition

As per TRU policy

Attendance Requirements – Include if different from TRU Policy

As per TRU policy

Special Course Activities – Optional

Use of Technology – Optional
