

Program: Chemistry (15025012071P6)

Course: ENVIRONMENTAL CHEMISTRY

Code: PPGQU0044

Workload: 60 hours

Credits: 04

Syllabus:

Biogeochemical cycles of elements; Chemical processes in the atmosphere; Hydrochemistry of soils and the lithosphere; Chemical processes in aquatic systems; Environmental chemistry and energy sources; Environmental impact assessment; Waste and effluent treatment; Environmental chemistry and energy sources; Environmental legislation (water, soil and atmosphere); Fundamentals and ecotoxicological studies. Definition and history of Green Chemistry; The twelve principles of Green Chemistry; Applications of Green Chemistry and its impacts on modern society.

Bibliography:

MANAHAN, S.E. Environmental Chemistry, 6th ed., CRC Press, 1994.

BAIRD, C. Environmental Chemistry, W.H. Freeman, 1994.

REEVE, R.N.; BARNES, J.D. Environmental Analysis (Analytical Chemistry by Open Learning), John Wiley & Sons, 1994.

TUNDO, P.; PEROSA, A.; ZECCHINI, Z. Methods and Reagents for Green Chemistry: An Introduction, John Wiley & Sons, Hoboken, 2007.

SHELDON, R. A.; ARENDS, I.; HANEFELD, U. Green Chemistry and Catalysis, Wiley-VCH, Weinheim, 2007.

Recent articles published in indexed journals.