



Decker

11.11.25

THE DEPARTMENT OF THE ARMY

M: Course Objectives/Learning Outcomes

The student will be able to:

1. Define or explain any of the chemical terms used in the course.

and describe the use of some of the more common laboratory equipment.
Give the name of the laboratory techniques using the accepted methods, such as titration, weighing, pipetting.

Give the random and systematic errors inherent in each of the common quantitative techniques which are used in the laboratory.

Given an experimental problem, state the series of steps and the accepted techniques required to solve that problem in the laboratory.

Write a report based on observations and data obtained in the laboratory. The report should include a statement of the problem, a description of the method used, a tabulation of the data, a graphical analysis, solution of equations, etc., necessary to obtain a numerical result. Write a conclusion and give the theory upon which the experiment is based.

Using the data, observations or results of an experiment, determine the relationship between experimental variables.

Analyze the overall laboratory experiment in respect to errors inherent in the method or technique used.

1. Liquids and Solids

O: Methods of Instruction

The course will be presented via lectures, as well as programmed material will be used where appropriate. Problems will be assigned on a regular basis which are to be handed in and marked. The laboratory course will be used to illustrate the practical aspects of the course material. Close coordination will be maintained between laboratory and classroom work whenever possible. This will be accomplished by discussing laboratory experiments in class and when necessary, by using the lab period for problem solving.

P: Textbooks and Materials to be Purchased or Supplied

General Chemistry, P.H. Patai & W.S. Hammett, McGraw-Hill, 1967
Douglas College Laboratory Manual, Chemistry 210

Q: Means of Assessment

Laboratory work (30%)

a) Laboratory reports: 14%

b) Lab work: 16%

Examinations (70%)

b) A minimum of two in class tests will be given throughout the semester. 30%

c) Any or all of the following evaluations, at the discretion of the instructor: problem assignments, quizzes, class participation. [5% maximum] (10% in total)

William Koop
Curriculum Committee Representative

Neil Khan
Course Designer(s)

Education Co

[Signature]
Registrar

[Signature]
Dean/Director

Registrar