



UNIVERSIDAD LIBRE®

Personería Jurídica No. 192 de 1946 de Mingobierno
Nit.: 860.013.798-5



FREE UNIVERSITY PEREIRA SECTION

UNDERGRADUATE PROGRAM IN ENVIRONMENTAL ENGINEERING



SUBJECT: ATMOSPHERIC POLLUTION II

CODE: -----

SEMESTER: EIGHTH

HOURS WEEKLY: 4

THEORETICAL: 4

PRACTICES: 0

REQUIREMENTS: ATMOSPHERIC POLLUTION I

GOALS.

- That the student is able to identify the sources, understand the processes training and formulate controls on gases and vapors, sulfur oxides and nitrogen and odors.
- That the student understands atmospheric photochemical reactions





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- That the student is able to identify the different points where originate from emissions in mobile sources and formulate measures to reduce such emissions
- That the student knows the instrumentation necessary for the analysis and monitoring of the different air pollutants.

METHODOLOGY.

The course will be developed with master lectures by the professor on the content basics of the subject; for their part, students will strengthen their knowledge of the subject through recommended readings, consultations with the teacher, problem solving application and through the development of a project that they will develop throughout the semester.

WORK PROGRAM.



1. GENERAL CONTROL OF GASES AND VAPORS

2. CONTROL OF SULFUR OXIDES

3. CONTROL OF NITROGEN OXIDES IN STATIONARY SOURCES





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4. ATMOSPHERIC PHOTOCHEMICAL REACTIONS

5. MOBILE SOURCES

6. ODOR CONTROL

7. INSTRUMENTATION

8. INDUSTRIAL PROCESSES: IDENTIFICATION, EVALUATION AND CONTROL OF EMISSIONS



LITERATURE.

WARK K., WARNER CF, Air Pollution, Origin and Control, LIMUSA, Noriega

Editors

DE LORA F., MIRO J., Environmental defense techniques, Editorial Labor SA,

Barcelona, Spain

SANCHEZ E., URIBE E., Industrial Pollution in Colombia, DNP, UNDP





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MINISTRY OF THE ENVIRONMENT, Fundamentals of Air Pollution,

Course reports, Santafé de Bogotá, 1996

SAWYER & McCARTY, Chemistry for Environmental Engineering, McGraw Hill, Inc. New

York, 1978

