4/97

SOUTHEAST MISSOURI STATE UNIVERSITY
COURSE SYLLABUS

Department of Chemistry Course No. GI604

Title of Course: AP Institute: Chemistry New: October 30, 1996

I. Catalog Description and Credit Hours of Course:

An institute designed to help prepare high school chemistry teachers to teach Advanced Placement Chemistry in their schools. Eight days, from 8 a.m. to 12 p.m. and 1 p.m. to 5 p.m. each day, lecture and lab. Summer. 3 credit hours.

II. Prerequisites

Certified chemistry teacher

III. Objectives of the Course:

A. To prepare participants to teach AP Chemistry.

B. To review and reinforce basic concepts and principles in chemistry, including the structure of matter, states of matter, reactions, descriptive chemistry, and chemical calculations.

IV. Expectations of Students

To attend class and participate in all laboratory exercises.

V. Course Outline

The institute covers topics in the Advanced Placement Chemistry course. Emphasis is placed on those topics which are normally covered in a second year high school course, and knowledge of first year high school chemistry will be assumed. A listing of the topics covered and the laboratory experiments conducted, and amounts of time spent on each are as follows:

		Class Hours
A.	Chemical Bonding	5
B.	Laboratory on the Determination of the Empirical Formula of a Sulfide of Copper	2
C.	Classifying Chemical Reactions and Predicting Their Products	2
D.	Laboratory on Chemical Reactions and Their Classification	2
E.	Thermochemistry and Thermodynamics	3
F.	Thermochemistry Lab	2
G.	Chemical Kinetics	2
H.	Kinetics Experiment	2
I.	Chemical Equilibrium	1
J.	Acids and Bases and Acid-Base Equilibria	5

K.	Antacid Laboratory	4
L.	Solubility Equilibria	2
M.	Lead in Paint Laboratory	2
N.	Electrochemistry	3
O.	Electrochemistry Lab	2
P.	Chemistry of the Representative Elements: Part I, The Metals	1
Q.	Qualitative Analysis Lab: The Silver Group	2
R.	Chemistry of the Representative Elements: Part II, The Nonmetals and Metalloids	1
S.	Qualitative Analysis Lab: The Copper-Arsenic Group	4
T.	The Transition Metals	1
U.	Qualitative Analysis Lab: The Aluminum - Nickel Group	4
V.	Coordination Compounds	3
W.	Qualitative Analysis Lab: The Barium - Magnesium Group	2
X.	Organic Chemistry	1
Y.	Qualitative Analysis Lab: Unknown Salt	4
Z.	Nuclear Chemistry	2

VI. Textbook:

General Chemistry, Fifth Edition, by Darrell D. Ebbing, Houghton Mifflin Company, 1996.

VII. Basis for Student Evaluation

The institute will be evaluated on a credit/non-credit basis with the following evaluative criteria:

A. The participants will be given a pretest and a posttest on the subject matter content to determine their knowledge gain (20%).

B. Classroom participation in the AP Chemistry Exam problem working sessions (25%).

C. Classroom participation in the discussion of the techniques of teaching AP Chemistry (25%).

D. Completion of the laboratory experiments (30%).