

# GEOINFORMATICS

Presented by

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# 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 Symbolology
  - Map Psychology
  - Map Production
  - Map Use for Analysis and Problem Solving.

That gave you a small glimpse of  
what geoinformation scientists do

**THE END**