

Science and its Impact on Society

Science 300

Section: D100

Term: 1998 Spring

Instructor: Dr. K. Slessor. Office: C-8080.

Discussion Topics: Under construction

Science 300 is an overview of science for the knowledge and enjoyment of those who have not pursued the physical and natural sciences, but recognize the role and necessity of science and technology in our society. The course is Not intended to create scientists and engineers. As a participant, you will Not be required to provide solutions as would a science student, but you will be expected to recognize the phenomena and perceive that a solution is available, readily in some instances, much more difficult in others. I have divided the subject matter into 10 units, their contents are listed below and to some extent the contents are dictated by my interests and knowledge.

Each unit will comprise a set of notes on topics such as that described for UNIT 1. These notes will serve in place of a text. Lectures will select a theme within the Unit framework, but will develop alternative examples and concepts.

UNIT 1 NUMBERS. Numbers, Exponents, Logarithms, Slide Rules, Units and Dimensions, Calculations, Graphs and Equations, Geometry and Trigonometry, Surveying, Maps & Map History, Geopositional Satellite Systems for Accurate Location, Chaos, Fractals.

Differential Calculus. Acceleration (and Deceleration)

Gravity, Skydiving, Effects of High Altitude on Jumpers.

Integral Calculus. Archaeological Dating, Compound Interest,

Mortgages, Population Growth.

UNIT 2 MATTER.

UNIT 3 MOLECULES.

UNIT 4 ENERGY.

UNIT 5 POLLUTION.

UNIT 6 ELECTRICITY & MAGNETISM.

UNIT 7 CHANCE.

UNIT 8 COSMOLOGY & PREHISTORY.

UNIT 9 LIFE. UNIT 10 SYNOPSIS.

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Grading: None

Required Texts: Notes instead of text.

Recommended Texts: None

Materials/Supplies: None

Prerequisite/Corequisite: None

Notes: None

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