OUTLINE

• What is Geoinformatics?

• Current Applications of Geoinformatics

• What will you learn?

• What you will use – an example of a Geographic Information System analysis
What is Geoinformatics?

- Geoinformatics is a mixture of Geography and Informatics
- It is using the techniques of Informatics to do Geographical Analyses
- It is helping decision makers to see the bigger picture
- It presents alternative solutions to environmental problems
- It is a tool for forecasting and managing the environment
CURRENT APPLICATIONS

- Agriculture
- Environment
- Epidemiology and Health
- Forestry
- Emergency services
- Navigation
- Marketing
- Insurance
- Real Estate
- Regional/Local Planning
- Roads and Railways
- Site Evaluation and Costing
- Tourism
- Utilities e.g. Eskom
WHAT WILL YOU LEARN?

• Geography (obviously)
  – Introduction to Human Geography
  • Environmental Sciences
  • South African Geomorphology
  • Climate and Weather of South Africa
WHAT WILL YOU LEARN?

• Informatics (obviously)
  – Design and integration of computer information systems
  – Computer Programming
  – Database design and modelling
  – Database Management
  – Geographic Information Systems (GIS)
WHAT WILL YOU LEARN?

• Mathematics (not too much)
  – Calculus
  – Vector and Matrix Algebra
  – Business Statistics
  – Spatial Statistics and Modeling
  – Spherical Trigonometry
WHAT WILL YOU LEARN?

• Remote Sensing and Survey (data gathering)
  – Gathering information from Satellite Data
  – Gathering information from ground surveys
WHAT WILL YOU LEARN?

• Geodesy (Earth Science)
  – The Shape of the Earth
  – The Gravity Field of the Earth
  – Global Navigation Satellite Systems
  – Other Space methods for determining characteristics of the earth and earth dynamics.
WHAT WILL YOU LEARN?

• Cartography
  – Map Projections
  – Map Symbology
  – Map Psychology
  – Map Production
  – Map Use for Analysis and Problem Solving.
That gave you a small glimpse of what geoinformation scientists do

THE END