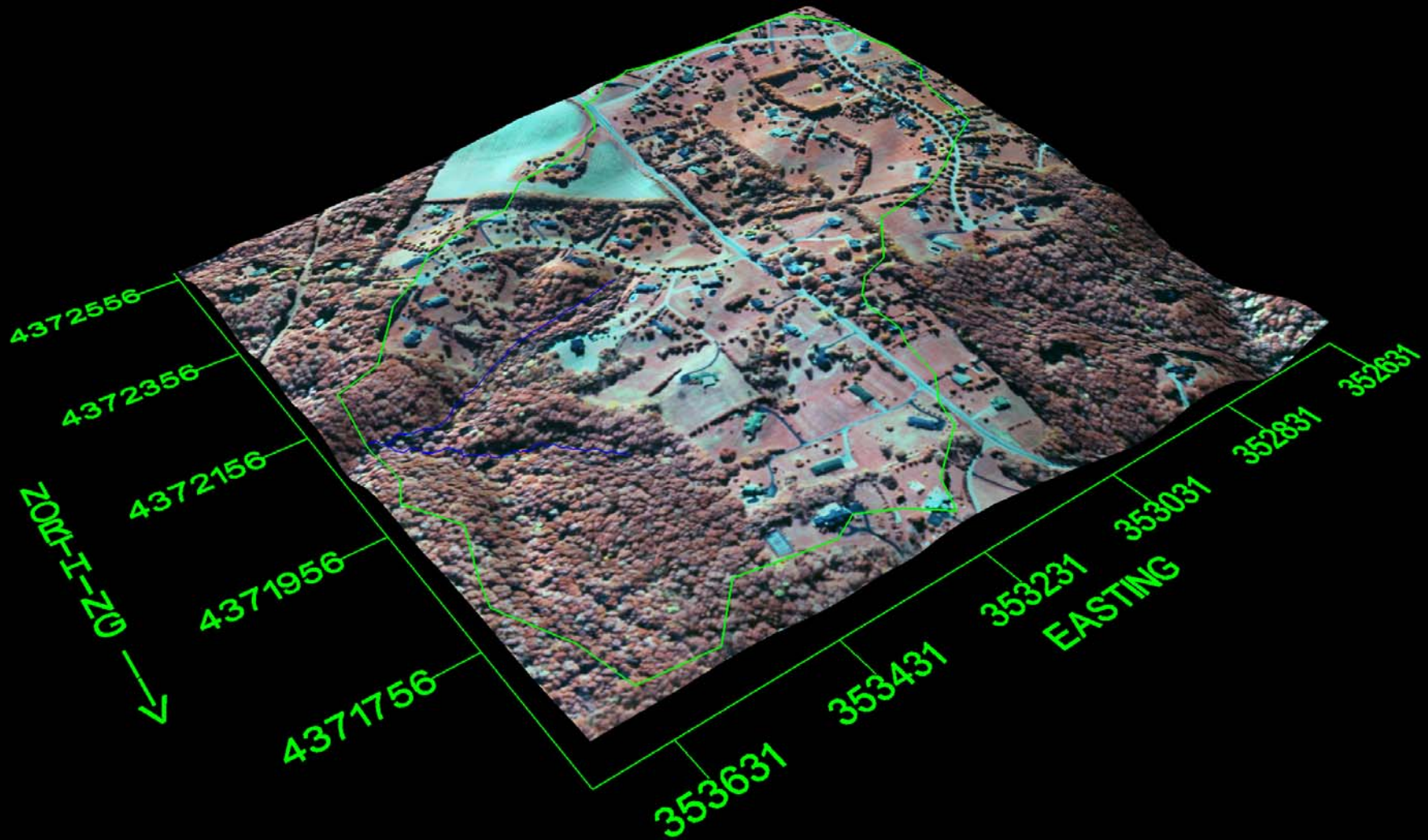# EEOS 265 - Computer Applications in Geography
Getting Started with Geographic Information Systems

EEOS 265 – Computer Applications in Geography
Getting Started in Geographic Information Systems

Course Description:

This course is an introduction to geo-spatial technologies, with an emphasis on computer-related applications. The course provides students with a brief introduction to the sub-fields of geo-spatial technologies, which include geographic information systems (GIS), global positioning systems (GPS), remote sensing and computer-generated cartography. All topics discussed in lecture are reinforced through computer lab exercises. This course is an excellent introduction to the more advanced geo-spatial technology courses offered through the department.

EEOS 265 – Computer Applications in Geography
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- **Topics** that will be covered include:
    - Coordinate systems & map projections
    - Geographic data structures
    - The global positioning system (GPS)
    - Remote sensing
    - Map production and design
    - Analysis of geographic data (including spatial analysis)

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- Students will be provided with **hands-on experience**, working with the ArcGIS desktop geographic information system (GIS). The **goals** are to help students:

1. Establish a **geographic perspective** of social and physical phenomena in the real world

2. Understand the **key issues** in dealing with geographic data

3. Learn how to **use geographic data in a GIS**
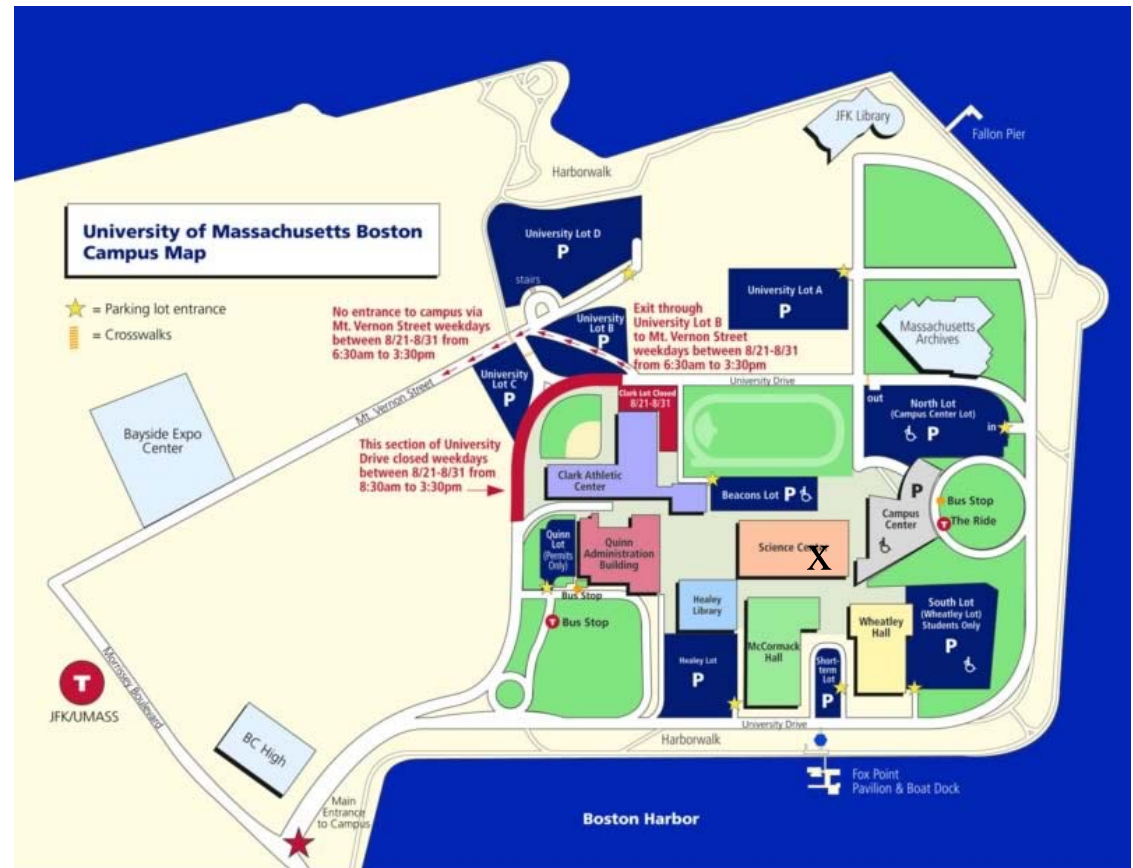
Course Introduction – Where and When

- **Lectures**:
  - S-2-062
  - Thursdays from 6:00 - 8:30 PM

- **Labs**:
  - S-3-020
  - Tuesdays from 6:00 - 8:00 PM

GIS's Focus Is On Where

- On the previous slide, I specified **where** using the names of buildings and room numbers

- Geographers often approach the concept of **where** using another representation of location – a **map**:

http://www.umb.edu/parking_transport/images/campus_map.jpg

But Where By Itself is Not So Useful

- **Where** – S-3-020

- **When** – Tuesdays from 6:00 - 8:00 PM

- **What** – EEOS 265 Labs

- **Who** – Students enrolled in the course (you)

- **Who Else** – The instructor teaching the course
  - Name – David Tenenbaum
  - Position - Assistant Professor
  - Department - Environmental, Earth and Ocean Sciences

David Tenenbaum

- ## Hon. B.Sc. at the University of Toronto
  - **Majors**: Physical and Environmental Geography & Environment in Society

- ## M.Sc. at the University of Toronto
  - **Thesis**: RHESSys-ArcView Integrated Modelling Environment

- ## Ph.D. at the University of North Carolina at Chapel Hill
  - **Dissertation**: Surface Moisture Patterns in Urbanizing Landscapes

- ## Canadian Government Lab Visiting Fellow at the Water & Climate Impacts Research Centre
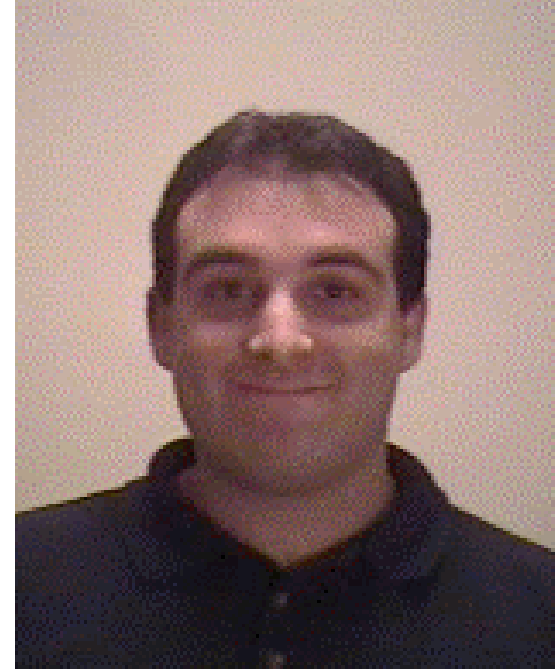 - **Research**: NAESI - In-Stream Flow Needs

How to reach me

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EEOS, UMass Boston

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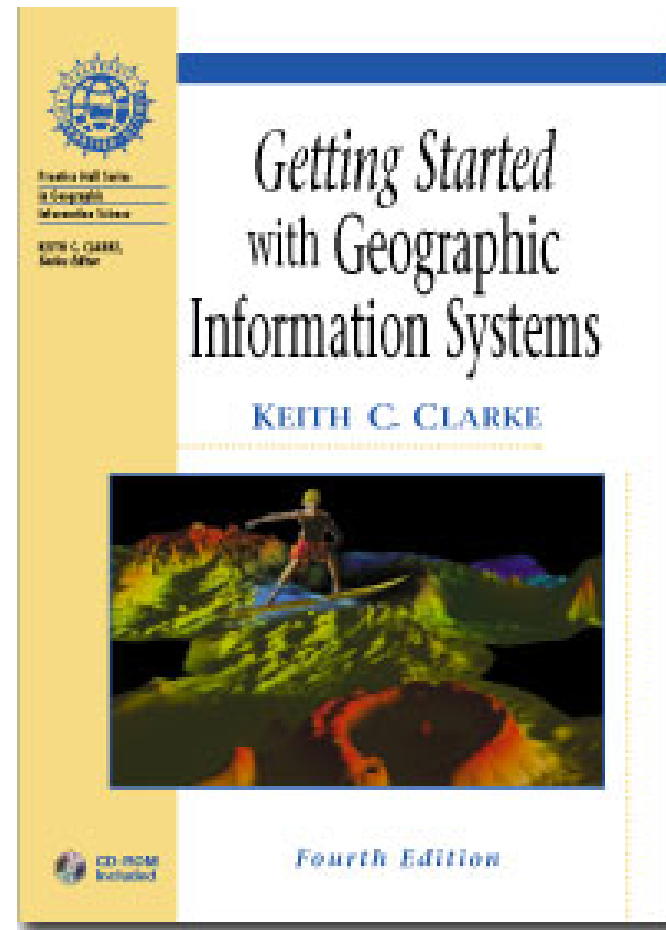
EEOS 265 – Computer Applications in Geography
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- **Course Web Page:**
  - **http://alpha.es.umb.edu/~david.tenenbaum/eeos265**
- **Read** the background material from the text
- **Complete** the online quiz on the textbook website
- **Download/read** sections of course material online
  - At least skim these before class so you are familiar with the material we will cover

- Lectures will follow (though not exactly) the **topics / structure** outlined in syllabus quite closely
- **Prentice-Hall Textbook Website**
  - **http://www.prenhall.com/clarke4/**

EEOS 265 – Computer Applications in Geography
Getting Started in Geographic Information Systems

- **Text:** Keith C. Clarke. Getting Started with Geographic Information Systems. 4 Edition. Prentice Hall, 2003. ISBN 0-13-046027-3.

EEOS 265 – Computer Applications in Geography
Getting Started in Geographic Information Systems

- **Labs:**
  - Tuesdays   6:00 - 8:00 PM S-3-020

- **Lab Exercises and Quizzes:**
  - available online through the Prentice-Hall website
  - These follow the text's chapter structure, and at the end of the course we will have 2 further integrative assignments where you will integrate what you have learned
  - Labs due 1 week later at the beginning of the lab session
  - Submit quizzes anytime, ideally before the lecture

- **lateness: <u>-10%</u>** of total mark per day
  - approach your TA for extenuating circumstances

EEOS 265 – Computer Applications in Geography
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Grading:

Online quizzes	**10%**
Lab assignments	**40%**
Mid-term (Oct. 21)	**20%**
Final exam (TBA)	**30%**