A GUIDE FOR GRADUATE STUDENT PREPARATION FOR CHEMISTRY ORIENTATION EXAMINATIONS
AT THE UNIVERSITY OF CALIFORNIA, RIVERSIDE

These examinations along with previous coursework experience are used to aid in placing you in the correct course program. We recommend that you prepare for these examinations so that course placement is based on your best level of performance and so that you can progress as rapidly as possible in your graduate studies. A satisfactory performance on each of the examinations or coursework is required before a student may advance to candidacy for the M.S. or Ph.D. degree.

ANALYTICAL CHEMISTRY: The minimum level of achievement in this examination should be that of a student who has completed a one-quarter course in instrumental method analysis. It is also desirable that the student be adept in the stoichiometric and equilibrium calculations of quantitative analysis.

Among the textbooks which cover the material in the Analytical Chemistry examination are:
Willard, Merritt, Dean and Settle, Instrumental Methods of Analysis, (7th Ed.), Wadsworth.
Harris, Quantitative Chemical Analysis, (4th Ed.), Freeman.

INORGANIC CHEMISTRY: The minimum level of achievement in this examination should be equivalent to that of a student who has had two quarters of upper-division Inorganic Chemistry. Performance above this minimum level will also be tested in order to give the staff a better picture of the student's background in this area. Both theoretical and descriptive material will be included.

Texts which give an appropriate level of treatment of the subject matter include:

ORGANIC CHEMISTRY: The minimum level of achievement in Organic Chemistry expected of an entering graduate student is reasonable proficiency in the material contained in a one-year undergraduate course (with laboratory) similar to the one offered at UCR.

While any modern elementary Organic text intended for a one-year course is suitable for study in preparation for the orientation examination, the following texts are currently used at UCR (effective Fall, 2001):


PHYSICAL CHEMISTRY: The minimum level of achievement on this examination should be that of a student who has finished one year of undergraduate Physical Chemistry and a Physical Chemistry laboratory course. Any text which covers thermodynamics, chemical kinetics, quantum mechanics, and basic statistical mechanics should be adequate for preparation for the examination. Examples of such texts include the following:

W.J. Moore, Physical Chemistry, Prentice-Hall.
G.W. Castellan, Physical Chemistry.