

# UNT GEOGRAPHY STUDENT ASSOCIATION

UNTGEOASSOCIATION@GMAIL.COM

Hikes  
Camping  
Industry Workshops/Conferences  
Movie Nights

**BIWEEKLY MEETINGS, FRIDAYS 2PM**  
1ST MEETING: SEPT 06, ESSAT 360

All majors are welcome!  
UNT Geography Student Association  
eUNTGeoSA

## FALL 2019 SCHEDULE

Feel free to join us at any of these events! Additional events TBD

September 6, 2pm, ESSAT 360  
1st General Meeting/Discussion of Plans

October 4-6, Boerne, TX  
Texas Hydro-Geo Workshop/Camping

October 10-12, Fort Worth, TX  
Southwest Division of the American Association of Geographers (SWAAG), Texas Christian University

November 6, ESSAT 360  
Movie Night: Koyaanisqatsi (1982)  
Snacks and drinks provided!

UNTgeoassociation@gmail.com  
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eUNTGeoSA

### CAREERS IN BUSINESS GEOGRAPHY

THE PURPOSE OF THIS SITE IS TO CATALOG CURRENT JOB OPENINGS IN THE FIELD OF BUSINESS GEOGRAPHY AND LOCATION ANALYSIS FOR STUDENTS AND RECENT GRADUATES

Maintained by the Business Geography Specialty Group

# B G S G

A SPECIALTY GROUP OF THE AMERICAN ASSOCIATION OF GEOGRAPHERS

<https://businessgeography.wixsite.com/careers>

## Under the theme of "continuous course improvement"...

### Posted on the Course Website: Revised Syllabus that Clarifies and Better Highlights Upcoming Class Dates

**Why should you take this course\*?**

(\*Only from the text you might have it)

Develop a knowledge of geography and its connection to business opens up a wide range of career opportunities! Even business mind people from the Midwest or Amazon depend on experts who understand the meaning of geography for business success. During this semester, we'll explore ideas that will give you a sound foundation for understanding the changing geography of both store and non-store retail activity. The semester will also expose you to feedback and GIS technology that form a key part of the toolkit that geographers use everyday in their work for retailers and consulting firms that themselves work for retailers. By the end of the semester you will have an understanding of the fundamentals that geographers need for a great career in the retail market & site analytics field.

• A weekly time to assess the course website for the resources posted there.

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Instructor: Dr. Murray D. Rice  
Office: ENV 5105  
Telephone: (840) 505-3661  
E-Mail: [murphy@unt.edu](mailto:murphy@unt.edu)

Class: MW 10:00am-12:20pm  
Classroom: ENV 385 GIS lab meetings in CSAM lab, located in ENV 335

Office Hours: W, 9:00-10:45 am

Class Web Site: <http://www.murrayd.com/teach>

Class Directors for applied equipment materials: © Class "Clear" directors, 2019. All materials provided are copyright © CSAM lab owners.

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## So what's new?

- Clearer week by week labeling of significant course milestones
- Addition of a little more information on what we're covering each week

Note: The **course schedule** and **discussion questions** sections are the only two sections in the syllabus that have clarifications

**PART 2 - RETAIL, BUSINESS APPLICATIONS OF GEOSPATIAL TECHNOLOGY & PERSPECTIVES**

**Week 2 (Sept 9)**

**GIS and Applied Retail Geography**  
Rice and Hernandez (2017), Case Study 2.2.1 "Use of Geographic Information Systems by Retail Organizations in Canada" (1-5); Esri (2012) "Improving Retail Performance with Location Analytics"; See all week 2 materials on "Syllabus and Handouts" page

**Discussion Questions for the Wednesday class**

- Introduction to geographic information systems as applied to business geography: in particular:
  - Brief survey of fundamental GIS concepts
  - Discussion of various GIS packages, including the BA Web software used in our lab sessions
  - Lab results on the "Further Reading" page of the course website

**Week 3 (Sept 9, 11)**

**Applied Retail GIS Lab Part 1**  
No reading, but be ready for the first of our dedicated lab sessions focusing both fieldwork and GIS analysis tasks.

- Hands-on lab including fieldwork and the BA Web cloud GIS package.
- Monday: the field observation component of the lab. Please meet at the beginning of class on Monday at our usual classroom. We'll walk from there.
- Wednesday: lab in our CSAM GIS lab room, focusing on GIS analysis of business location opportunities in Denton.
- See lab instructions posted on course website.

## The revised syllabus is available for download on the course website

As always, visit the "Syllabus and Handouts" link

**Note: the syllabus distributed at our first class still applies**

- Same weekly sequence of topics & grading scheme

**About the next few important weeks...**

## Overview: Next Few Weeks

- **Next Week (Week 3: Sept. 9 and 11)**
  - **Monday** is our GIS lab #1 field work day: meet briefly here in our regular classroom and be prepared for a short walk to Fry Street
    - Bring a **pen/clipboard** to complete the **fieldwork worksheets** I am providing, and whatever else you might want to **record field insights** (sketch maps, notes, pictures)
  - **Wednesday** is our GIS day for lab #1: meet in our CSAM lab classroom – **ENV 336** – and be prepared to get some good work done on the BA Web analysis
    - I will be there to answer questions, but **this is a work session** (so very little class instruction from me)

## Overview: Next Few Weeks

**Before next week, please download the GIS lab guidelines from the class website**

**Assignment Documents**

**Retail GIS Lab Part 1, Week 3 of the Course:**  
The assignment component we work on this week will focus on fieldwork observations and basic location and market analysis for a restaurant chain in Denton using the basic mapping and reporting capabilities of the BA Web-Appcloud GIS package.

- Applied Assignment Part 1 - Guideline and Instruction Document
- Applied Assignment Part 1 - Evaluation Page

**Retail GIS Lab Part 2, Week 3 of the Course:**  
The assignment component we work on this week will focus on GIS analysis and optimization assessment for the same restaurant chain across the Dallas-Fort Worth region using more of the analytical capabilities of the BA Web-Appcloud GIS package.

- Applied Assignment Part 2 - Guideline and Instruction Document
- Applied Assignment Part 2 - Evaluation Page

**Document download links here**

<http://www.murrayrice.com/retail-applied-gis-labs.html>

## Overview: Next Few Weeks



If you have not already, **please complete** the online account registration you will need to use Esri's Business Analyst Web App

➔ How many of us are having Esri account issues? I will permit student pairs to complete this lab together if necessary.

Please see me after class today if you have not yet received an Esri account registration invitation (or are having other lab problems)

## Overview: Next Few Weeks



### • When you have your Esri account set up...

BA Web Main Page



BA Web Sign In Page



<https://bao.arcgis.com/esriBAO/login/>

## Overview: Next Few Weeks



### • Week 4: Sept. 16 and 18

○ We will spend all this week back in our usual classroom, with Mon., Sept. 16 focused on exploring a basic set of retail geography concepts:

- Site selection and trade area analysis

○ Wed., Sept. 18 is our first guest speaker: Carl Whitaker, with RealPage Inc. in Dallas

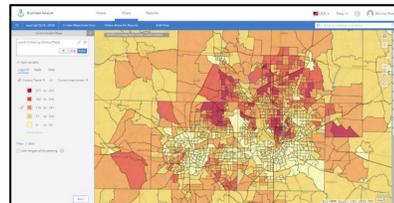
- He will be talking about his career path and what it's like to be a professional geographer in the business world
- Carl will also be prepared to provide class project advice
- Please be thinking about any class project and career questions you might want to ask Carl

## Overview: Next Few Weeks



### • Week 5: Sept. 23 and 25

○ GIS Lab 2, focused completely on BA Web GIS work in our computer lab (ENV 336)



*And now, finally,  
back to this week...*

### This Week's Retail Business Case Study: QuikTrip

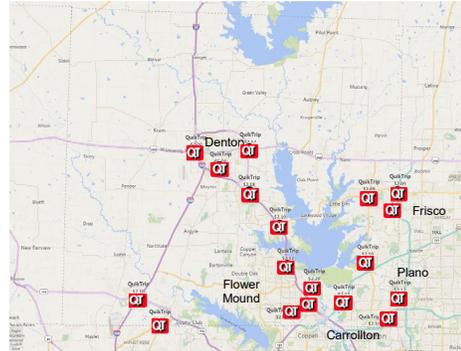


What is QuikTrip? Where do we find these stores? What would be an ideal QuikTrip location? What location issues impact their operations?

### QuikTrip Locations by Metro Area



### QuikTrip Locations in Denton County



## Week 8

### GIS and Applied Retail Geography



### GIS and Applied Retail Geography



- Business location analysis involves a combination of many different skills
  - 1. Knowledge of basic geographic concepts that cut across all sub-disciplines in geography: spatial pattern, concept of "region", diffusion processes, distance decay, etc.
  - 2. Knowledge of concepts specifically relevant to businesses, markets, cities, and locations: spatial demand cones, growth strategy alternatives, central place theory, etc.

### GIS and Applied Retail Geography



- Business location analysis involves a combination of many different skills
  - 3. Ability to apply conceptual knowledge to analyze a given situation: connecting the "book knowledge" with the applied problem you face
  - 4. Skill in using modern GIS technologies to actually implement your solution

### GIS and Applied Retail Geography



- Our session today introduces the basics you need to know to successfully combine your conceptual knowledge with modern technological capabilities
  - Either knowledge or capabilities by themselves won't get the job done

## GIS and Applied Retail Geography



- This course is one of three UNT Geography courses that address the intersection of geographic knowledge and capabilities for business
  - GEOG 3100 (US & Canada):**
    - Development of geography as a problem solving framework using regional case studies from across the US & Canada
  - GEOG 4220/5220 (this course):**
    - Emphasis: retail geography conceptual knowledge (~60% to 70% of your course grade)
    - But also: GIS capabilities developed in our two-week GIS lab segment (30% of course grade)

## GIS and Applied Retail Geography



- This course is one of three UNT Geography courses that address the intersection of geographic knowledge and capabilities for business
  - GEOG 4230/5230 (Location Intelligence – Business GIS Concepts & Applications)**
    - Shifted emphasis: more business GIS experience (five plus weeks on GIS lab/project, 60% of course grade)
    - Also important: broad range of industry applications covered (retail, transportation/logistics, marketing/customer analytics, health/medical services)
    - GEOG 4230/5230 to be offered next in spring 2020**

## GIS and Applied Retail Geography



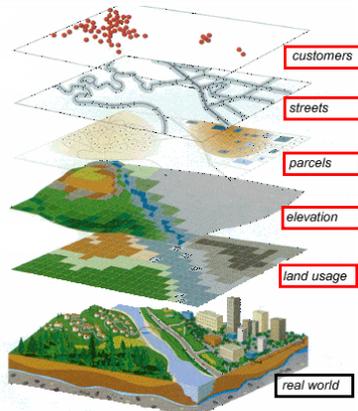
- The big picture:** the power of GIS is that it brings together data analysis capabilities and mapping capabilities
  - Each of these two capabilities is powerful on its own, but can only go so far
    - Google Maps: mostly mapping (towns, highways, stores)
    - Excel/SPSS: mostly data analysis (these have tried to bring in limited mapping functions)
  - GIS opens the door to very powerful results for business (and other users)

## GIS and Applied Retail Geography



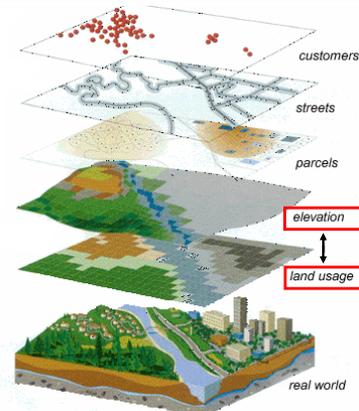
- Key GIS building block: data layers**
    - GIS allows us to analyze separately and together a multitude of different geographic features with associated data
    - Different kinds of data, for different kinds of features, and different kinds of applications
      - People
      - Buildings
      - Topography
      - Water
- What other kinds of data have you seen in use with a GIS?**

**Layers in a GIS:**  
various map data themes that GIS can bring together



**Layers in a GIS:**  
various map data themes that GIS can bring together

**GIS allows us to look for connections between different map layers**





## GIS and Applied Retail Geography

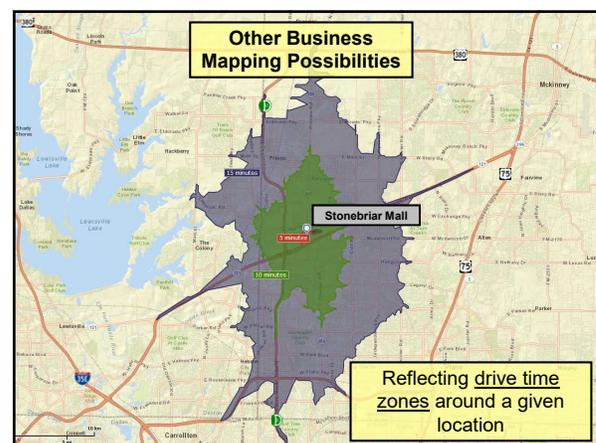
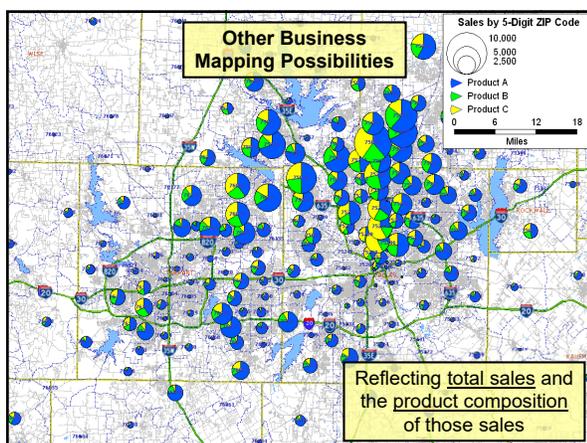
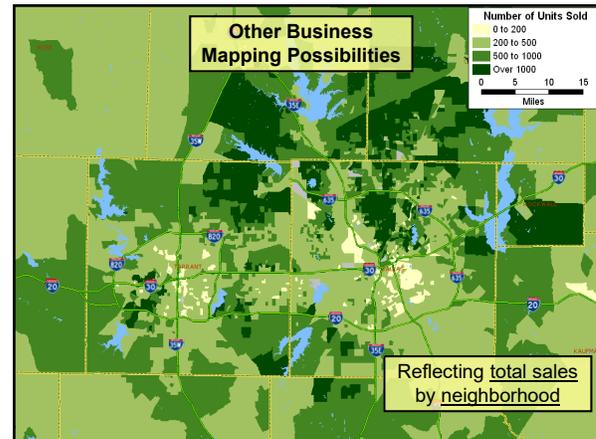
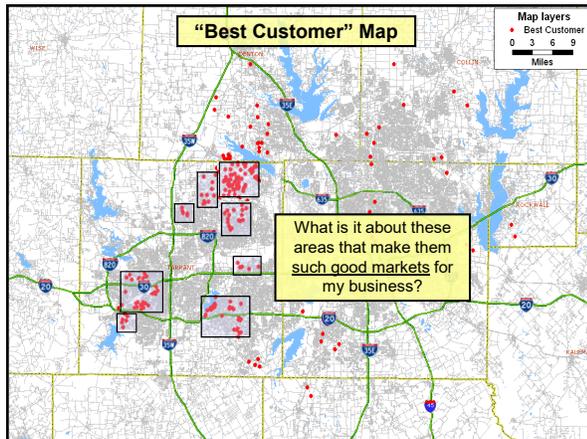


- **GIS has now reached the point where it is mainstream (not an exotic option)**
  - Very important for retail businesses dealing with an intensely competitive marketplace
  - Survival requires that retailers do a good job of understanding their markets
  - GIS is one tool that retailers are increasingly turning to for strategic market insights

## GIS and Applied Retail Geography



- **One typical application is to create a map of a business' very best customers: where do they come from?**
  - 1. Have shopped with you very recently
  - 2. Have continued to shop with you frequently
  - 3. Have spent the most of all of your customers
- **Such an analysis combines database analysis (customer purchase records) with mapping (customer addresses)**





GIS and Applied Retail Geography 

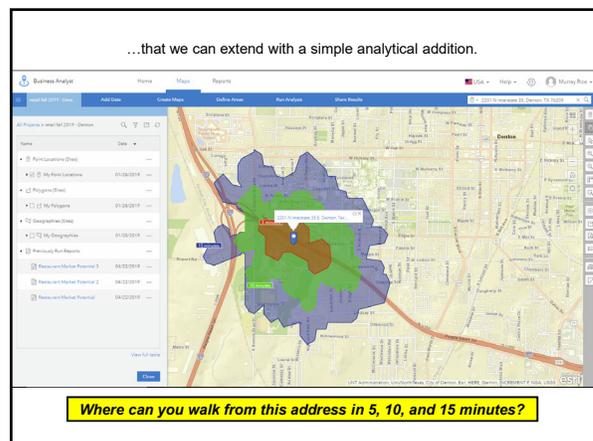
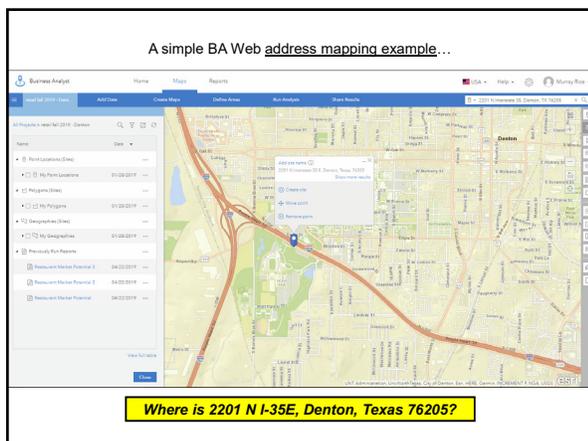
- **Some key geo data layers for GIS analysis of retail markets and locations**
  - Boundaries for various levels of government: city, county, state, national
  - Boundaries for zip code zones: 3 digit, 5 digit
  - Boundaries for census and related data sets: blocks (smallest zones available), block groups, census tracts, zip+4 points
  - Streets: local streets up to interstate highways
  - Landmarks: schools, shopping centers, etc.

GIS and Applied Retail Geography 

- **Other kinds of databases that we can link to locations using GIS**
  - Demographic data: by block/block group/census tract, from census (every ten years) and yearly estimates/projections
  - Market types: neighborhood classifications identified through geodemographic segmentation analysis (coming in week 12)
  - Business databases: individual businesses by address (names, business types, sales, etc.)

GIS and Applied Retail Geography 

- **In this course we will focus on use of one GIS software package**
  - We've already mentioned BA Web as the package we will use in this course



## GIS and Applied Retail Geography



### Key things you must do to get ready for the BA Web lab time

1. You should have registered your Esri BA Web account so you can access the software
  - I previously sent a registration message to your UNT e-mail account on how to do this: see me if questions
2. Review the handout for applied GIS lab #1 thoroughly before Wednesday next week
  - Knowing the basics of the lab will make our work time in class much more efficient

## GIS and Applied Retail Geography



### Another capable GIS package to know about is Maptitude

- A powerful package especially suited to business and retail site selection, market area, and logistical network analysis
  - This is the primary GIS package that my consulting firm has used for over 20 years
  - Maptitude is a desktop GIS that combines a suite of advanced analytical capabilities with a diverse set of census and community data

