

## **COURSE NAME; NUMBER; SEMESTER; MEETING DAYS, TIMES, AND PLACE.**

Applications in Industrial Meteorology

11:670:381 Fall 2021 One credit

Wednesdays 7:00-8:20 PM (First 10 Weeks)

ENR 223

## **CONTACT INFORMATION:**

Instructor(s): David Margolin

Office Location: ENR 334

Email: wxprediction@gmail.com

Office Hours: T 10:30 AM - 12:30 PM

## **COURSE WEBSITE, RESOURCES AND MATERIALS:**

- Students will need to access the course Canvas site for provided materials and additional resources.

## **COURSE DESCRIPTION:**

The applied research and project management skill sets used in industrial meteorology. Weather and climate effects on financial markets. Small applied research exercises that simulate authentic industry experiences. Critical appraisals of the methods used to apply weather and climate information in industry. Guest speakers from relevant weather-impacted industries and the Rutgers Business School are typically included. Course may be repeated for additional credit.

## **LEARNING GOALS:**

Students will:

- 1) Apply critical and analytical thinking to solve relevant scientific problems in both individual and collaborative settings. (Program Goal 3)
- 2) Gain practical knowledge as to how weather impacts industry through discussions with experts and examples from the field.
- 3) Increase their prospects for future employment and employment security by gaining greater skill sets and knowledge of industry and the markets.

## **ASSIGNMENTS/RESPONSIBILITIES, GRADING & ASSESSMENT:**

This is a pass/fail course. Coursework will rely heavily on in-class instruction and exercises. A passing grade (70% or higher) is assigned based on attendance and effort, not performance, as follows:

Attendance 50%

Participation 30%

Effort 20%

Exceeding two absences will automatically result in a failing grade.

## **ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES**

Please follow the procedures outlined at <https://ods.rutgers.edu/students/registration-form>. Full policies and procedures are at <https://ods.rutgers.edu/>

## **ABSENCE POLICY**

Students are expected to attend all classes; if you expect to miss one or two classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence. An email is automatically sent to me.

## COURSE SCHEDULE:

(Topics/speakers will vary from semester to semester)

Week 1	<p>Course Introduction; Bridging the Gap (Careers in Meteorology)</p> <ul style="list-style-type: none"> <li>• Introduction to the Subseasonal Forecast Contest and other programs that are available to promote collaboration between students and the private sector</li> </ul>
Week 2	<p>The Practice of Research in Industry Settings (It's not always an exact science!)</p> <ul style="list-style-type: none"> <li>• 30-minute demonstration of a weather-related problem that typifies challenges/obstacles faced by industry</li> <li>• 30-minute exercise (small groups) to identify possible solutions to the problem</li> </ul>
Week 3	<p>Guest Speaker: Robert Haas (Maxar) - Weather Research and Its Application in the Energy Industry</p> <p>(Weekly) Forecast and Communications Exercise</p>
Week 4	<p>Exercise: Meteorological Research for the Energy Sector</p> <ul style="list-style-type: none"> <li>• Use what was learned last week, and guidance provided by Maxar, to examine techniques that may help support Maxar's Forecast Operations</li> <li>• Share techniques with and solicit feedback from Maxar</li> </ul>
Week 5	<p>Guest Speaker: Stephen Bennett (Riskpulse) - A Glimpse into the Future of the Job Market for the Next Generation of Atmospheric Scientists</p> <ul style="list-style-type: none"> <li>• The challenges, the obstacles, and the opportunities</li> </ul> <p>(Weekly) Forecast and Communications Exercise</p>
Week 6	<p>Guest Speakers: Recent Graduates Jenny Kafka and Larry Gloeckler (Riskpulse) – The Life of an Applied Meteorologist Working Remotely at a Small Company</p> <p>(Weekly) Forecast and Communications Exercise</p>
Week 7	<p>Guest Speaker: Mark Russo (Riskpulse) - Meteorological Research for Supply Chain and the Ag Industry</p> <p>(Weekly) Forecast and Communications Exercise</p>
Week 8	<p>Guest Speaker: Kevin Lyons, Rutgers Business School, Supply Chain Management</p>
Week 9	<p>Panel Discussion: Nick Schiraldi (UAlbany) and Lynne Trabachino (Rutgers EOAS): Improving Medium-range Weather Forecasts Using Model Diagnostics</p> <p>(Weekly) Forecast and Communications Exercise</p>
Week 10	<p>Importance of Climate Change to Industries Reliant on Agricultural Commodities (with Chris Alston)</p>

## FINAL EXAM/PAPER DATE AND TIME

This course does not have a final exam.

## ACADEMIC INTEGRITY

The university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy>. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.

- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
- all student work is fairly evaluated and no student has an inappropriate advantage over others.
- the academic and ethical development of all students is fostered.
- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

## STUDENT WELLNESS SERVICES

Just In Case Web App <http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

### Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901 / [www.rhscaps.rutgers.edu/](http://www.rhscaps.rutgers.edu/)

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

### Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / [www.vpva.rutgers.edu/](http://www.vpva.rutgers.edu/)

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

### Disability Services

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the

accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Scarlet Listeners

(732) 247-5555 / <https://rutgers.campuslabs.com/engage/organization/scarletlisteners>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.