SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: ORGANIC CHEMISTRY

Code No.: CHM 235-3

Program: PULP & PAPER TECHNOLOGY

Semester: 4

Date: SEPTEMBER, 1983

Author: D. TROWBRIDGE

New: _____ Revision: _____

APPROVED: _____ March 11/86
Chairperson Date

CALENDAR DESCRIPTION

ORGANIC CHEMISTRY	CHM 235-3
Course Name	Course Number

PHILOSOPHY/GOALS:

This course is intended to give an introduction to the subject of organi chemistry. Upon successful completion, the student should be able to identif the name of organic compounds as well as predict likely reactions between the compounds. Emphasis will be placed on organic chemistry as it relates to the pulp and paper industry.

METHOD OF ASSESSMENT:

Periodic tests throughout the course will be included with assignments a quizzes to establish the overall grade for the course.

TEXTBOOK(S):

Organic Chemistry: An Introduction
by Jack E. Fernandez.

ORGANIC CHEMISTRY

CHM 235-3

TOPIC	PERIODS	TOPIC DESCRIPTION
1	6	Principles of Bonding - covalent and ionic bonding - electronegativity and formal charge - hydrogen bonding (including cellulose) - bond strength and hybridization
2	6	Principles of Structure - structural formula - molecular models - isomerism and resonance - functional groups
3	5	Principles of Reactivity - acid-base theories - dissociation constants - equilibrium and reaction rates - catalysts, intermediates and free radicals
4	5	Alkanes and Alkenes - structure and nomenclature - physical properties - synthesis and reactions
5	2	Dienes and Alkynes - classification and nomenclature - tautomers
6	5	Aromatic Hydrocarbons - benzene and its derivatives - structural properties - reactions with benezene
7	4	Alcohols, Phenols and Thiols - classification, structure and nomenclature - examples in the pulp and paper industry - oxidation of alcohols

TOPIC	PERIODS	TOPIC DESCRIPTION
8	4	Aldehydes, Ketones and Acids - structure and nomenclature - physical properties - oxidation of aldehydes
9	4	Ethers and Epoxides - structure and nomenclature - lignin and cellulose ethers
10	4	Polymers - macromelecule formation - cellulose and hemicellulose structure and properties
Testing	3	
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