

ATM-3020: Forecasting and Broadcasting Practicum
Fall 2009
Dr. Jay Shafer
Office: T, TH 10:00AM-12:00PM, ASAC 304

FORECASTING AND BROADCASTING PRACTICUM SYLLABUS

COURSE DESCRIPTION: This course involves preparing and communicating weather forecasts for the general public across the Northeast Kingdom of Vermont. Forecast information is presented via the weatherphone with a voice recording (626-6421), and it's published online. Modern weather forecasting tools and techniques are used to construct a unique and specific forecast to the Northeast Kingdom's complex terrain. The course is a first step towards becoming an independent and accountable meteorologist.

INTENDED LEARNING OUTCOMES:

- a) To develop your operational forecasting skills and increase your awareness of local and regional weather patterns.
- b) To improve your written and oral communication skills.
- c) To learn from your forecast mistakes through verification.

TIME: Approximately 3 hours a week per one credit

COURSE WEBPAGE (includes many useful references from effective writing to forecast information): <http://apollo.lsc.vsc.edu/cgi-bin/classes/met3020/met3020.cgi> , in addition all grades will be available on the blackboard page.

GRADING/EVALUATION:

50% Forecast Evaluations: Your forecasts will be formally evaluated by your peers and the instructor during two one-week periods: **Sep 21-27, and Nov 9-13**. The teacher's evaluation is weighted as 60% of this grade and the cumulative peer evaluation as the other 40%. Additional informal instructor evaluations may be conducted to provide occasional feedback, but these will not count towards your grade.

The evaluation is done using an online evaluation form (see course web page) and graded according to the total points:

40-37 pts: A 36-34 pts: A- 33-31 pts: B+ 30-28 pts: B 27-25 pts: B-
24-22 pts: C+ 21-19 pts: C 18-16 pts: C- 15-10 pts: D 9 pts or below: F

30% Forecast Portfolio: Please keep an organized portfolio (please use a 3-ring notebook) that includes the items below. The portfolio will be collected mid semester (**Oct 21**) and at the end of the semester (**Dec 15**) for grading.

- 1) Each hard-copy forecast as posted online: **(20%)**
- 2) Your forecast verification for each forecast (verification data is online): **(30%)**
- 3) Peer and teacher evaluations - these will be emailed to you. **(20%)**

- 4) Self evaluations: Please describe in detail what you learn about forecasting, the communication of weather, and reflect on your strengths and weaknesses. (30%)

20% Forecast Accuracy: This is based on your day 1 and day 2 performance statistics. An objective measurement of your performance versus class consensus is applied. You are required to track these statistics and present them in your forecast portfolio. I will monitor progress throughout the semester.

EVALUATION: FACULTY MEETINGS

You are **required** to meet with me if any National Weather Service Advisory, Watch, or Warning has been posted during your forecast period over the Northeast Kingdom. It is your responsibility to schedule this meeting. If we can't connect face-to-face, then email correspondence or a phone conversation will suffice. If possible, please contact me in advance to schedule. My availability (with a few exceptions) is as follows:

M, W: 1:30-3:30PM, **T:** after 3:00PM, **TH:** after 1:00PM., **F:** 11-12:00, 2:30-3:30PM.

ATTENDANCE: Students are expected to issue forecasts when scheduled. An unexcused absence (no forecast) on the day you're scheduled will result in a zero grade for that day, or for each unexcused missed forecast seven percentage points will be deducted from your final grade. You may switch times with another person, but please communicate this clearly to me. The only valid reasons (with appropriate written documentation) for an excused absence are as follows:

- a) Illness documented by a physician
- b) Participation in the college-sponsored activity
- c) Death of family member
- d) Jury duty
- e) Severely inclement weather

COMPUTER ETIQUETTE: Non-educational use of the met lab computers will not be tolerated. It is rude and detracts from the learning environment. Non-educational uses may include surfing the web, face booking, chatting with friends, or playing games.

CLASSROOM ENVIRONMENT: Nobody knows everything about the atmosphere. With this in mind, we encourage an open, non-threatening environment in which everyone is free to be curious and ask questions. When you have questions or don't understand something, please don't be shy, ask questions.

STUDENTS WITH DISABILITIES: Lyndon is committed to providing a broad spectrum of accommodations for students with documented disabilities. Within the resources of the college, we are prepared to provide accommodations that are appropriate to the disability and the course. Any and all disabilities must be documented; please take care of this documentation as soon as possible so that we can readily accommodate you.

OFFICE HOURS: Scheduled office (ASAC 304) hours are: Tuesday and Thursday 10:00AM-12:00PM. However, I'm always willing to help, but during non-office hours please send an e-mail: jason.shafer@lyndonstate.edu or call **x6225** to make sure I'm available.

FORECAST TRAINING INFORMATION

MISSION: Our primary mission is to give the public a general overview of the current and future weather conditions across the forecast area, and to inform them about potentially high-impact weather situations, such as: frozen precipitation (snow, sleet, freezing rain), severe weather, freezes/frosts, high winds, flooding, and other situations that might adversely affect people's lives. *Remember, you are representing Lyndon State College and the Atmospheric Sciences Department, so please carefully proofread your forecast. I don't like fielding public comments pointing out basic grammar/spelling mistakes.*

FORECAST AREA: The forecast area includes Vermont's Northeast Kingdom (NEK) (Caledonia, Essex, and Orleans counties). The NEK covers 2074 square miles (larger than Rhode Island), and includes 54 cities, towns, and villages. For more information explore: http://en.wikipedia.org/wiki/Caledonia_County%2C_Vermont and http://en.wikipedia.org/wiki/Northeast_Kingdom . The total population of the NEK (as of 2005) was approximately 64,000. The terrain plays an important role in local weather and is fairly complex with the highest elevation at Jay Peak at 3861' and lowest 450' (Barnet). More detailed information is given within a PowerPoint presentation on the course webpage.

AUDIENCE: The general public is our main audience. Vermonters' character is strongly influenced by its weather and climate, from the harsh winters to the ever-changing conditions in the fall and spring, to violent summertime thunderstorms. In short, Vermont's climate and weather helps shape the soul of what it means to be a Vermonter...as a result Vermonters are very tuned in and sensitive to the weather. This is good because it makes your job important and meaningful to them. This also means you need to be on the top of your game every time.

FORECASTING PROCEDURE: Please evaluate the entire forecast area when making your forecast. Your forecasts should reflect the general low-elevation weather over the entire NEK (most people live from 500'-1500' elevation). *Please do not only forecast for LSC, you are forecasting over the entire NEK.* See below for specifics.

TEMPERATURE FORECASTING: Please include a range (less than 8 degrees Fahrenheit) of values for high and low temperatures. Any local extremes that deviate from this range should be explicitly stated. Also, if there is a decent risk of a frost and/or freeze (especially early or late in the season), this should be noted. If the temperature is going to feel particularly warmer or colder (e.g. brisk winds, clouds, sun), please also mention this.

PRECIPITATION FORECASTING: If rain will occur, please include a range of amounts (in tenths, quarter, or half-inch intervals) to account for regional variations. Also identify the dominant precipitation type and any regional/topographic variations; this can get tricky in the winter. You should be clear if the precipitation is widespread or if it will be more showery and localized. For example, if 30% of the forecast area is going to see rain, then consider saying scattered rain showers. While if only 10% of the forecast area is going to see rain, then consider saying isolated showers.

For snowfall amounts, please include a range of values. Also try to mention how dense the snow will be. Note any extremes and implications this may have towards flooding, traveling, etc. Only include precipitation amounts during the first 48 hrs. Also include storm total precipitation or snow amounts.

CLOUD FORECASTING: You should have a mental picture as to what the sky is going to look like...please include the average sky conditions (cloudy, mostly cloudy, mostly sunny, sunny) and if you're ambitious level and/or thickness. On days when it's going to be less than ~40% cloud cover, instead of saying partly cloudy, consider saying mostly sunny. In general, it's a good idea to forecast more of what the sky condition will be rather than what it is not. You may also want to include visibility, especially if conditions are going to be hazy or foggy. For example, it is fairly common to have valley fog on certain mornings.

WIND FORECASTING: Include a range (use increments divisible by 5 mph) of wind speed and direction through the next 48 hrs. Also note any extremes and their location (e.g., ridges above 1500' may see wind gusts over 40 mph). You should try to relate high-wind events to their potential impacts (e.g., power outages, wind chill, downed trees).

ALL NATIONAL WEATHER SERVICE ADVISORIES, WATCHES AND WARNINGS must be included if any exist (check the Burlington NWS homepage <http://www.erh.noaa.gov/er/btv/>). Although you may not always agree with their judgment, they are the professionals. You must consult me if any advisories, watches or warnings exist to talk about the potential impacts and how they should be communicated effectively to the public.

DEADLINES: AM forecasts are due by 11:30 AM, and PM forecasts are due by 5:30 PM. If necessary, however, forecasts should be updated using appropriate data. **IT IS CRUCIAL TO UPDATE YOUR FORECAST DURING MAJOR STORMS OR UNSUAL WEATHER, SO PLEASE BE AWARE AS TO HOW THE WEATHER EVOLVES AFTER YOU SUBMIT A FORECAST.**

ENTRY FORM: <http://apollo.lsc.vsc.edu/intranet/forecast.html>

REMOTE ENTRY: If you enter the forecast from your residence hall or from off campus, you will be prompted to enter a login and password. Your login is your met login (i.e., shafertj) and your password is your 7-digit college ID as given on the lower left of your id card. If it is only 6 digits, just add a zero in front of it.

Please spell check your forecast text using a word processor and then cut and paste the text into the web form. The form is relatively self explanatory, but be sure to select all the right days/times.

WEATHERPHONE RECORDING PROCEDURE: See course webpage.

FORECAST DISCUSSION HELP: See the course webpage under writing help.

FORECAST PERIODS: As per the forecast entry form, you are given five periods to forecast. You are encouraged to break up these periods as you feel necessary. For example, if you want to add more detail early in the forecast, you may want to include a forecast for tonight, tomorrow morning and tomorrow afternoon, especially if a major weather event is occurring. This means you'll issue anywhere from a 2 to 5 day forecast. *It's imperative to get the forecast right during times when you think it will have the largest societal impact (i.e., during daylight hours, commute) or when major weather systems are moving through.*

COMMUNICATION TIPS: It's not necessarily what you know, it's how you say it...you'll find that to be a great forecaster, effective communication is just as important as knowing the weather. If you can't effectively communicate your forecast, you probably don't fully understand it. Here are a few general communication tips. ***Remember, you are representing Lyndon State, once you publish your forecast the whole world can see it. Be proud that you are providing an important public service. Please proofread your forecast carefully.***

1. Make a story out of the forecast. After going through the analysis and forecast process, you should have an idea of how to craft the forecast into something interesting that flows.
2. Be clear and concise – nothing bothers me more than saying partly cloudy with a 50% chance of rain – this does not provide any useful information! You might as well flip a coin.
3. Be confident and honest – exude confidence (avoid phrases like, “maybe a chance...”), but be honest when significant forecast uncertainty exists. If you have problems judging your confidence, please see me, I will be happy to help.
4. Don't forget about your audience (imagine talking to your grandmother) - do not use technical jargon. Keep it simple, and use plain language.
5. Don't get lost in the details of the forecast...allow the cream to rise to the top with what your main message is or what's the theme of your story.

COURSE RESPONSIBILITIES:

1. Submit text forecast online
2. Print (user the “printer version link on the bottom” and post hard copies on appropriate bulletin boards
3. Record voice forecast for the weatherphone
4. Print a copy of your forecast for your portfolio
5. Verify your forecast and add this to your portfolio
6. If necessary, evaluate peer forecasts (**Sep 21-27, and Nov 9-13**)

This syllabus is subject to change with reasonable notice.