

Division of Natural Science

<http://natsci.info.yorku.ca/>

Course Outline

NATS1515 M, Atmospheric Pollution

Winter 2019

Monday and Wednesday, 4:30 – 6:00 pm, Vari Hall (VH) C

Course Instructor and Contact Information

**Dr. Stephanie Pugliese Domenikos**

Assistant Professor, Teaching Stream, Department of Science and Technology Studies

Chemistry Building Room 352

Phone: 416-736-2100 ext. 22912 (no voicemail – leave message by email)

**Course email:** [nats1515@yorku.ca](mailto:nats1515@yorku.ca) (use your @mymail.yorku.ca account)

**Course website:** <https://moodle.yorku.ca>

**Office hours:** Drop-in office hours January-May (no appointment necessary) or set up by email

**Email Policies and Etiquette:**

- Use only your @mymail.yorku.ca account (email with other accounts may be filtered)
- Allow 24-48 hours for a response
- Use for general course questions or personal issues (ex. Illness, missing of a midterm, setting up an appointment, etc.)
- Provide a descriptive subject header (ex. “Missing midterm due to illness”)
- Be polite and professional
- Write in clear sentences without using slang, text lingo or vulgar terms
- Sign off with first and last name

Expanded Course Description

The course commences with the evolution of the Earth's atmosphere from its creation and moves to its development to the present throughout several stages. The cyclical climate change of Earth has been due to changes in orbital obliquity, eccentricity and precession (related to the change of Earth's rotation axis, distance from the sun and rotation rate respectively). The course proceeds to examine the history of atmospheric pollution from natural causes such as volcanoes, natural fires, desert dust, etc., to pollution caused by humans prior to the industrial revolution arising from the burning of wood and the clearing of land. Subsequently, modern day pollution due to the burning of fossil fuels and production of other anthropogenic harmful chemicals will be

discussed. Different forms of pollution such as manifested as smog and acid rain are discussed and past successes in dealing with these types of pollution are recounted. The course concludes with topics on new policies and technologies that can be considered to ameliorate the deleterious effects of atmospheric pollution, such as the usage of green energy (solar, wind, fuel cell, geo-thermal, biomass, etc.).

### Course Learning Outcomes

Upon successful completion of this course students should be able to:

- Understand the evolution of the Earth's atmosphere
- Describe the pollutants and chemistry that creates urban pollution and evaluate air pollution in the Greater Toronto Area
- Understand the impacts air pollution has on an environment and on human health
- Evaluate the mechanisms responsible for global stratospheric ozone loss
- Understand the greenhouse effect and climate change
- Discuss newly developed energy solutions used to alleviate air pollution and impacts of climate change

### Evaluation

Assessment	Weight	Due date
<b>iClicker Cloud in-class participation</b>	6 %	Every class
<b>Assignment 1 – Ground-level Ozone in GTA</b>	10 %	Wednesday January 30, 2019
<b>Assignment 2 – Understanding the ozone layer</b>	10 %	Monday March 18, 2019
<b>Assignment 3 – Write a letter to a climate skeptic</b>	10 %	Wednesday April 3, 2019
<b>Midterm 1</b>	17 %	February 6, 2019
<b>Midterm 2</b>	17 %	March 13, 2019
<b>Final Exam</b>	30 %	April exam period (Apr. 5-20)

**Statement on grades and extra credit assignments:**

In order to be fair and consistent to the entire class, individual grades are not negotiable and “extra credit” assignments are not provided at any point during or after the course. Please contact the instructor about a grade **only** if there is a clear error (calculation, clerical, etc.) within two weeks of the grade being made available to you.

## Course Materials

**Required Book:** There is no required textbook for this course. Recommended readings will be suggested throughout the lectures.

### **Required iClicker Reef:**

- Use your laptop or smartphone for this activity – let Dr. Pugliese Domenikos know if you don't own either technology
- Download the app – see instructions here: <http://its.info.yorku.ca/polling-student/>

## Laboratory/Tutorial

This course does not have a laboratory or tutorial component

## Course Content and Format

This course spans over a single semester, with two 1.5-hour lectures per week. Lectures will be interactive. Over the entire course, there will be 2 midterms, 3 assignments and a final exam.

Midterms and final exam will be a combination of multiple choice, problem solving and short answer.

## Math Content

Basic concepts as covered in Ontario Grade 10 Math

## Course Policies

### **Questions and Concerns**

Questions and concerns should be directed to the Dr. Stephanie Pugliese Domenikos either during class time or during office hours. You can also email questions to the course mailbox [nats1515@yorku.ca](mailto:nats1515@yorku.ca), where they will be responded to in 24-48 hours.

### **Conduct during Assessments**

In-class midterms: Midterms will start promptly at 4:30 pm. During in-class midterms, all notes, aids and electronic devices must be placed under your chair, and all electronic devices must be turned off.

In-class activities: Activities, such as case studies, will occur occasionally during class time. During this time, students are allowed to work in groups and access their notes or any other resources. Discussion is encouraged and students are welcome to ask for help.

### **Conduct during Lecture**

During lecture students may use smartphones or laptops for iClicker participation and note taking. However, use of electronics for any personal purposes will not be tolerated. Volume for all devices must be disabled.

### **Policy for a Missed Midterms/Quizzes/Final Exam**

**Midterm:** If a midterm is missed, you must email an Attending Physician's Statement (<http://registrar.yorku.ca/pdf/attending-physicians-statement.pdf>) to the course email (nats1515@yorku.ca) within 48 hours of the missed midterm. If exemption is granted for the missed midterm, the missed component will be added to the final exam. There are no make-up midterms.

**Final Exam:** There will be one deferred exam scheduled at the same time for all students who miss the final exam.

### **Late Submissions and Late Penalties**

Late assignments should be submitted directly to the Moodle site. A penalty of 10 % per day (including weekends) will be enforced, up to a period of 10 days where the assignment will then receive a grade of zero.

### **Reappraisal Requests**

If you require a reappraisal of work that has been submitted and marked, an email must be sent to the course email (nats1515@yorku.ca) to set up an appointment with the course instructor. Valid reasoning must be provided to request a reappraisal.

## **Copyright and Intellectual Property**

In order to protect copyright and intellectual property, you may not:

- Upload any course content\* to any website
- Record lectures for non-personal use
- Photograph class activities

\*Course content includes any activities, documents or files connected to this course, including lecture slides, recordings, images, tests, quiz questions, in class participation exercises, and assignments.

## **University Policies**

### **Important Sessional Dates – Winter 2019 Term**

Winter classes start: January 3, 2018

Winter Reading Week (no classes, University open): Feb. 16-22, 2019

Winter classes end: April 3, 2019

Last date to submit Winter term work: April 3, 2019

Winter study day (no classes, University open): April 4, 2019

Winter examinations: April 5-20, 2019

### **Academic Honesty and Integrity**

Academic honesty requires that persons do not falsely claim credit for the ideas, writing or other intellectual property of others, either by presenting such works as their own or through impersonation. Similarly, academic honesty requires that persons do not cheat (attempt to gain an improper advantage in an academic evaluation), nor attempt or actually alter, suppress, falsify or fabricate any research data or results, official academic record, application or document. Finally, academic honesty requires that persons do not aid or abet others to commit an offence of academic dishonesty, including intentional

acts to disrupt academic activities.

Suspected breaches of academic honesty will be investigated and charges shall be laid if reasonable and probable grounds exist.

#### Academic Honesty and electronic devices during assessments (e.g. exams)

- Internet capable and personal storage devices of all kinds must be turned off, including vibrate. These and any other unauthorized material must be placed under the student's chair and should not be accessed at any point during the exam. Failure to comply with directive may be considered a break of academic honesty.
- See <http://registrar.yorku.ca/exams/tipsheet>

Please familiarize yourself with the full Senate Policy on Academic Honesty, found at <http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>

Please also familiarize yourself with the SPARK Academic Honesty tutorial found at <https://spark.library.yorku.ca/academic-integrity-what-is-academic-integrity/>

#### **Academic Accommodation for Students with Disabilities**

York University shall make reasonable and appropriate accommodations and adaptations in order to promote the ability of students with disabilities to fulfill the academic requirements of their programs.

The nature and extent of accommodations shall be consistent with and supportive of the integrity of the curriculum and of the academic standards of programs or courses.

Please familiarize yourself with the full Senate Policy on Academic Accommodations for Students with Disabilities, found at <http://secretariat-policies.info.yorku.ca/policies/academic-accommodation-for-students-with-disabilities-policy/>

**Note: Students should submit accommodation letters from Counseling and Disability Services (CDS) to the course instructor within the first two weeks of the course or as soon as issued.**

Counseling and Disability Services - <http://cds.info.yorku.ca/>

York Accessibility Hub - <http://accessibilityhub.info.yorku.ca/>

**Note: A student registered with CDS, and choosing to write with Alternate Exams, is responsible for making the appropriate writing arrangements within the timeframes outlined by Alternate Exams.**

Alternate Exams - <http://altexams.students.yorku.ca/>

#### **Religious Observance Accommodation**

York University is committed to respecting the religious beliefs and practices of all members of the community, and making accommodations for observances of special significance to adherents.

<https://w2prod.sis.yorku.ca/Apps/WebObjects/cdm.woa/15/wo/kmHGekTpzKLX6XYKBXYc8M/0.3.4.62.0>

**Note: Students who will have an academic conflict as a result of a religious observance, at any point in the term, should make the instructor aware of such at least three weeks prior to the conflict.**

For conflicts occurring during an official examination period, please complete the Examination Accommodation Form available at [http://www.registrar.yorku.ca/pdf/exam\\_accommodation.pdf](http://www.registrar.yorku.ca/pdf/exam_accommodation.pdf) and submit to your instructor at least three weeks prior to the final exam.

#### **Student Conduct in Academic Situations**

Students and instructors are expected to maintain a professional relationship characterized by courtesy and mutual respect and to refrain from actions disruptive to such a relationship. Moreover, it is the

responsibility of the instructor to maintain an appropriate academic atmosphere in the classroom and the responsibility of the student to cooperate in that endeavour. Further, the instructor is the best person to decide, in the first instance, whether such an atmosphere is present in the class. A statement of the policy and procedures regarding disruptive and/or harassing behaviour by students in academic situations is available on the website of the University Secretariat (<http://secretariat.info.yorku.ca/>).

## Division of Natural Science Resources

### **NATS-AID**

Free peer tutoring for students enrolled in Natural Science Courses.

See <http://natsci.info.yorku.ca/nats-aid/>

### **M-AID in NATS (Math Aid)**

Free math help for students enrolled in Natural Science Courses (TA tutors)

See <http://natsci.info.yorku.ca/m-aid-in-nats/>

## Other Resources

### **Learning Commons**

The Learning Commons brings together key supports for your learning: writing, research, learning skills and career services. <http://www.library.yorku.ca/cms/learning-commons/>

### **goSAFE**

goSAFE is a complimentary service provided to the York Community. At the Keele campus, goSAFE has two routes: North Route & South Route which will safely transport community members by vehicle from one specified hub to another on campus. goSAFE operates seven days a week, all year round, including University closures (with the exception at Glendon during the Christmas holiday closure).

Call the goSAFE office at 416-736-5454 or extension 55454 during hours of operation. Please give your name, location and destination. <http://www.yorku.ca/goSAFE/>

### **Mental Health and Wellness at York University**

Outlines a variety of resources available to support mental health and wellness

<http://mhw.info.yorku.ca/resources/resources-at-york/students/>

### **Good2Talk**

Post-Secondary Student 24 hour Helpline

<http://www.good2talk.ca/> 1-866-925-5454