DEPARTAMENTO:
Departamento de Engenharia Sanitária e Ambiental

IDENTIFICAÇÃO DA DISCIPLINA:

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<td>WATER AND WASTEWATER TREATMENT</td>
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OBJETIVOS – ao término da disciplina o aluno deverá ser capaz de:
The course examines theoretical concepts and mechanisms of water and wastewater treatment by physicochemical processes and its applications in practical engineering solutions. Water-quality and sludge control strategies are discussed in terms of treatment, management, and disposal.

PROGRAMA:
1. WATER AND WASTEWATER CONSTITUENTS

1.1 – Physical Characteristics.
1.2 – Chemical Characteristics.
1.3 – Biological Characteristics.
1.4 – Constituents of Concern in Water and Wastewater Treatment.

2. BASIC UNIT OPERATIONS

2.1 – Screening.
2.2 – Coagulation and Flocculation.
2.3 – Sedimentation.
2.4 – Flotation.
2.5 – Filtration.
2.6 – Disinfection.

3. ADVANCED UNIT OPERATIONS

3.1 – Adsorption.
3.2 – Ion Exchange.
3.3 – Membrane Filtration.
3.4 – Advanced Oxidation Processes.
3.5 – Gas Stripping.

4. SLUDGE TREATMENT AND MANAGEMENT

4.1 – Sludge Characterization.
4.2 – Sludge Treatment. Dewatering and Thickening.
4.3 – Sludge Management and Disposal.

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Pelo DERCA