# **CITY COLLEGE OF NEW YORK - CUNY**

**EARTH AND ATMOSPHERIC SCIENCE DEPARTMENT**

**THE ATMOSPHERE**

**EAS 101 (Fall 2016)**

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**Instructor:** Prof. Sami Segni

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**Text Book:** TheAtmosphere (12th edition) by Lutgens & Tarbuck

**Class Schedule:** Mondays, Wednesdays (8 am – 9:15 am)

**Room:** MR 044

**Course description:**

EAS 101 gives students an introduction to the science of meteorology with an emphasis on the physical processes working within weather systems on a global and local scale. Major topics include wind, pressure, precipitation, atmospheric stability, radiation processes, cyclonic activity, severe weather, weather analysis and very basic weather forecasting techniques.

The course applies reading and writing skills to interpret and communicate information including equation and graph interpretation. The course uses qualitative and quantitative reasoning and mathematics to analyze, interpret, and evaluate information in order to solve complex earth science and environmental problems experienced in today’s world. Atmospheric and Environmental issues in the United States and abroad are discussed and investigated to give you a greater appreciation of the world that we live in.

**Learning outcomes:**

Student who complete this course will be able to:

* Explain the composition and the structure of the atmosphere.
* Understand the Earth-Sun relationships and their impact on the energy budgets on Earth’s system.
* Interpret weather charts and maps.
* Discuss and evaluate weather-related information in oral and written forms.

**General Education Information:**

As part of the College’s General Education Curriculum, this course is designed to enhance your understanding of artistic issues and how they are studied. Students successfully completing this course will develop the following proficiencies:

**Oral and written communication skills** - Students will produce well-reasoned written or oral arguments using evidence to support conclusions.

**Critical thinking skills** - Students will evaluate evidence and arguments critically or analytically.

**Information literacy -** Students will gather, interpret, and assess information from a variety of sources and points of view.

**Scientific World proficiency** – Students will identify and apply the fundamental concepts and methods of a discipline or interdisciplinary field exploring the scientific world.

**Attendance:**

You must be in class at 8 am. I will start lecturing at that time. Lateness is not acceptable unless you have a reasonable proof (e.g. Doctors Note). If you are planning to miss a session, make sure you inform me **by e-mail,** 48 hours prior to your absence.

**Participation:**

You are encouraged to ask questions if you need clarification regarding the covered material. I will not have an office, but you can either email me (you can expect a response to your email in 24 to 48 hours) or meet with me in class after the lecture time.

**Exams:**

You must attend exam 1 and the final exam.

**Homework Assignments:**

There will be a total of three assignments this semester. All labs must be turned in one week after they are assigned, at **8 am**.If a student does not submit the homework assignment by the due date, he/she will receive a grade of zero.

**Video:**

There will be three documentaries to watch. As you are watching the documentary you will have to complete a quiz comprised of short answer/multiple choice questions. The quiz must be completed during the video showing. Therefore, you must be on time to be able to answer the questions. While watching the documentary, you are not allowed to talk or to ask questions. Students, who cause any disturbance, will be removed from that session. **BE ON TIME!!!**

**Grading System**

Attendance and Part 5%

Lecture Exam 1 30%

Assignments 15%

Video – Assignment 20%

Lecture Final Exam 30%

**Lecture Syllabus**

|  |  |  |  |
| --- | --- | --- | --- |
| **Day** | **Date** | **Lecture Topic** | **Reading Assignment** |
| 1 | 08/29 | **Course Introduction/** Introduction to the Atmosphere | Syllabus/Chp 1 |
| 2 | 08/31 | Introduction to the Atmosphere | Chp 1 |
| 3 | 09/07 | Heating Earth’s Surface & Atmosphere | Chp 2 |
| 4 | 09/12 | Heating Earth’s Surface & Atmosphere | Chp 2 |
| 5 | 09/14 | Temperature Data and the Controls of Temperature | Chp 3 |
| **6** | **09/19** | **Assignment 1** | **Handout** |
| 7 | 09/21 | Moisture & Cloud formation | Chp 4 |
| 8 | 09/26 | Forms of Condensation & Precipitation | Chp 5 |
| 9 | 09/28 | Forms of Condensation & Precipitation | Chp 5 |
| 10 | 10/05 | Air Pressure & Winds | Chp 6 |
| **11** | **10/06\*** | ***VIDEO 1*** |  |
| 12 | 10/17 | Atmospheric Circulation | Chp 7 |
| **13** | **10/19** | **Assignment 2** | **Handout** |
| 14 | 10/24 | *Exam Review* |  |
| **15** | **10/26** | **EXAM 1** |  |
| 16 | 10/31 | Air Masses | Chp 8 |
| 17 | 11/02 | Air Masses | Chp 8 |
| 18 | 11/07 | Weather Patterns | Chp 9 |
| **19** | **11/09** | **Assignment 3** | **Handout** |
| 20 | 11/14 | Weather Patterns |  |
| 21 | 11/16 | Thunderstorms & Tornadoes | Chp 10 |
| 22 | 11/21 | Thunderstorms & Tornadoes | Chp 10 |
| **23** | **11/23** | ***VIDEO 2*** |  |
| 24 | 11/28 | Hurricanes | Chp 11 |
| 25 | 11/30 | Hurricanes | Chp 11 |
| 26 | 12/05 | Weather Forecasting | Chp 12 |
| **27** | **12/07** | ***VIDEO 3*** |  |
| 28 | 12/12 | *Final Exam Review* |  |
|  | TBD | **FINAL EXAM** |  |

**10/06\*: classes follow a Monday schedule**

**\*\*\* The instructor reserves the right to modify this syllabus during the semester.**

**CLASSROOM POLICIES**

1. **Attendance:**

**Lateness:** Late arrivals are disruptive especially in big classes. Please do not come to class late. If you are late more than five minutes you are considered absent for that particular day.

1. **Adherence to classroom policy and protocols:**

Learning environment directly affects the quality of the lecture and the students. Therefore;

**Private chats** are not allowed during class-session they are disruptive to you classmates.

**Sleeping** is prohibited during the class-session. If you are tired in any particular

day, please use a free absences to rest.

**Cellphones/texting:** Calls or texting during class are disruptive, they interfere with your ability to absorb and discuss the material and disturb other students. Please turn off your cellphones completely during class. If you must take a phone call during class, you must leave the room, and may not return to the class session. If you absolutely need to have your phone on during class, you must talk to the instructor at the beginning of the session/semester.

**Please note: the use of all electronic devices is prohibited during class session**

\*\*\*In the case of repeated violations, the student will be notified, verbally (after class) or via e-mail, and will be asked to adhere to the class policy. Beyond two warnings, the student **will lose a percentage of the 20% of the Final Exam grade**.

1. **Participation:** Ask questions when something is not clear, it is almost certain that someone else in the class has the same question(s). If you think I have made an error, call me on it. Call each other on it. Some of the most important clarifications and productive discussions emerge from mistakes or potential errors.

**WHAT YOU CAN EXPECT FROM YOUR PROFESSOR:**

In return for your hard work and cooperation during the semester, I will be fully prepared for class. I will do my part to make sure class time is valuable to the students who attend. I will abide by the grading scale, course policies, exam dates, etc. listed in this syllabus and will not change these things in the middle of the semester. I will answer e-mail questions from students thoroughly. I will listen to in-class questions from students carefully and will answer them thoroughly. If I do not know the answer, I will find it out and report back. I will grade student assignments fairly and as promptly as possible. I will be available during my scheduled office hours. If I must change office hours on a particular day, I will notify students in advance. I will be civil and professional in my dealings with students.

Most importantly: I want you to do well in this course!! At the end of the semester, I would like for you to take away not only a general understanding of how science works, but also responsible and successful study habits to help you throughout your college career. To do that, I need you to let me know when there are concepts you don’t understand and/or when you need extra help. Finally, I am very open to suggestions and questions regarding this course. Remember: I am here to help you learn!

\*\*\*\*\*GOOD LUCK\*\*\*\*\*

**Professor Sami Segni**