# ATMOS 5010: Weather Forecasting Course Overview



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# Introductions

# Name Where you are from How you got into meteorology Your academic standing (e.g., senior) Your weather "surfing" and "forecasting" experience

# **Course Objective**

At the end of this course you should be able to effectively use meteorological observations, numerical weather analysis and prediction models, and statistical forecast tools to produce detailed, verifiable, site-specific sensible weather forecasts in a time-limited environment

# Format

Two traditional lecture classes

# Some practice forecasting (training wheels stage)

More forecasting!

# Grading

50% accuracy of forecasts
 25% attendance and participation

 1 absence without deduction
 Next absence reduction of 5 points
 Others 10 points each

 25% online modules

Forecast Practicum
 Involves forecasting for KSLC and a floater site

16 variables for each city

Validated using traditional skill scores

# Forecast Practicum Web Pages

# Department of ATMOSPHERIC SCIENCES THE UNIVERSITY OF UTAH USEFUL WEBSITES Forecast Practium MesoWest Utah Weather Center **RAL** Weather SPC Forecast Tools NWS EDD TwisterData.com **PivotalWeather** NCEP Models PSU E-Wall **CIRA GOES Images** GOES Derived Products TAMU Weather Interface MesoWest Camera Display **NWS Anomalies** Wasatch Weather Weenies <sup>log</sup> Hy.Utah.edu

First time logging or Go HERE First Atmos 5010: Weather Forecasting

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# Under Development for Spring 2019

### COURSE DESCRIPTION

Atmos 5010 provides students with an introduction to the tools and techniques used for contemporary weather forecasting. Students analyze and forecast the weather in each class, with the instructor providing a guiding hand and stimulating discussion of forecast issues and techniques.

# OVERVIEW AND LEARNING OBJECTIVES

At the end of this course, students should be able to effectively use meteorological observations, numerical weather prediction models, and statistical forecast tools to produce site-specific sensible weather forecasts in a time-constrained environment.

# FORMAT

Two classes per week (09:10-10:30 AM MW) in the 711 WBB computer lab.



Search

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**Jim Steenburgh** 

Professor 488 INSCC 581-8727 jim.steenburgh at utah.edu Office hours: Drop in or by appointment

# Getting Up To Speed

This class emphasizes learning by doing

- If you want to learn how to ride a bike, the best option is to get on it and start pedaling
- I'll get you started, but how much you learn depends on your level of engagement

# Start doing practice forecasts <u>now</u>

- Use web sites and/or IDV
- Forecasting can be done entirely via web if desired, but at times, IDV can be useful
- Complete online MetEd modules

Attend class and review lecture notes!

# Web Sites

campus: a to z index | map | directory | calendar



USEFUL WEBSITES

Utah Weather Center RAL Weather SPC Forecast Tools NWS EDD

MesoWest

Department of

ATMOSPHERIC SCIENCES

THE UNIVERSITY OF UTAH

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# IDV

# http://www.unidata.ucar.edu/software/idv/



# IDV

# FORECAST PRACTICUM

Students produce in-class forecasts for the Salt Lake City International Airport (KSLC) and a floater site selected each morning before class. For each site, students produce a 16-variable forecast covering three sensible weather categories: temperature, precipitation, and cloud/wind. Forecasts are evaluated using traditional forecast accuracy metrics.

REQUIRED COMPUTER SKILLS

Forecast tools will be accessed using computers in 711 WBB (assigned at the beginning of the semester) or personal laptops. These tools will be accessed using web pages or IDV bundles. For the latter, students will need a basic knowledge of IDV and must configure IDV as described <u>here</u>. IDV YouTube tutorials are available <u>here</u> and some basic instructions are available <u>here</u>. Learn it and love it! Motivated students can <u>download the IDV from Unidata</u>, install on their laptops or personal computers, and use many of the bundles used in class and available <u>here</u>.

YouTube Videos, Tutorials, etc.



# Work together, share information, and swap knowledge and everyone wins