

Brooklyn College Department of Chemistry

Environmental Chemistry, CHEM 4780– FALL 2020

Required Text: *Environmental Chemistry, 4th Edition*; vanLoon and Duffy
Oxford University Press

Supplemental Text: *Chemistry for Environmental Engineering and Science, 5th Edition*;
Sawyer, McCarty and Parkin; McGraw Hill

Useful Website: www.oup.com/uk/vanloon4e/

Contact Information and Office Hours:

Dr. Mathias

Tuesday & Thursday 10:00-11:00 AM Office hours are held on Blackboard Collaborate

jmathias@brooklyn.cuny.edu

Counseling Undergraduate Chemistry Advisor: Aneta.Mieszawska@brooklyn.cuny.edu

Chemistry Department

Office: 359 New Ingersoll; 718-951-5457

Webpage: <http://academic.brooklyn.cuny.edu/chem/index.htm>

Important Dates:

Wednesday, September 15: last day to DROP a course without a grade (*i.e.*, W)

Friday, November 6: last day to apply for non penalty withdrawal (*i.e.*, W grade).

Wednesday, October 14: classes follow a Monday schedule (we have no class)

Wednesday, November 25: classes follow a Friday schedule (we have no class)

Learning Objectives for Chemistry 4780

Upon completion of this course, students should

- Understand the principles of chemistry as applied to problems of the environment.
- Be familiar with: sources, reactions and effects of chemical species on the environment.
- Be able to perform calculations involving general and specific problems of analysis.
- Be able to objectively evaluate the results of scientific studies involving pollution, pollution control and impact of energy production.

Grading:

Your final grade will be determined as follows:

75% (3) Lecture Exams

25% Final Exam

Lecture Exams: Topics to be announced

- **First Lecture Exam:** Wednesday, September 30
- **Second Lecture Exam:** Wednesday, November 4
- **Third Lecture Exam:** Wednesday, December 2

Final Exam: Wednesday, December 16, 8:00-10:00 AM

Practice Problems:

There are worked examples in every chapter that you should study carefully.

There are problems at the end of each chapter; unfortunately, there are no answers.

The website given on the first page of the syllabus contains self-test questions for each chapter.

Academic dishonesty is prohibited in the City University of New York.

Cheating, plagiarism, internet plagiarism and obtaining unfair advantages are violations of policies of academic integrity and are punishable by penalties, failing grades, suspension and expulsion.

For more information about CUNY policy on academic integrity see

<http://www.brooklyn.cuny.edu/bc/policies/pdt7CUNY%20PolicyAcademicIntegrity.pdf>

Student Disability Services

In order to receive disability-related academic accommodations students must first be registered with the Center for Student Disability Services. Students who have a documented disability or suspect they may have a disability are invited to set up an appointment with the Director of the Center for Student Disability Services, Ms. Valerie Stewart-Lovell at 718-951-5538. If you have already registered with the Center for Student Disability Services please provide your professor with the course accommodation form and discuss your specific accommodation with him/her.

Non-Attendance Due to Religious Beliefs

Students who are unable to attend class due to religious observations should consult the Brooklyn College Undergraduate Bulletin for the college's policy, and contact the lecturer to discuss the issue. Students must come forward with the issue in a timely manner.

Student Bereavement Policy

Students who experience the death of a loved one during the semester should consult the student bereavement policy here:

<http://www.brooklyn.cuny.edu/web/about/initiatives/policies/bereavement.php>

Chemistry 4780: Lecture Topics

PART I	
Basic Chemical Concepts and Applications to Environmental Chemistry from: -General & Analytical Chemistry -Physical Chemistry -Organic Chemistry -Colloidal Chemistry -Nuclear Chemistry	
	Chapter references from 4th ed.
PART II Atmospheric Chemistry & Air Pollution	Chapters 1-8
PART III The Hydrosphere	Chapters 9-16
PART IV The Terrestrial environment	Chapters 17-21