<u>**Suffolk County Community College**</u>
<u>**Department of Physical Sciences**</u>

<u>**Course Title:**</u> **Introduction to Weather (MET 101)**

<u>**Instructor:**</u> **Michael Flanagan**

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<u>**Classroom:**</u> **T211 (Smithtown Science Building)**

<u>**Class Times:**</u>  **Monday 6:00 PM – 8:00 PM**
                        **Wednesday 6:00 PM – 9:00 PM**

<u>**Course Website:**</u> **http://michaelrflanagan.tripod.com/**

<u>**Materials for class:**</u>
- *Understanding Weather & Climate Seventh Edition*, **by Edward Aguado and James E. Burt [Required].**
- **Investigations in Atmospheric Science, by Mandia & Smiley [Required]**
- <u>**Basic**</u> **pocket calculator, Colored Pencils, Five 'Scantron Sheets' [Required]**
- **Highlighters [Optional]**

<u>**Course Description:**</u>
**Introduction to elements and energies that are basic processes described as weather. Basic principles such as temperature, pressure, density, humidity and air movement are studied to provide basis for understanding long- and short-range forecasting, including severe weather phenomena such as hurricanes, tornadoes and storms.**

<u>**Learning Outcomes:**</u>
**The learning outcomes listed here should be considered the minimum core outcomes for the course. Many other learning outcomes may also be a part of the learning experience within the course. Upon completion of this course, students will be able to:**
- **Navigate the Internet World-Wide Web (WWW) for research purposes and laboratory assignments.**
- **Find locations using latitude and longitude coordinates.**
- **Determine and analyze atmospheric temperature, pressure, density, and wind.**
- **Describe various cloud and fog types and their formation and the associated precipitation types.**
- **Analyze data on a weather map, including location of air masses and weather fronts.**
- **Describe the dynamics of thunderstorms, tornadoes, and hurricanes, and demonstrate the ability to forecast these phenomena.**
- **Given real-time data, provide a three-day forecast for any city in the U.S.**

<u>**Determination of Grades:**</u>   **Three Tests (40% of final grade)**
                                **Nine Quizzes (20% of final grade)**
                                **Group Forecasts (10% of final grade)**
                                **One Lab Practical (20% of final grade)**
                                **One Final Exam (10% of final grade)**

- **The lowest test score [excluding the lab practical and final exam], and quiz score will be dropped.**
- **Tests, the lab practical and the final exam will consist of multiple choice questions.**

<u>**Course Policies:**</u>
- **Attendance will be taken for every class.**
- **All exams, quizzes, and tests are 'closed book/closed notes'.**
- **It is important to note, that to succeed in this class, it is recommended that you keep all materials, notes, hand-outs, etc. very well organized.**
- **There are <u>no</u> extra credit projects/assignments.**
- **There is a two-in-one plastic ruler/protractor that comes with 'Investigations in Atmospheric Science', by Mandia & Smiley. The lab manual & ruler/protractor must be brought to *every* class.**
- **The 'course website' will have announcements updated on a regular basis. Therefore it will be a good idea to check the website at least once a day, including Saturday & Sunday.**
- **The lecture notes will be posted on the course website prior to it being used in class. Therefore, it is your responsibility to print out the notes *and* bring it to class as I will not wait to have students copy down the notes.**
- **The lecture notes are an <u>outline</u> and any material covered in lecture is germane to the tests.**
- **All cell phones, pagers, etc. must be turned off prior to every class.**
- **An absence will only be excused in the case of a <u>*documented*</u> [i.e., Doctor's note, note from work, etc.] emergency.**
     - **There will be no make up quizzes or tests for an unexcused absence.**
- **There is no grade curve.**
- **If your behavior is disruptive, you may be excused from class.**
- **If you are late to class more than two times, you may be asked to withdraw from the course.**
- **If your name appears on the final grade roster, you will receive a final grade.**
- **If you miss a class, ask me for any materials missed.**
- **Cheating will result in a final grade of an 'F'.**
- **It is my recommendation that you buy the 'Investigations in Atmospheric Science' packet from the bookstore as soon as possible because previously I have observed that these work packets sell out quickly.**
- **No withdrawals will be granted <u>after</u> March 25th.**
- **Keep your returned tests and quizzes and check them to make sure there are no discrepancies. Keep track of your overall grade throughout the semester;**

do not complain about your grade at the end of the semester because you do not like it.

- You will need to purchase five 'scantron sheets' from the campus bookstore.
- All answers <u>must</u> have correct units; otherwise point(s) will be taken off.
- You must <u>*show*</u> <u>*all*</u> <u>*work*</u> (i.e., show all steps) with regard to any mathematical problems. If you do not show all work, you will lose point(s).
- Some of the class notes on the course website have color diagrams in them; therefore it may be helpful, but <u>not</u> mandatory to use a color printer for those notes.
- I am only allowed to discuss grades in person, not via e-mail.

## <u>Tests:</u>

- Test one will cover Chapter one through four. [Bring two <u>sharpened</u> #2 pencils]
- Test two will cover Chapter five through seven. [Bring two <u>sharpened</u> #2 pencils]
- Test three will cover Chapter eight through ten. [Bring two <u>sharpened</u> #2 pencils]
- Final exam will cover Chapter eleven, twelve, satellite tutorial, radar tutorial and questions covering concepts learned earlier in the semester. [Bring two <u>sharpened</u> #2 pencils]

## <u>Quizzes:</u>

- Quiz one will cover U.S. States, and Greenwich Mean Time.
- Quiz two will cover I.A.S. #15. [Bring a calculator, two-in-one ruler/protractor and two <u>sharpened</u> pencils]
- Quiz three will cover I.A.S. #5. [Bring two <u>sharpened</u> pencils]
- Quiz four will cover I.A.S. #3. [Bring two <u>sharpened</u> pencils]
- Quiz five will cover I.A.S. #4. [Bring two <u>sharpened</u> pencils]
- Quiz six will cover I.A.S. #9.
- Quiz seven will cover I.A.S. #10. [Bring two <u>sharpened</u> pencils]
- Quiz eight will cover I.A.S. #11. [Bring two <u>sharpened</u> pencils]
- Quiz nine will cover I.A.S. #7. [Bring a calculator]

**Grading Scale:**
**The following grading scale will be used for this class, including your final class grade:**

| Letter Grade | Numerical Grade |
|:---:|:---:|
| A | 90.0 and above |
| B+ | 85.0 to 89.9 |
| B | 80.0 to 84.9 |
| C+ | 75.0 to 79.9 |
| C | 70.0 to 74.9 |
| D+ | 65.0 to 69.9 |
| D | 60.0 to 64.9 |
| F | 0.0 to 59.9 |

**How to properly show all work for mathematical questions throughout the semester:**
**Throughout the semester, on quizzes, you will be asked to <u>show</u> <u>all</u> <u>work</u> on mathematical questions. Failure to do so will result in points being taken off. The following shows how to properly answer a sample question while showing all work.**

- **Question: Convert 20ºC to its equivalent in degrees Fahrenheit. <u>Show</u> <u>all</u> <u>work</u>.**
- **Write down the proper equation:**
  - $F = (1.8)(C) + 32º$
- **Fill in the remaining variables and solve for 'F':**
  - $F = (1.8)(20º) + 32º$
  - $F = 36º + 32º$
  - $F = 68º$
- **'Box-in' or 'circle' your final answer.**
  - **68ºF**