EARTH SC/ENVIR SC/GEOG 2GI3

Midterm Exam Details

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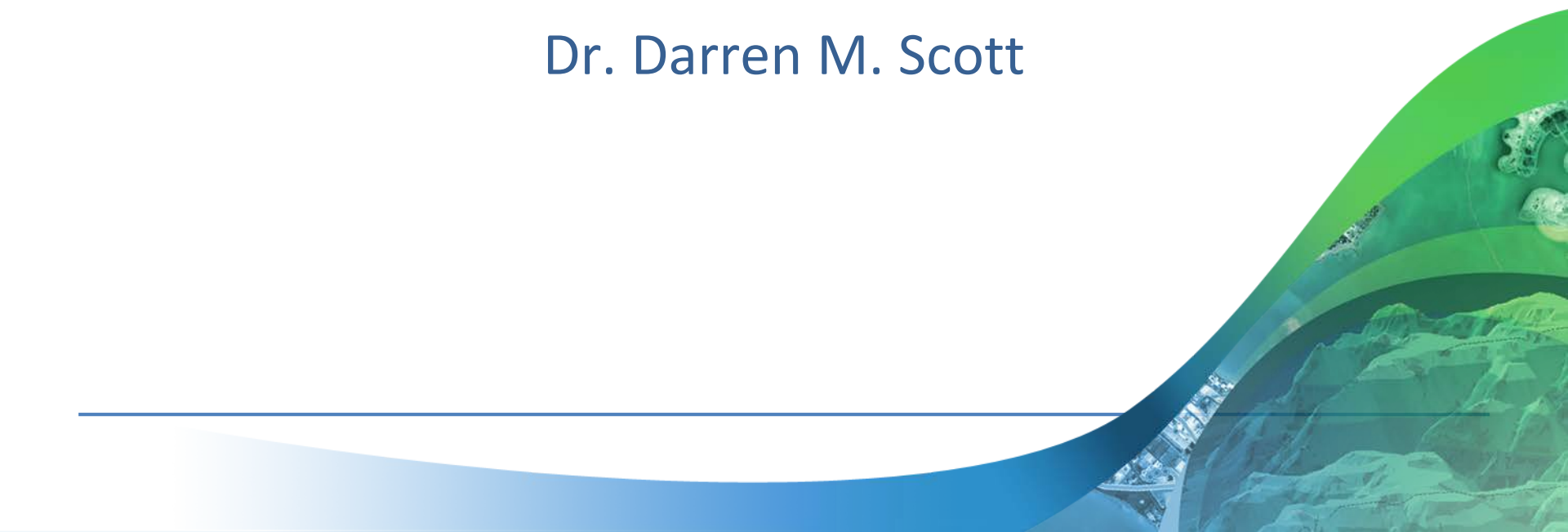

When, Where, What to Bring

- When:
  - October 25th, 2017 from 11:30 to 12:20 pm
- Where:
  - UH 213: Last name begins with A to L
  - T13 123/24: Last name begins with M to Z
- What to bring:
  - Casio FX-911 calculator (McMaster standard)
  - Student ID card

T13

Exam Structure

- Total marks = 45
- Part I: Multiple Choice, True/False, Fill-in-the-blank
  - 25 questions
  - Each worth 1 mark
- Part II: Short Answer and Problem Solving
  - 3 questions, with multiple parts
  - In total, the questions and their parts = 20 marks

What the Exam Covers

- First three topics:
  - What is a GIS?
  - What is georeferencing?
  - How are data represented in a GIS?

- Questions will be derived from all material covered in lectures on the above topics (majority will come from latter two topics)
- Some questions could come from Exercises 1, 2, and 3 (Part A)

Sample Questions (1)

- Who invented GIS?

  A. Gerhardus Mercator

  B. Roger Tomlinson

  C. Johann Lambert

  D. Jack Dangermond

Sample Questions (2)

- Information about places on the Earth's surface is known as ___geographic / geospatial___ information.

Sample Questions (3)

- When using a secant cylindrical projection with a normal aspect the scale is true:

  A. Only at the equator

  B. At two standard parallels

  C. Only at the Greenwich Meridian

  D. At two standard meridians

  E. None of the above

Sample Questions (4)

- A map projection will always distort the Earth in some way.

  True False

Sample Questions (6)

- The _____raster_____ data model represents space as a series of grid cells with the same resolution.

Sample Questions (7)

- Define the following terms: latitude and longitude **(2 marks)**. Use a figure to illustrate each term **(2 marks)**.

Sample Questions (8)

- Storage is an important consideration in applications involving raster data. Encode the following figure using run length **(2 marks)** and run length row order **(2 marks)** encoding. Which approach is better at compressing this particular figure? **(1 mark)** Justify your answer based on your encoding results. **(1 mark)**

A	A	A	A
A	B	B	B
A	A	B	B
A	A	A	B