

Geography 113, Section 001

INTRODUCTION TO ECONOMIC GEOGRAPHY

Fall 2003 Tues & Thur 10:20 – 11:40AM, Rm 116 Farrall (Ag Eng Hall)

INSTRUCTOR:

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Office Hours: 2:00 - 3:00 PM Tuesday and Thursday, and by appointment.

TEXTBOOK:

THE WORLD ECONOMY: RESOURCES, LOCATION, TRADE, AND DEVELOPMENT, (3rd Edition) by Frederick P. Stutz and Anthony R DeSouza, Upper Saddle River, New Jersey: Prentice-Hall, Inc., 1998.

PURPOSE AND OBJECTIVES:

The purpose of this course is to introduce to you the principles and practices of modern economic geography. To accomplish this it will be necessary for you to acquire a basic knowledge of geographic problems, methods and theories. In addition, you should be able to apply this knowledge to further your understanding of world economies at various scales. To achieve these purposes you will have interrelated tasks to complete involving material from lectures **and** the readings. THE READING SCHEDULE FOR THE SEMESTER IS ATTACHED AND WILL BE ADHERED TO UNLESS PRIOR INFORMATION IS DISSEMINATED. You are expected to attend class regularly **and** to read the assigned materials in a timely fashion. When you encounter difficult or confusing materials, from readings or lectures, do not hesitate to ask questions in class, during my office hours, over email, or of the TA (if I get one!). Even though this is a fairly large enrollment class and will utilize a lecture format primarily, I would like to encourage as much discussion as possible. The schedule lists the topics for the readings by the day and, while **lectures will not duplicate the readings**, there will be a systematic relationship between the two. On page 4 you find the start of three lists (one for each portion of the course) of the topics I plan to deal with in lectures. There is flexibility in my lecture schedule to facilitate the occasional diversion for discussion but I do not anticipate any deviation from the reading or examination schedule. Below the lecture topics are lists of terms and names which students have found useful for review.

The course is divided into three sections. The daily reading assignments are attached. **Lectures will relate to the readings but will not duplicate them.** In general, the course is organized around the following structure:

- A. Fundamental Concepts of Economic Geography
- B. Spatial Theories of Agricultural Land-use

- C. Spatial Theories of Urban Processes
- D. Spatial Theories Relating to Manufacturing

- E. Spatial Models of Transportation Systems
- F. Models and Policies of Spatial Development

GRADING:

There will be 3 regular examinations **and** a final exam. Each of the **regular examinations** will cover two of these topical areas. Lectures will include some methodologies and applications but there are no methodological prerequisites; in fact, there are no prerequisites for this course.

Grading will be done on a total of 135 possible points for the semester. There will be three regular examinations during the semester consisting exclusively of multiple choice questions. The exams will

cover material from READINGS AND FROM LECTURES, about equally. THE THREE REGULAR EXAMS ARE NOT CUMULATIVE; THUS, THERE ARE ESSENTIALLY THREE DISCRETE SECTIONS TO THE COURSE. Each examination will have 45 multiple choice questions (the possible points are $3 \times 45 = 135$).

There will be an **optional CUMULATIVE final examination** during the regular final exam time slot. The final will also have 45 multiple choice questions. The score on this exam may be substituted for any one of the three regular hour examination scores, providing it is an improvement. Thus, taking the final will not hurt anyone, but it may indeed help! Therefore, your grade is based on the 3 best scores from 4 tests. **Please note, however, the final will cover material from the beginning of the course; it WILL be comprehensive.** Thus, the final will be 15 questions from each of the three sections of the course, however, these will **not** be questions simply taken from the prior tests.

Grades will be determined by the following fixed scale:

104 and above	= 4.0
96 - 103	= 3.5
86 - 95	= 3.0
78 - 85	= 2.5
71 - 77	= 2.0
65 - 70	= 1.5
59 - 64	= 1.0
58 and below	= 0.0

This grade scale seems pretty easy and, for those who are prepared, it probably is. However, my exams are not easy; they are fair but demanding. For this policy to work it is imperative the grade scale be fixed; that is, for you to make the decisions about whether or not to take the final exam it is absolutely necessary that you have a clear and unvarying scale upon which to make your decision. **Thus, this is the scale; it will not be changed.**

OTHER POLICIES & COMMENTS

READINGS:

The readings are assigned in relatively small portions for each day. It is advised that you try to read along with the scheduled assignments. As noted above, these readings do NOT generally duplicate the lecture material but you are responsible for both readings and lectures. Try to keep up with the readings.

ATTENDANCE:

I have experimented with electronic attendance takers but will not be using it this semester. Because I consider you to be adults, I assume you are capable of maintaining your own schedules. I will not take attendance; indeed, my exams "take attendance." As the exams will cover material from lecture and from the text (fairly equally). If you are not in class you will have, at best, a limited view of what goes on there. There are commercial note-taking services but I can not endorse any of them. You are advised to attend class regularly. THE "CONTRACT," IMPLIED BY YOUR REGISTERING FOR THE COURSE, DOES, HOWEVER, REQUIRE YOUR ATTENDANCE ON THE DAYS OF SCHEDULED EXAMINATIONS. (The lecture assistant's duties, if I get one, do NOT involve taking notes for those not in class.)

MAKE-UP EXAMINATIONS:

Make-up examinations will be available only when absence from the scheduled exam time can be justified with appropriate documentation. (Examples of such documentation are medical confirmation and team travel authorizations.) **Make-up exams will NOT be given before the regularly scheduled exams and will, in most cases, be ESSAY in nature.** It is expected that students confronting circumstances that may result in missing a regularly scheduled exam should contact Professor Pigozzi, (his assistant, if he gets one!), or at least the main Geography office as soon as possible. This normally means BEFORE the exam time. Don't wait a week or two after the exam to contact me. When this happens, or when someone misses an exam for an undocumented reason, the likely result will be a zero for that exam; thus, such a student would probably avail herself or himself of the optional final (see above).

DECORUM:

In any class this size general decorum is essential. It's rude to be reading a newspaper while someone is trying to lecture or answer questions. It's not just rude to me but to the rest of the class which is trying to participate in the classroom exchange. One person reading the paper in the back row of a class of 30 may irritate me but 10 people reading the paper in this class will irritate all of us. If you're going to arrive late to class or leave early, seat yourself near the door where your activities will disrupt what's going on the least. **Please be mannerly; be at least as courteous as you would be in a movie theater!** The class goes from 10:20 to 11:40; I won't go over but please don't be packing it in at 11:20!

Reading Schedule:

Date:	Read Pages:	Chapter: Topic:
Aug 26	1-23	1: Globalization I
Aug 28	23-46	1: Globalization II & Geographic Approach
Sept 2	49-75	2: Population Distributions and Processes
Sept 4	75-106	2: Population structure and economic growth
Sept 9	109-133	3: Resources I
Sept 11	134-152	3: Resources II & Environment
Sept 16	229-254	5: Agriculture I (Note, we read Ch #4 later.)
Sept 18	255-270, 152-159	5&3: Agriculture II, Thunen, GIS appendix
Sept 23		FIRST EXAMINATION
Sept 25	273-286	6: Urban Intro
Sept 30	286-304	6: Urban Models and Problems
Oct 2	307-317	7: Central Place Theory I
Oct 7	317-340	7: Central Place Theory II & World Cities
Oct 9	343-353	8: Industry and Weber model
Oct 14	353-376	8: Multi-firm Location
Oct 16	377-393	8&9: Corporate Systems & Intro Regions
Oct 21	393-408	9: Regions & Industries
Oct 23	409-424	9: Industrialized Nations & Implications
Oct 28		SECOND EXAMINATION
Oct 30	163-173	4: Transport Introduction (note back to Ch 4)
Nov 4	173-192	4: Networks and Models
Nov 6	193-218	4: Personal Mobility & Communications
Nov 11	427-441	10: International Trade
Nov 13	441-470	10: Competitive Advantage, FDI, & Global again
Nov 18	474-500	11: World Trade Patterns I
Nov 20	500-524	11: World Trade Patterns II
Nov 25	528-559	12: Development
Dec 2		Review
Dec 4		THIRD EXAMINATION

December 12, Friday**FINAL EXAMINATION****10:00AM to noon****SAME ROOM. (See statement above concerning the Final Exam.)**

If you have a conflict with this final exam time please be sure to consult the University statements concerning *common finals*, typically these are the exams which confound the exam schedule and it is these courses, the ones that give common finals, which need to plan for make-up times and rooms.

Ref: <http://www.reg.msu.edu/ROInfo/Calendar/FinalExam.asp>

Lecture Topics:

Introduction

Course expectations, requirements, schedule

Dimensional Primitives and Basic Definitions

Economic Geography vs Economics: Different Points of view

Spatial Distributions

Point Patterns, Line Patterns, Area Patterns

Explanation of patterns

Region Building - Nodal and Uniform Regions

Geography as Science - Hypothesis formulation in Geography

Population Issues

People as Market and Resource

Births, Deaths, Migration

Point Distributions, density, pattern, dispersion

Mean Center, average X and average Y

Nearest Neighbor Technique, what information is needed, how do you interpret the R statistic?

Age-Specific Death Rates, computation handout

Central America Case Study, dendritic networks, rank-size distribution, Primate Cities then and now, urbanization vs urban growth

Dual Economies and Measurement of Inequality, Lorenz curves and Gini ratios, applications from global to local and one for Higher Education in Michigan - A Hierarchy of Trade Areas

Migration and Models in Geography, Iconic vs Analog Models, Interactions Between Populations - The Gravity Model, an analog model from "social physics." Don't let the formula throw you!

Cohort Survival + Gravity Model = Grade School Population Forecasting Model

Labor Issues - Depressed Areas and Supply/Demand Curves, models from Economics, but what about space?

Resource Issues, what is valuable? Definition and Examples, People, landscape, and space as "resources,"

Namibia - A Case Study in Resource Conflict

Agriculture and the Basic Land Market

Von Thunen and Ricardo - Concepts of Economic Rent

The Bidding Process

The Spatial Pattern which result

Complications: Multiple crops, multiple markets, alternative transport systems, and other distortions

FIRST EXAMINATION comes here

Urban Land-use and Patterns: Intra-urban

Von Thunen in an Urban Context

Classic Models of Urban Structure

Evolutions of Modern City Form

Paradox - the Poor on the Most Expensive Land

Reilly's Law of Retail Gravitation

Central Place Theory: Inter-Urban

Christaller; Central Place Goods and Services

Range of a Central Place Good or Service

Complementary Region

Hierarchies: K-3 (K-4 and K-7)

Consumer Behavior in Central Place Hierarchy

The Loschian Central Place Network

Problems with Central Place Theory

Basic Economic Concepts in Spatial Context

Demand in Space

Indifference Curves

Population Potential

Supply in Space

Scale of Production

Industrial Location Theory

- Weber's Model - Graphs from Book
- Isotims and Isodapanes

City Building Activities

- Export, Employment, Economic BASE Models
- Location Quotients
- Input-Output Tables and Analysis

Spatial Aspects of Different Pricing Strategies

SECOND EXAMINATION comes here

Transportation Networks - Graph Theory Measures

Linear Programming in the Transport Context

- Three Factories and Three Markets Example
- L-P used in a Societal Context - Minimizing Cost to Public

Capacitated Networks and Optimum Flows - Max Flow = Min Cut

Models Predicting Transportation and Spatial Behavior

- Urban Transportation Model System
- Shoreham Nuclear Power Station - Evacuation Plan
- Garin-Lowry Model and Application to Grand Rapids Beltway

Railroad Planning in the United States

- Regional Railroad Reorganization Act of 1973
- United States Railway Association
- Final System Plan
- ConRail
- Railroad Revitalization and Regulatory Reform Act of 1976
- Other Efforts to Deregulate Transportation

Transport Rate Structures - Complications of the Cost Surface

Risk, Uncertainty, and Information - Complications to Behavior

- Game Theory and Location Strategies, Risk Avoidance

Diffusion of Innovation

- New Rice in the Philippines
- Monte Carlo Simulation of Diffusion of Innovation
- Hierarchical Diffusion and The Impulse Transmission Model
- G. Pyle's work with the Diffusion of Cholera

Functional Linkages of American Cities

Growth Pole and Growth Center Strategies of Development

Integration with the Impulse Transmission Model

Botswana, Abattoir and Oodi Weavers

Occupational and Industrial Specialization

Equity and Efficiency in a Spatial and Social Context

Burkina Faso (Upper Volta) Example

Back home

Conclusions

THIRD EXAMINATION comes here

Terms/Names for first test (lecture based):

- accessibility
- temporal patterns vs spatial patterns
- Anglo-Saxon bias (ref economics)
- point, line, and area patterns
- spatial process
- functional (nodal) vs homogenous (uniform) regions
- Taxonomic process, regionalization
- density
- density vs pattern vs dispersion
- Nearest Neighbor Index
- Rank-Size distribution
- dendritic transportation network
- Lorenze Curve, Gini Ratio
- urbanization vs urban growth
- Gravity Model
- complication of resource definition
- Titusville, Altoona, Namibia
- Bid-rent process
- Thunen land rent model
- space, spatial patterns, spatial distributions
- Geography as science, explanation
- heuristic and normative models
- imperfections of competition?
- Isoline and choropleth maps
- Data Block
- distance decay
- people as demand, people as input to production
- Mean Center
- Central America example
- Primate Cities, Mark Jefferson
- crude birth rates, crude death rates
- Michigan university trade areas
- scale models, analog models, mathematical models
- Cohort Survival Model
- people as resource, space as resource
- Ricardo theory
- marginal land

Terms/Names for second test (lecture based):

- intra-urban patterns
- economies of agglomeration
- urban structure
- Hoyt
- interstitial growth
- horizontal growth
- retail gravitation
- inter-urban patterns
- H. G. Wells
- range of a good
- real upper limit
- demand cone
- complementary region
- Christaller
- K-3, K-4, K-7
- Lösch
- agglomeration
- substitution effect and distance
- demand surface
- Wm. Warntz
- isotims
- Varignon frame
- urban land rent
- land use inertia, industrial inertia
- Burgess
- Harris and Ullman
- vertical growth
- central business district
- Reilly
- central place theory
- central place goods and services
- ideal upper limit
- price funnel
- threshold
- hierarchy
- hexagon
- rank-size and cpt
- Isard
- indifference curves
- potential model
- supply surface
- Weber's model
- isodapanes
- export base model (also employment, economic)

- basic vs non-basic
- multiplier
- Leontief
- marginal cost, marginal revenue
- massed reserves

- location quotient
- input-output model (incl inter-regional I-O)
- scale economies (also dis-economies)
- specialization
- internal economies (also external economies)
- intra-urban patterns

Terms/Names for third test (lecture based):

- networks, nodes (vertices), edges (links)
- linear programming, factories and hospitals
- constraints, capacities and demands
- UTMS, trip generation, trip distribution, modal split, trip assignment
- Shoreham Nuclear Power Plant evacuation
- Garin-Lowry Model
- Interstate Commerce Commission & Railroads
- planar vs non-planar graphs
- Risk, Information, Uncertainty, Game theory
- Diffusion of innovations
- Torsten Hagerstrand, Monte Carlo Simulation
- hierarchical diffusion
- lag times in economic base
- King, Casetti, & Jeffrey
- Niles Hansen
- Botswana, Abattoir and Weavers
- Occupational vs Industrial Diversification
- Efficiency vs Equity
- Burkina Faso - Upper Volta project
- Post-Fordist Production
- Kinsky measures, beta index, cyclomatic number, accessibility
- optimization
- capacitated networks, maxflow = mincut
- user optimization vs system optimization
- "Hidden Demand," transportation supply and demand
- Grand Rapids "Southway"
- Deregulation of railroads
- curvilinear line-haul costs, Weber model
- Jamaican fishing, Japanese landownership
- IR-8 rice through Gapan
- "mean information field"
- G Pyle's study of cholera
- Impulse Transmission Model
- Regional Industrial Complexes
- Perroux and Boudeville, Growth Pole - Growth Center Strategies
- Economic restructuring, globalization
- Foreign Direct Investment, good or bad?
- New Plants vs Acquisitions
- USA perspectives - Humana Corp.
- Post-Fordist Consumption