

**GEOG 4220**  
**Applied Retail Geography**  
**Fall, 2016**  
**Monday/Wednesday 2:00-3:20pm**  
**ENV 360**

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**Catalog Description:** A survey of the geographic principles and techniques used in the analysis of retail markets and locations. Examines the key characteristics of modern urban markets and commercial economies, and how geography makes a contribution to effective planning for retail firms. 3 hours.

**Course Overview:** This course is an introduction to the concepts, models and methods used by geographers working in an applied retail location environment. This course focuses particularly on the intersection of urban and economic geography. The interplay of cities and their changing neighborhoods with the ongoing evolution of regional and national economies will form the central focus of this course. Retail businesses in particular need to understand how cities are evolving so they can make effective plans for future investment decisions. We will see how geographers are making a contribution to solving some of the most important issues that face commercial businesses and cities today.

**Prerequisite(s):** Junior standing or permission of the department.

**Instructor:** Dr. Murray D. Rice

**Office:** ENV 310G

**Telephone:** (940) 565-3861

**E-Mail:** rice@unt.edu (general contacts), or murray.d.rice@gmail.com (class submissions)

**Class:** M/W 12:30-1:50pm

**Classroom:** ENV 360 (applied assignment lab meetings in CSAM computer lab)

**Office Hours:** W, 9:00-10:45 am (or by appointment)

**Class Web Site:** <http://www.murrayrice.com/geog-4220.html>

**Class Directory (for applied assignment materials):** R Drive "Class" directory, 4220 subdirectory (accessible on computers in CSAM lab rooms)

**Course Philosophy:** I am here to organize the course and introduce you to the topics and readings we will examine. I don't have all the answers and I don't pretend to have all the answers, but I will share with you from what I know. I will do my best to make the course interesting, relevant, and challenging.

This being said, it's important that you understand that you have the most important role in making GEOG 4220 a success for you. You will determine how much you actually get out of this course. Doing the readings outlined, answering the discussion questions provided ahead of time, and coming to class ready to think and participate in group discussions puts you in the best position to benefit from what this course offers. I encourage you to make full use of the learning opportunities that this class presents.

**Grading:** It is not essential to pass any particular exam, lab, or project to pass the course, but relative success in each will affect your final grade.

Assignments:	Discussion Questions (see sched.; 2 x 7.5%)	10%
	Applied Assignment (weeks 9, 10)	20%
Case Study Term Project:	Presentation (weeks 13, 14)	10%
	Final Written Report (due week 14)	25%
Exams:	Midterm Exams (see schedule; 2 x 12.5%)	25%
	Final Exam (date to be announced)	10%

The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the Office of Disability Accommodation website at <http://www.unt.edu/oda>. You may also contact them by phone at 940.565.4323.

**Course Text:** The recommended (but not required) textbook for this course is Birkin, Clarke, and Clarke (2002) *Retail Geography and Intelligent Network Planning* (Wiley). Other readings are required, and details on access to those readings will be announced in class. The course's "Further Reading" page gives you a good start on accessing a wide variety of resources related to the course (see <http://www.murrayrice.com/retail-further-reading.html>).

**Late Policy:** Anything handed in late will be subject to an immediate 10% penalty. Late work will not be accepted after graded work has been handed back to the class. Graded work is usually returned to the class one week after the due date. I will grant exceptions to the above if you provide documentation substantiating a valid personal emergency.

*Please note:* it is your responsibility to come to me with an explanation if a personal emergency prevents you from handing in something on time. I respect your privacy and will not approach you to ask about this.

**Attendance:** I encourage full attendance since the in-class experience is a crucial component of learning in this course. I will not take attendance in this course on a regular basis, but persistent non-attendance may result in your being withdrawn from the course with a grade of WF.

**Exam Dates:** Exam and presentation dates are final and will not be changed regardless of student circumstances (except for emergencies as outlined above). It is your responsibility to plan outside activities so they will not conflict with class dates.

**Extra Credit:** The Department of Geography does not allow extra credit assignments (work not specified on a course syllabus).

**My Promise to You:** I want to be clear about what I promise to do for you when you come to talk with me, and what I will not do.

(a) I promise to answer thoughtful, focused questions you have related to the course. A focused question might be something like “Can you please help me understand this comment you made on my discussion question answers?”, or “Can you please explain how concept X applies to situation Y?”

(b) I will not answer broad, open-ended questions, even if related directly to the course. An open-ended question would include something like “Here is my draft project report. Can you please read it and give me some comments?” or “Here is a revised version of the discussion question set I handed in earlier in the course. Can you please tell me if this will get an A grade now?” or “Can you please explain yesterday’s lecture?”

(c) Related to (b) above, I will not read through draft material (or revised versions of material already submitted) to provide feedback and suggestions. Please do not hand in drafts or re-done work for me to read and tell you what I think. *To be clear:* feel free to talk to me about drafts and re-done work (and even bring sections along to discuss), but make sure you have thoughtful, focused questions to ask.

(d) I will not answer any form of the following question: “I missed class yesterday. What did you cover? Did you talk about anything important?” It goes without saying that you miss something important when you miss a class. If you miss a class, it is your responsibility to figure out what you missed and how you will make it up. Although I am happy to answer specific questions (see parts **a** and **b** above), please do not expect me to repeat substantial portions of lectures you have missed in a subsequent office visit.

**Case Study Term Project:** You will be asked to complete a report and presentation on an applied, case study topic in retail geography. I expect that you will handle this project with maximum professionalism: to succeed, you will think of this as not just another “term project”, but as a report that you are producing for an actual business client. Everything you write in your report and plan for presentation should indicate that you have put your best effort forward.

*Your project will focus on a specific case study topic: a retail geography analysis and recommendation. Please consider the following points as you plan your project.*

The term project for GEOG 4220 is a complete geographic analysis and assessment for a real-world business that will be introduced during the first week of classes this semester. For this project we will be working with government and business officials working in the retail field. Our industry contacts will meet with the class periodically during the semester to introduce the case study, define the project parameters, and provide some general insight into the project situation.

The focus of the case study will be a specific, actual business that is a client in need of geographic analysis and advice to guide their future plans. You will be filling the role of a location analyst in completing your project work. This project will give you an excellent introduction to the connection between geography and real-world business problems through this project. Because you are working with an actual business, you will have an abundance of real-world information about the business and its markets that you will need to consider in combination with the concepts and methods we are learning in this class.

To succeed in this project, you will need to think carefully about the role you are playing in this case study, the case study business itself, its locations and its markets. A few questions to consider: What are the business and government professionals like your industry contacts trying to accomplish – and following from that, what are you really trying to accomplish in your analysis? Where is the case study business currently located? What geographic factors contribute to success for this business? Who are its customers? Where are they located? How and when do these customers actually travel to the business? Who are the business’ key competitors? Where are they located? How is this competitive situation changing over time?

Last thought: the focus of your report should be on geography and the considerations the case study business need to make related to locations and markets. You will find that the GIS skills you gain in *Maptitude* and *Business Analyst Online* (your Applied Assignment tasks) will also be very useful in completing your case study analysis.

*It is important that you begin planning and working on your project immediately: you will find you need the entire semester to complete the project.*

**Assignments:** You will complete two groups of assignments in this course.

**Discussion Questions:** In weeks 2-12 of the course, I will provide a set of discussion questions (“DQs”) for you to review each week. In two of these modules (identified below as well as in the course schedule) you will submit your responses. In-class discussion will be based in part on discussion questions, so it is a good idea that you invest substantial time in advance of class each week in thinking about the discussion questions for the week’s module.

Weeks with a DQ set due at the beginning of the week: 5 and 7

**Applied Assignments:** In modules 8-14 of the course, we will be covering material that is highly applied in nature. To give you some experience in actually implementing some of the concepts and methods discussed in class, you will complete an applied assignment section (“AA”) relating to the methods examined in these modules. The AA portion of the course will give you practical fieldwork experience and GIS analytical experience with *Maptitude* and *BAO*, two feature-rich data analysis and mapping software packages with particular application in retail analysis. *Note:* the AA section will provide you with capabilities you will also find useful in completing your case study term project.

AA weeks: 9 and 10

**Courtesy:** You can expect to be treated with respect as a student in this course. I promise to do my best to make sure this happens for everyone in the class. I expect the same in return from you, for both me and the other students around you. A few specific ways you can extend courtesy to everyone else in the class include the following.

- Please arrive before the class begins. If you are unavoidably detained and are late, please disturb the other students as little as possible when you take your seat. In other words, if you are late do not walk across the front of the classroom or insist on sitting in a middle seat if one near the edge is available.
- Please avoid talking or engaging in other behavior that disturbs people sitting around you.
- If you cannot stay awake, please stay home and sleep.
- Please do not come to class to work on your homework for another course.
- Please do not come to class to read books, magazines, or anything else I did not ask you to read in class.
- Please do not come to class to write e-mail or play games on your computer or other mobile device.
- I allow computer use during class time if you use your computer to take notes. Please do not use your computer for any of the activities prohibited above.
- Please leave during class only if it is really necessary (i.e. restroom breaks).
- Please turn off your cell phone before class begins.

Student behavior that interferes with an instructor’s ability to conduct a class or other students' opportunity to learn is unacceptable and will not be tolerated in any instructional forum at UNT.

**Academic Dishonesty:** Academic dishonesty in this course will be penalized according to University of North Texas rules and regulations, including a potential mark of 0 on a test or assignment, a grade of “F” in the class, or suspension or expulsion from the university, depending on the nature and circumstances of the dishonesty. Learning what is dishonest and how to stay away from such conduct is good preparation for a successful career.

To help you avoid academically dishonest behavior, the Center for Student Rights and Responsibilities at the University of North Texas has developed a definition of academic dishonesty and a set of strategies to protect yourself from being accused of academically dishonest behavior.

The following is a summary of definitions and strategies from CSRR:

#### **Forms of Academic Dishonesty**

- **Cheating:** intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise. The term academic exercise includes all forms of work submitted for credit or hours.
- **Plagiarism:** the deliberate adoption or reproduction of ideas, words or statements of another person as one’s own without acknowledgement.
- **Fabrication:** intentional and unauthorized falsification or invention of any information or citation in an academic exercise.
- **Facilitating academic dishonesty:** intentionally or knowingly helping or attempting to help another to violate a provision of the institutional code of academic integrity.

#### **Proactive strategies to protect yourself from charges of academic dishonesty:**

1. Prepare thoroughly for examinations and assignments.
2. Take the initiative to prevent other students from copying your exam or assignments, e.g., shield your answer sheet during examinations, do not lend assignments to be turned in to other students.
3. Check your faculty member’s course syllabus for a section dealing with academic dishonesty for that course. There may be special requirements. If you cannot find a written section in the syllabus, ask the faculty member what his/her expectations are.
4. Consult the Code of Student Conduct for a detailed definition of academic dishonesty.
5. Do not look in the direction of other students’ papers during examinations.
6. Utilize a recognized handbook for instruction on citing source materials in papers.
7. Consult with individual faculty or academic departments when in doubt.
8. Utilize the services of the University Writing Center, located in room 105 of the Auditorium Building, for assistance in preparing papers.
9. Discourage dishonesty among other students.
10. Refuse to assist students who cheat.

## Course Schedule

**Please read the following schedule carefully.** Note, the module marked **DQ** has a discussion question set due at the beginning of that week. Modules marked **AA** are part of the applied assignment portion of the course.

**Readings:** the readings for each module come from the recommended Birkin, Clarke, and Clarke textbook (see earlier details), plus more readings from an additional reading package (details on access to this readings package will be given the first day of class).

- In particular, please review the Caliper *Maptitude* brochure and the Esri *Business Analyst Online Brochure* and *Business Analyst Online Report Reference Guide* in the first week of the course. These documents (linked on the course "Further Reading" page) will give you some idea of the spectrum of applications that can be addressed using the *Maptitude* and *BAO* packages.

### WEEK

### TOPIC

#### PART 1 – INTRODUCTION TO THE GEOGRAPHY OF RETAIL BUSINESS

1 (Aug 29, 31)

##### *Retail Location: Motivation and Fundamentals*

Jones and Simmons (1990) Chapter 1 "Why Study Retail Location?" (1-26)

Caliper (2016) *Maptitude Brochure*

Esri (2012) *Business Analyst Online Brochure* and Esri (2012) *Business Analyst Online Report Reference Guide*\*

- Introduction to retail and business geography
- Overview of the course and major semester activities
- Brief discussion of the *Caliper Maptitude* and *Esri Business Analyst Online* software packages and their applications

\* See the "Further Reading" page on the course website for links to these Esri documents, as well as to other documents designated for weekly readings throughout the semester:

<http://www.murrayrice.com/retail-further-reading.html>.

## **PART 2 – GEOGRAPHIC PERSPECTIVES ON RETAIL BUSINESS**

2 (Sep 7)\*

### ***Geography, Distribution Systems, and the Location of Demand***

Jones and Simmons (1990) Chapter 2 “The Geography of Demand” (31-60)

\* Meeting on Wednesday only (Monday this week is Labor Day).

#### **Business contacts scheduled to attend class on Wednesday this week**

- Spatially defined markets
- Spatial demand curves
- Income, age, and household characteristics
- Introduction to the case study term project topic (outside business experts invited to class)

3 (Sept 12, 14)

### ***Site Selection and Trade Area Analysis***

Jones and Simmons (1990) Chapter 11 “Trade Area Analysis” (344-377)

- Site Selection Methodologies:
  - Rules of thumb
  - Ranking and ratio methods
  - Regression models
  - Location-allocation modeling
- Trade Area Analysis Approaches:
  - Spatial monopoly
  - Market penetration
  - Dispersed markets

4 (Sept 19, 21)

### ***The Value of Location***

Jones and Simmons (1993) Chapter 4 “The Value of Location” (81-106)

Gladwell (2004) “The terrazo jungle”\*

#### **Mid-Term Exam #1 on Wednesday this week**

- The bid rent curve
- The expansion of a retail chain
- The concept of risk

\* Link available on the "Further Reading" page of the course website.

5 (Sept 26, 28)

***Retail Growth Strategy Alternatives***

**DQ**

Birkin, Clarke, and Clarke (2002) Chapter 4 “Spatial Retail Growth Strategies” (71-88)

**Discussion Question set due Monday this week**

- Organic growth
- Mergers and acquisitions
- Franchising
- Joint ventures and strategic alliances
- Warehousing and retail expansion

**PART 3 – THE CONTRIBUTIONS OF URBAN/ECONOMIC GEOGRAPHY**

6 (Oct 3, 5)

***Commerce and the Settlement Pattern***

Berry, Conkling, and Ray (1987) Chapter 15 “Local Trade and Urban Hierarchies” (379-397)

**Term project business contacts tentatively scheduled to attend class on Wednesday this week**

- Settlement pattern
- The logic of central place
- The distribution system
- Retail chains and settlement systems
- Discussion and opportunity to ask questions to our retail practitioner and members of the case study business management team regarding the case study term project

7 (Oct 10, 12)

***Commercial Structure Within the Metropolis***

**DQ**

Wrigley and Lowe (2002) Chapter 7 “The inconsistent geography and spatial switching of retail capital: urban issues” (131-149)

**Discussion Question set due Monday this week**

- The intra-urban commercial hierarchy
- Downtown and the inner city
- The growth of planned centers and the changing commercial structure of the city

## **PART 4 – DECISION SUPPORT METHODS AND APPLICATIONS IN RETAIL GEOGRAPHY**

8 (Oct 17, 19)

### ***GIS and Applied Retail Geography***

Esri (2012) *Improving Retail Performance with Location Analytics*.\*

**Applied Assignments distributed & introduced on Monday**

**Mid-Term Exam #2 on Wednesday**

- Introduction to geographic information systems as applied to business geography
- Brief survey of fundamental GIS concepts
- Discussion of the various GIS packages, including the ***Maptitude*** and ***BAO*** software used in our lab sessions

\* Link available on the "Further Reading" page of the course website.

9 (Oct 24, 26)

### ***Applied Retail GIS Lab Session I***

**AA**

No reading, but be ready for the first of our dedicated lab sessions featuring both fieldwork and GIS analysis tasks. We begin on Monday (Oct 24) with the *field observation* component. Please meet at the beginning of class on Monday at the ENV Building ground level east doors (near the round pond). On Wednesday we're back to meet in CSAM I – ENV 336.

- Hands-on lab

10 (Oct 31, Nov 2)

### ***Applied Retail GIS Lab Session II***

**AA**

Jones and Simmons (1990) Chapter 11 "Trade Area Analysis" (344-377)

The GIS lab session this week continues with a focus on use of the ***Maptitude*** and ***BAO*** software packages. We meet all week in CSAM I – ENV 336.

- Hands-on lab

11 (Nov 7, 9)

***The Corporate Context for Retail Development***

On *Monday* this week we will meet back in our regular classroom for discussion of the corporate environment that provides the organizational context for retail development. We will devote our *Wednesday* session to wrap-up of the GIS work associated with the Applied Assignment section (meeting on Wednesday for one more work day in the CSAM I lab room – ENV 336).

Wrigley and Lowe (2002) Chapter 2 “Reconfiguration of corporate structures in retailing” (21-50)

**Applied Assignment #1 due on Monday this week**

- Who does what in the distribution system
- Stores, chains, franchisers, shopping centre developers
- Networks and distribution systems

12 (Nov 14, 16)

***Geography and Direct Marketing***

Birkin, Clarke, and Clarke (2002) Chapter 10 “Direct Marketing and Distribution Channel Management” (205-243)

Esri (2011) *Tapestry Segmentation Reference* (1-12).\*

**Applied Assignment #2 due on Monday this week**

- An overview of the direct marketing industry
- Applications for geodemographics
- Lifestyle databases
- Micro-modeling strategies

\* Link available on the "Further Reading" page of the course website.

13 (Nov 21)

***Project Presentations***

- Project presentations begin this week
- Please hand in a paper copy of your presentation slides/notes on your presentation day

14 (Nov 28, 30)

***Project Presentations***

**Project Papers and PowerPoint Presentation Files Due Monday This Week (Paper Copy of Report Due in Class)**

- More project presentations this week
- Please hand in a paper copy of your presentation slides/notes on your presentation day

## **PART 5 – THE FUTURE**

15 (Dec 5, 7)

### ***The Evolving Retail Environment***

Wrigley and Lowe (2002) Chapter 9 “The configuration, manipulation, and contestation of retail space” (171-186)

- Externalities and land use conflicts
- Commercial land redevelopment
- Big box, e-commerce, and beyond

Also, we will spend time this week discussing the case study-based final exam. It is extremely important that you attend class this week.

**The two hour final exam date will be announced in class**

## Discussion Questions

**Please note:** you are responsible for handing in the discussion questions for the two weeks marked “DQ” in the course schedule (modules 5 and 7). For each of the other weeks with questions provided, please read and answer for yourself the DQs for that week before coming to class.

### Week 2: The Geography of Demand

1. What is “marketing”? Is marketing a synonym for “advertising”? How is marketing a distinct concept? Why might location considerations be an important factor in the execution of effective marketing strategies?
2. Your reading outlines five fundamental kinds of retail market area limits. Come to class with at least two good examples of each kind of limit.

### Week 3: Site Selection and Trade Area Analysis

1. What does the term “trade area” mean to you? How might we define the extent of a business’ trade area?
2. Do all businesses have “similar” trade areas? Consider car dealers, grocery stores, fast food outlets, and clothing stores, for example. What would determine, or limit, the extent of the trade area for each business type?

### Week 4: The Value of Location

1. Can you think of examples of a given location having a high value? What leads you to believe that the examples you have chosen are good ones?
2. Would all businesses value locations the same, or would some stores be willing to pay more for certain locations compared to other businesses? How? Why? What examples can you think of to back up your thoughts?
3. Why do mall developers need to pay attention to mall design? List specific insights you gain from the Gladwell reading.

## Week 5: Retail Growth Strategy Alternatives

## DQ

Your reading this week identifies four different retail growth strategies. The most common of these is “organic growth”.

1. What do you think a retailer should be concerned about if they decide to grow organically? What potential dangers can you identify? Discuss in detail, but don't go on needlessly (i.e. don't take a page to say what you could express fully in a sentence).
2. Use your textbook readings (any of the readings from throughout the semester), plus your own experience and initiative to do research, to come up with two good examples of organic growth. Summarize each in single, meaningful paragraph. If possible, select one example of successful organic growth (positive results for the business doing the expanding) and one example where the growth was not so successful for the firm (an expansion followed by store closings, or even the demise of the business).

## Week 6: Commerce and the Settlement Pattern

1. In what ways do large cities like Dallas “serve” the surrounding area?
2. Search newspaper or other reputable web sites and come up with three examples of stories or situations involving a “trade area”, “service area”, “hinterland”, or other idea related to the area served by an urban place. Summarize each example in a separate paragraph, describing the importance of the “trade area” concept in each one.

## Week 7: Commercial Structure Within the Metropolis

## DQ

In an earlier DQ (module 3, question 1), we began to consider retail clusters and the various types of clusters that exist. In this module we continue that discussion in more detail. The questions below ask you to give some thought to possible examples for a couple of the general types of clusters we will discuss in class.

1. One retail cluster type we can identify is based on spatial form: some clusters are most like a point, while others look more like a line, and others would be best described as an area. Name and describe one example of each type of cluster from our local region.
2. Another way of classifying retail clusters is based on functional composition, or the kinds of businesses that might be found in the cluster. A good way of starting to think about this kind of cluster would be based on “specialization”: some clusters of retail businesses focus on a specific kind of good or service, while other clusters are very diverse and include many different kinds of businesses. Name and describe one example of each type of cluster from our local region.

## **Week 8: GIS and Applied Retail Geography**

1. What is your GIS background? What software packages (MapInfo, ArcGIS, etc.) are you familiar with? What GIS capabilities strike you to be of most use to a retailer? If you haven't taken a GIS course, what do you know about GIS systems and their capabilities?
2. Referring to the Esri reading for this week, what are the specific benefits of GIS for retail businesses?

## **Week 9: Applied Retail GIS Lab Session I**

1. How might you select new business locations if you did not have access to GIS and data analysis technology such as the *Business Analyst Online* package we're using in this course? How does GIS use help a location analyst? Once you've used *Business Analyst Online* this week, list some specific tools and capabilities that are directly helpful in the location analysis process.

## **Week 10: Applied Retail GIS Lab Session II**

1. Why is it important that business geographers do fieldwork in addition to GIS analysis? What is the unique role played by fieldwork? What is the unique role played by GIS analysis?

## **Week 11: The Corporate Context for Retail Development**

1. Beyond individual stores, it is the clusters of stores that are the most visible manifestation of the retail sector in society today. What retail clusters/complexes can you identify and name? Are they all the same? Can you identify any different types of clusters from your experience?
2. Dallas-Fort Worth has one of the greatest collections of retail firms in America, both in terms of sheer numbers (we have so many stores) and their variety (most major chains have a representation here). However, some of these businesses have an even greater connection to our local area than others, as a select group of firms are actually located here. Which retail firms would this "locally-headquartered" list include, and what do you know about each one? Are they all national chains? Which ones are more regional or local in extent? What retail subsectors (e.g. food, electronics, hardware, clothing, etc.) are represented in our locally-based business community?

## Week 12: Geography and Direct Marketing

1. How would you define “junk mail”? Is all advertising sent through the mail “junk mail”?
2. What businesses have sent you some kind of advertising through the mail in the last week? What have they been selling?
3. What would make you want to respond to advertising sent to you through the mail? Have you ever responded to advertising you have received via the mail?

**My goal in this course is for your time here to be of great value to you.** This course provides concepts and skills you will find a helpful starting-point for a career in retail geography. However, even if you follow a career path outside of retail geography, my hope is that this course will provide you with insights into the North American society and economy that can help you in many other ways, regardless of where your life and career takes you in the future.

Please do not hesitate to let me know if there is anything else we can do, beyond what you see in this course package, that could be useful in preparing you for your future.

## Sources Referenced in the Course Reading List

Each of the following books and other publications provide excellent background reading for this course. We will examine selected chapters from each book listed in this course, along with our required course text. Some marked readings are available through links on the course website. None of the complete books listed below are available in the UNT bookstore, but copies of most are available through online retailers such as Amazon.

Berry, Brian J.L., Edgar C. Conkling, and D. Michael Ray (1987) *Economic Geography*, Prentice-Hall: Englewood Cliffs, NJ. ISBN: 0-13-231440-1

Caliper (2016) Maptitude Brochure. Caliper: Newton, MA.\*

Esri (2011) *Tapestry Segmentation Reference*. Esri: Redlands, CA.\*

Esri (2012) *Business Analyst Online Brochure*. Esri: Redlands, CA.\*

Esri (2012) *Improving Retail Performance with Location Analytics*. Esri: Redlands, CA.\*

Esri (2012) *Business Analyst Online Report Reference Guide*. Esri: Redlands, CA.\*

Gladwell (2004) The terrazo jungle. *The New Yorker*, March 15, 120-127.\*

Holloway, Charles A. (1979) *Decision Making Under Uncertainty: Models and Choices*, Prentice-Hall: Englewood Cliffs, NJ. ISBN: 0-13-197749-0

Jones, Ken, and Jim Simmons (1990) *The Retail Environment*, Routledge: London. ISBN: 0-415-04985-7

Jones, Ken, and Jim Simmons (1993) *Location, Location, Location: Analyzing the Retail Environment*, 2<sup>nd</sup> Edition, Nelson Canada: Scarborough. ISBN: 0-17-604140-0

Wrigley, Neil, and Michelle Lowe (2002) *Reading Retail: A Geographical Perspective on Retailing and Consumption Spaces*, Arnold: London. ISBN: 0-340-70660-0

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\* Complete electronic version available for your download via links on the course website (see "Further Reading" page: <http://www.murrayrice.com/retail-further-reading.html>). Instructions for access to all other readings will be available in class.