

PRINCIPLES OF AIR POLLUTION (11:375:421)

10:55 -12:15 PM Tuesday, Friday

Hickman Hall, Rm 211

89 George St, New Brunswick, NJ 08901, [Map](#)

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Course Materials: 1. Air Quality 4th Ed. Thad Godish ISBN: 156670586X

2. Supplemental Handouts

3. Course Website: use <https://sakai.rutgers.edu/>

Log-in with your own NetID and password

List of topics

(sequence of topics may vary depending on the availability of guest lecturers)

Lecture	Topic
1	Introduction, pollution definition, structure of atmosphere Air pressure and density, Boyle's law, Charles's law, ideal gas law; Partial pressures; Conversion from ppm to mg/m ³
2	Continued
3	Sources and pollutant categories; Chapter 2
4	Concentrations; Chapter 2
5	Regulations and regulatory process
6	Regulations and regulatory process;
7	Basic properties of aerosol particles
8	Basic properties of aerosol particles
9	Mobile sources and their control; Chapter 9
10	Mobile sources and their control; Chapter 9
11	Midterm 1
12	Stationary sources and their control; Chapter 10
13	Stationary sources and their control; Chapter 10
14	Atmospheric dispersion, effects of meteorology; Chapter
15	Atmospheric dispersion, effects of meteorology; Chapter 3
16	Atmospheric Chemistry
17	Atmospheric Chemistry
18	Dispersion modeling
19	Dispersion modeling
20	Midterm 2
21	Exposure
22	Health effects; Chapter 5
23	Biological aerosols
24	Atmospheric effects; Chapter 4
25	Welfare effects; Chapter 6
26	Air quality and emissions assessment; Chapter 7
27	Air quality and emissions assessment; Chapter 7
27	Current topics
28	Review
	FINAL EXAM

Grade Breakdown:	Midterm Exam 1	20%
	Midterm Exam 2	20%
	Homework	10%
	Final Exam	50%

Additional reading:

“Air Pollution. Its Origin and Control”, 3rd edition, K. Wark, C.F. Warner, W.T. Davis, 1998, Addison Wesley Longman, Inc.

“Atmospheric Pollution. History, Science, and Regulation”, Mark Z. Jacobson, 2002, Cambridge University Press.