

APPLIED CHEMISTRY (BS-ADP 7th Semester)

Module Code:	Chem-435
Module title:	Processing Industries
Name of Scheme:	BS-ADP 7th Semester
Department:	School of Chemistry
Faculty:	Science
Module Type:	Compulsory
Module Rating:	2 credits

OBJECTIVES

Students will understand and learn about the operation and processes involved in Paper, Leather and Oils/Fats industries. Starting from raw material to end product.

SYLLABUS OUTLINE:

1. Paper & Leather Industry

Paper – History, Survey of Raw materials, Production of Pulp by Soda process, Sulphite process, Kraft (Sulphate) process, Recovery of cooking liquor, manufacturing of paper, Environmental aspects of paper Industry.

Leather – Introduction, Types of Skin, Theory of Tanning, Beamhouse Operations, Vegetable and Chrome tanning, Finishing processes, Waste Disposal and Pollution Aspects.

2. Oils And Fats

Classification of oils and fats, vegetable oils, essential oils, various methods of extraction of oils, refining and hydrogenation of oils, Industrial applications of oils in resins, surfactants, lubricants and paints.

RECOMMENDED BOOKS:

1. Applied Chemistry, Haq Nawaz Bhatti and Muhammad Salman, 2017, Caravan Book Publisher, Pakistan.
2. Pulp and Paper Technology, Testing and Applications, K.P. Rao (2003), CBS Publishers.
3. Chemistry of Pulp and Paper making, Edwin Sutermeister, Ed-3rd (1946)
4. Fertilizers and Soil Fertility, U.S.Jones, Reston Publishing Co. Virginia, 1979.
5. Industrial chemistry, B. K. Sharma, Krishna Prakashan Media (P) Ltd., Ed-15 (2006).
6. Shereve's Chemical Process Industries, 5th Ed.1975, by G.T.Austin, McGraw Hill Book Co. New York.