



COURSE: Chemical Plants for Pollution Abatement

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website: -

Language italian

ECTS: 9

n. of hours: 81

Academic year: 2014/2015

Campus: Potenza

Semester: II

TOPICS

The environmental materials and their interaction with environmental pollutants. Treatment plants for the removal of pollutants from water and soil environmental materials. Systems of treatment of gaseous effluents. Design of chemical plants for the removal of pollutants. Adsorption processes

TEACHING METHODS (please tick one or more options)

Theoretical lessons

Tutorials in classroom

Tutorials in laboratory

Project works

Technical visits

Other activities (please specify) _____

TEXTBOOKS

Notes of the teacher

Siti contaminati, Maurizio Gorla – Dario Flaccovio Editore

ON-LINE EDUCATIONAL MATERIAL

web address:

LEARNING OUTCOMES

Knowledge of investigation techniques for the evaluation of the level of pollution in environmental materials. Knowledge of the physical - chemical characteristics of organic and inorganic pollutants and their interaction with soil and water. Knowledge of the main techniques of pollutant removal and ability to perform sizing and verification of chemical plants for the reduction of pollutants in the environmental.

REQUIREMENTS

None

EVALUATION METHODS (please tick one or more options)

Intermediate verifications

Written examination

Discussion of a project work

Practical test

Oral examination

Other methods (please specify) _____

DETAILED CONTENT

The environmental materials and their interaction with environmental pollutants. Physical - chemical properties of organic and inorganic pollutants. Treatment plants for the removal of pollutants from water and soil environmental materials. Systems of treatment of gaseous effluents. Design of chemical plants for pollutant removal (coagulation, precipitation, chemical oxidation). Adsorption on activated carbon, ion exchange resins, reactive chemical barriers. Equipment for gas-liquid separation (stripping). Application processes with fluids in the supercritical state.

SEMINARS BY EXTERNAL EXPERTS YES NO

FURTHER INFORMATION
