SAULT COLLEGE
of Applied Arts and Technology
Sault Ste. Marie

COURSE OUTLINE

PHYSICS 116-3

Building Science I

revised 1981

j'iipi.- No	Periods	Topic Descriptio-	Relerence

Applied Mathematics

a) English System (review)
Metric System (1) CGS
(2) SI (emphasis)

b) Measuring (significant figures)

c) Error Calculations

Hydraulics

a) Force - Principle of Porce
Properties of Force

b) Gas and VJater Pressure (Introduction)

c) Pressure - (applied force)
- pressure gauges
- porosity and permeability of natural ind other construction materials

d) Pascal^s Law
Pressure in pressure out

e) Density vs Specific Gravity
Experiment - Concrete of different SG u
calculate dens5.ty in SI

Archimedes Principle
Isostasy of buildings
Above and below G.W, Level
Variations with annual change
Variable density liquids
(soil water mixtures) effect on buildings
Channel F3ow
Vlcir - stream - gauges

f) Flow - i) Turbulent flow
ii) Lamellar Flow
iii) Transportation in streams and erosior
effect of Dam Sites on flow pattei

g) hernouilli's Principle and Applications

h) Air Prcasure i) Units - Atmosphere
- Ears
~ Pascals
ii) Gauge Pressure and Ab&olvte Pressure

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Wave Motion and Sound

a) Types of waves - long
- transverse
- conprossional
- love vjnves

Toyi : No •	Per iocs	Topic Iiescri pti c>n	Re ference
	2	b) Wave equations Standing waves	
	1	c) Reflection and Refraction of Sound	
	1	d) Velocity of sound e) Pitch - Intensity Heasurement of these - S.P. Levels Industrial Applications as cutting tools	
		f) Boppler effect	
		Optics	
	1	a) Nature of light waves	
	2	b) Reflection and Refraction of light	
	2	c) Polarization - The s brain r.ai^G	
	1	d) Lenses - basic type The lense equation	
	1	e) Mirrors - Types	
	1	f) Optical images i) Real ii) Virtual iTna[:,es	

Plus 3 hours test and review tl$_{me}$

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