

FACULTY OF **ENGINEERING**

DEGREE COURSE: **CIVIL AND ENVIRONMENTAL ENGINEERING**

MASTER DEGREE: **CIVIL ENGINEERING**

SUBJECT: ENVIRONMENTAL CHEMISTRY

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OBJECTIVES

Purpose of the course is to provide the fundamentals of environmental chemistry, i.e. the chemistry of Earth natural processes in the air, water and soil.

Human alteration of natural ecosystems and methods for decontaminations will be analysed.

CONTENTS

Chemistry of the Atmosphere. Environmental pollutants. Pollutants diffusion in the atmosphere .

Ozone depletion. Acid rain. Greenhouse gas emissions.

Chemistry of natural water. Water pollution and purification.

Waste disposal. Soil pollution and recovery interventions.

Sustainable development, renewable energies and their environmental impact.

LEARNING OUTCOMES

Students will be able to analyse critical environmental conditions, chemical processes evolution and recovery interventions.

ASSESSMENT

Written exam: multiple choice and open questions

RECOMMENDED TEXTBOOKS

Colin Baird, Michael C. Cann, Environmental Chemistry - W H Freeman & Co (Sd)