From GPS and Google Maps to Spatial Computing

grouplens
UNIVERSITY OF MINNESOTA

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Driven to Discover℠

Learning Objectives

- Know what to expect each week in the course
  - Content and structure
- Choose your track!
  - Make sure the course is right for you
- Understand course rules
- Be able to plan your successful completion of each week's material

Course Schedule

- Starts Tuesday, Sept. 22
- Ends Monday, Nov. 17 (8 weeks)
- Eight modules = 1 per week
  - Each module will be very self-contained
- Short course: if you want more, come study with us at the University of Minnesota!

Course Schedule: Each Module

- Each module will consist of…
  - … a number of lecture videos taught by Dr. Shekhar or Dr. Hecht
  - … mandatory course readings
  - … 1-2 “Problem Sets” (more on this soon)
  - … assignments for those in the technical track (a few weeks only)

Course Schedule: Each Module

- Each module will have a consistent schedule
  - The module will begin at Midnight (12:00am/ 0:00) on Tuesdays
  - The module will end at 11:59pm/23:59 on Mondays
  - All times refer to the time here in Minnesota

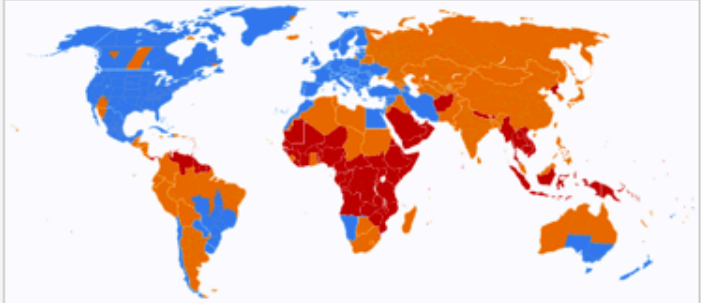
Daylight saving time

From Wikipedia, the free encyclopedia

"Summer time" and "DST" redirect here. For other uses, see Summer time (disambiguation) and DST (disambiguation).

This article is about the concept of daylight saving time. For local implementations, see Daylight saving time around the world.

Daylight saving time (**DST**) or **summer time** (see Terminology) is the practice of advancing clocks during the summer months that have more daylight so that people get up earlier in the morning and experience more daylight in the ne hour near the autumn.[1]



Although not used by the majority of the world's countries, daylight saving time is common in the Western world.
DST is used.
DST is no longer used.
DST has never been used.

posed in 1895 lemented by ril 1916. Many n, most

ized.[1] Putting activities that use problems d to the sun (such as farming) or to darkness (such as firework shows).[4][5] ening use of incandescent lighting (formerly a primary use of electricity[6]), r greatly, and research about how DST currently affects energy use is limited or contradictory.[7]

Time in Minnesota

- UTC-5 before Nov. 2, 2014
- UTC-6 after Nov. 2, 2014

Module Topics

- Week 1: Introduction to Spatial Computing
  - Dr. Shekhar and Dr. Hecht
- Week 2: Spatial Query Languages
  - Dr. Shekhar
- Week 3: Spatial Networks
  - Dr. Shekhar
- Week 4: Spatial Data Mining
  - Dr. Shekhar

Module Topics

- Week 5: Volunteered Geographic Information
  - Dr. Hecht
- Week 6: Positioning
  - Dr. Hecht
- Week 7: Cartography and Geographic Human-Computer Interaction
  - Dr. Hecht
- Week 8: Future Directions in Spatial Computing
  - Dr. Hecht and Dr. Shekhar

Group & Individual Work

- Feel free to study in groups
- All problem sets are to be done individually
- Technical track-only: all assignments are to be done individually
- See the syllabus for more information


Senator Quits Montana Race After Charge of Plagiarism


Both Sides in Gay Marriage Fight in Utah Agree: Supreme Court Should Hear Case


Russia Responds to Western Sanctions With Import Bans of Its Own

Snowden Said to Be A Years in Russia

POLITICS

Senator Quits Montana Race After Charge of Plagiarism

By JONATHAN MARTIN AUG. 7, 2014

Three Course Tracks

- Three tracks
  - "Curiosity Track"
  - "Concepts Track"
  - "Technical Track"

Course Tracks: Curiosity Track

- Targeted at…
  - ….people who want to learn about one or more spatial computing topics
  - …people who don't want to commit to a whole eight-week course
- No certificate given
- Prereqs: None!

Course Tracks: Concepts Track

- Targeted at…
  - …people who want to make informed spatial computing choices, but who are not programmers and/or do not have statistics or math experience
- Statement of Accomplishment
- Prerequisites: some familiarity with online maps
- Time per week: 2-4hrs per week

Course Tracks: Technical Track

- Targeted at…
  - …people with a programming and math background
- Programming assignments on top of problem sets
- Distinguished Statement of Accomplishment
- Prerequisites
  - some experience w/ Java programming and a little web development experience
  - Pre-calculus level math (e.g. geometry), basic statistics
- Time per week: additional 2-3hrs/week
  - Varies week to week

Course Tracks: Deliverables

- Concepts Track students
  - one problem set per week
- Technical Track
  - some weeks will involve an **additional** problem set
  - Some weeks will have a programming assignment

Which track should you choose?

Question by Jessica Lock from The Noun Project

Choosing a Track

- Some function of the following:
  - The amount of time you have available
  - Your existing knowledge base and skill set
  - How much you want a certificate
  - The computer you have available
  - Other individual factors

System Requirements

- None for the Curiosity and Concept Track
- For the technical track:
  - Pay attention to the system requirements in the syllabus!
    - Java, PostGIS, etc.
  - Attempted to make assignments accessible to as many computing setups as possible

System Requirements (Cont)

- For the technical track:
  - It's **your responsibility** to install the appropriate software and make sure it's working
  - We cannot provide individual technical support
  - We cannot give extra time or forgive points for technical issues

Grading

- Parallel points systems
- Concept Track points: only from Concept Track problem sets
- Technical Track points: only from Technical Track problem sets and assignments
  - Technical Track students will have concept track and technical track point totals

Grading

- Concepts Track certificate
  - 50% of Concept Track points
- Technical Track “Distinguished” certificate
  - 50% of Technical Track points
  - We will consider you for a Concepts Track certificate if you fail to get a Technical Track certificate
  - Must also get 50% of concept track points

Grading

- No late problem sets or assignments
- We'll forgive one problem set in each track
- All assignments are required

Recipes for Success

- Watch the videos early in the week!
- Don’t leave the problem sets until the very last minute
  - No late problem sets
- Make use of the discussion forums to communicate with your “classmates”

More course info…

- Read Me First
- Syllabus

Read Me First

Meet the Course Team

COURSE

Announcements

Module 1

Module 2

Video Lectures

EXERCISES

Quizzes

Peer Assessments

Programming Assignments

ABOUT THE COURSE

Syllabus

Grading and Logistics

Upcoming Deadlines

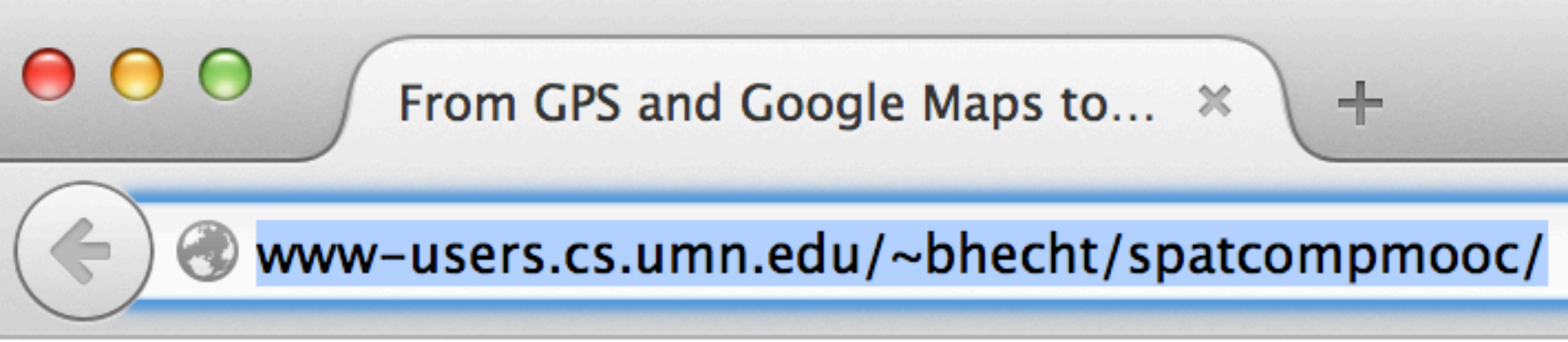
Recent Discussions

Browse all discussions »

Admin Help

Web Resources

- Reading website



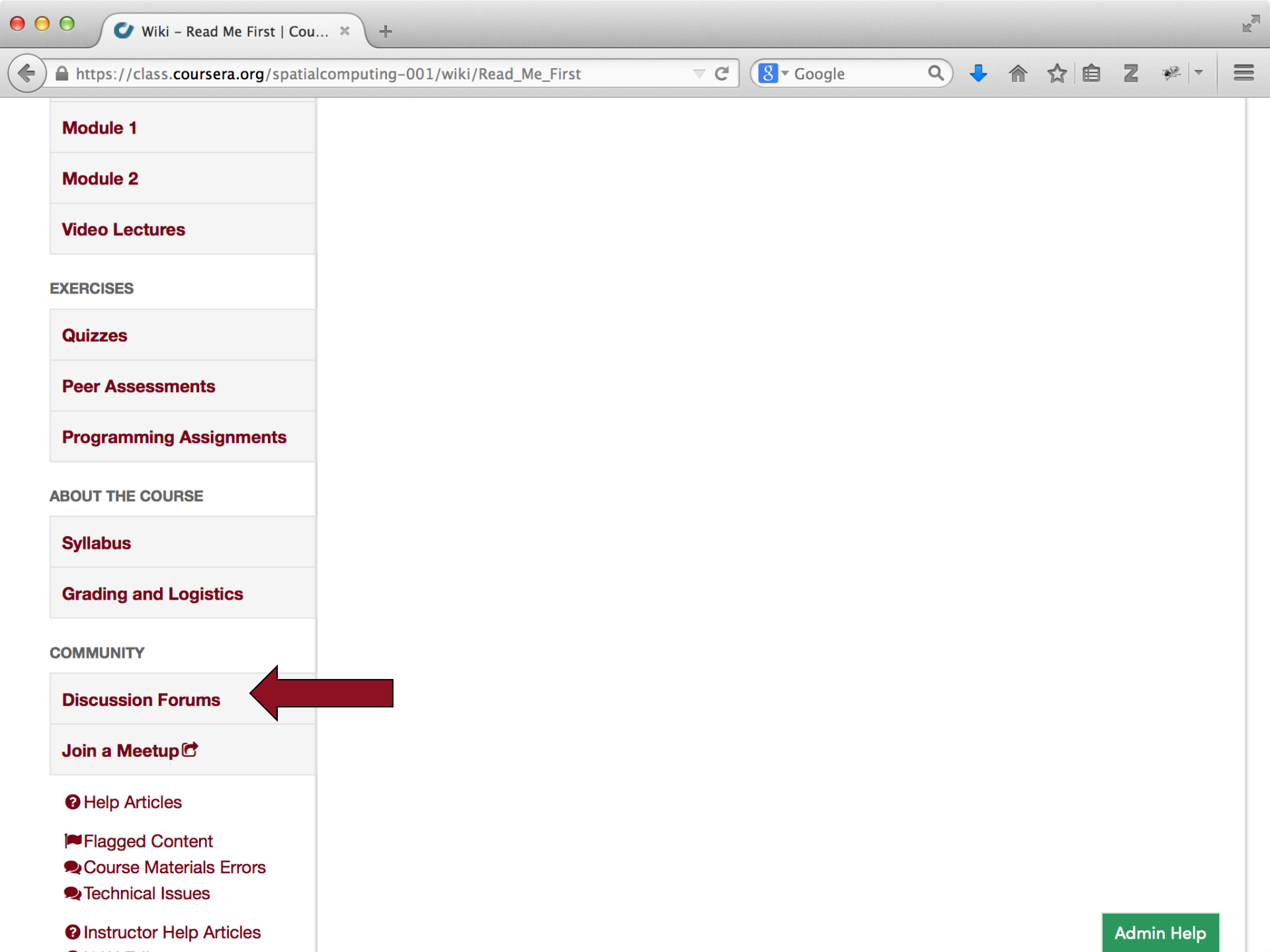
Spatial Computing

Welcome to the Readings and Re
course, "From GPS and Google M
resources are listed below.

Note: No module's list of reading

Web Resources

- Reading website
- Discussion forum


Wiki - Read Me First | Cou...
https://class.coursera.org/spatialcomputing-001/wiki/Read_Me_First
Google
Module 1
Module 2
Video Lectures
EXERCISES
Quizzes
Peer Assessments
Programming Assignments
ABOUT THE COURSE
Syllabus
Grading and Logistics
COMMUNITY
Discussion Forums
Join a Meetup
Help Articles
Flagged Content
Course Materials Errors
Technical Issues
Instructor Help Articles
Admin Help

Web Resources

- Reading website
- Discussion forum
- Social media

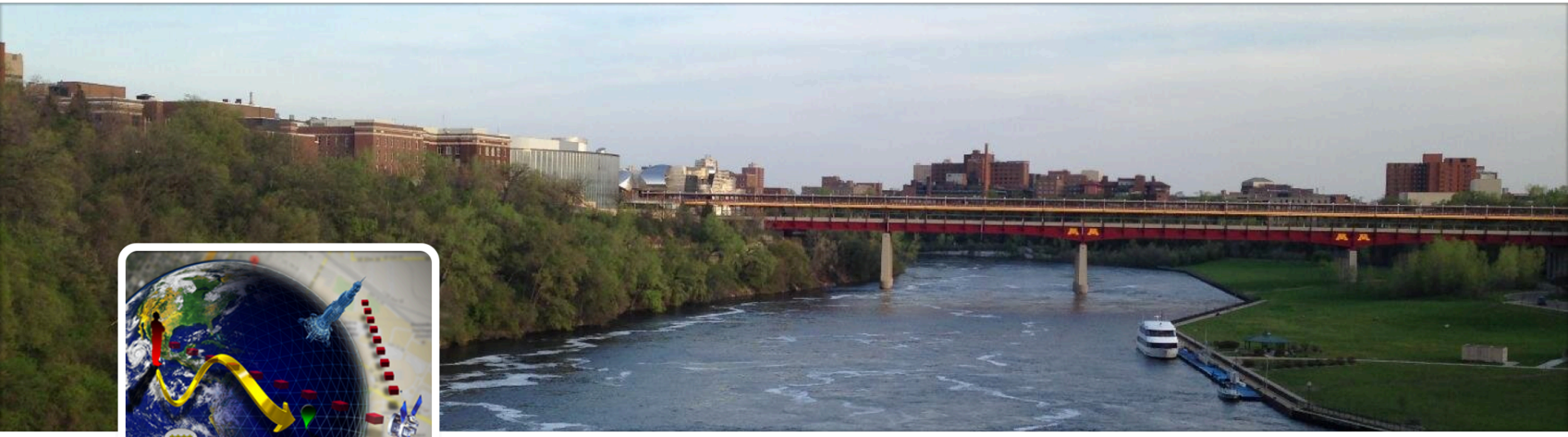
Spatial Computing (Spatial...

Twitter, Inc. (US) https://twitter.com/spatialcompmooc/

Google

Search Twitter

Have an account? Sign in



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Spatial Computing

@SpatialCompMOOC

The Twitter account for th
Minnesota's Spatial Comp
taught by Dr. @bhecht an
Shekhar

Minneapolis, MN

coursera.org/course/spatial...

Tweets | Tweets and replies

Spatial Computing @SpatialCompMOOC · Jul 31

ike Ellen at the

@spatialcompmooc

Don't miss any updates
from Spatial Computing