

Typical ChaMP Program Academic Plan (Updated 4/11/2006)

YEAR 1

YEAR 2

The following calendar presents a typical ChaMP schedule. When specific courses are listed, they are **core courses**. Electives are chosen in consultation with your advisor. Courses must be passed with a grade of "B" or better. Exceptions to this typical schedule are often granted for students who have already completed comparable work or who have goals better met by other course work. However, these exceptions must be pre-approved by your advisor and you must follow up on the necessary paper work with the grad-affairs office of your home department, especially for exceptions to the core. Not all electives are offered every year. However, usually you and your advisor will be able to identify a desirable course offered in Chemistry, Physics, Biology or Engineering. In the spirit of the ChaMP program, you should take electives that represent a variety of topics, rather than specialize. Keep in mind that though useful, the official rules for the program can be found in the UCI catalog, and this document only provides guidance.

SUMMER:	Chem 206/Phys 206 Chem 207/Phys 207 Chem 208	Laboratory Skills Chemistry for Physicists Math for Chemists	SUMMER:	Research for Master's Thesis	
FALL:	Chem 231A or Phys 215A Choose One: Phys 222 or 211 (Phy. Major) Chem 230 (Chem. Major)	Quantum Mechanics Continuum Mechanics Classical Mechanics & Electromagnetic Theory	FALL:	Chem 266/Phys 266 Phys 222 Chem 236 Phys 238	Current Topics Continuum Mechanics Concepts in Solid State Solid State Theory
	Chem/Phys 229A Begin Investigating Research Opportunities	Computational Methods		ELECTIVE-Check UCI Catalogue	
WINTER:	Chem 231B or Phys 215 B Chem 232A Phys 228 or Phys 229B	Quantum Mechanics B Statistical Thermodynamics Electromagnetic Theory or Computational methods		Begin Preparing Master's Thesis The length and specific content of the Masters Thesis should be discussed with your research advisor. Usually, the format is similar to that of a research publication. Each student will be assigned a committee of three faculty members who must approve the thesis.	
	Mid-March: Choose Research Advisor		WINTER:	ELECTIVE-Check UCI Catalogue	
SPRING:	Chem 231C Chem 232B ELECTIVE-Check UCI Catalogue	Quantum Mechanics C Statistical Thermodynamics Typically Phys 133 or Chem 236		M.A. Advancement to Candidacy Must apply for Advancement 1 quarter before receiving degree.	
			SPRING:	Chem 139/Phys 273/Phys 12 Tech. Writing & Comm. Skills ELECTIVE-Check UCI Catalogue	
			End of Year 2:	Submit Master's Thesis, teaching requirement fulfilled.	

Financial aid and teaching requirement:

Students admitted to the ChaMP program are offered financial aid in the form of fellowships and teaching assistantships. Three quarters of teaching experience are required for the Master's degree.

Late June: QUALIFYING EXAMS (required at end of first year)

These exams are administered 1-2 weeks after the end of the spring quarter. They are given in three sessions. In the morning session you choose two of three topics: typically from Electricity and Magnetism, Thermodynamics and Solid State Physics. In the afternoon session you again choose two topics: typically from Time Dependent Quantum Mechanics, Statistical Mechanics and Kinetics. Each of these exams is one hour long, and is similar in difficulty to the final exam for the course on the same subject. Finally, you will be given a take home exam to complete a computational problem. You must pass each exam individually and also achieve a passing total point score. These exams are taken for the first time at end of the first year 1-2 weeks after the end of the spring quarter. If you do not pass the exam at the end of the first year, you are offered a second attempt just before classes resume in the fall.

ELECTIVES (NEED APPROVAL FROM YOUR ADVISOR)

TOTAL OF 7 ELECTIVES NEEDED TO GRADUATE (4 OF WHICH CAN BE RESEARCH)

Students may choose from these courses or propose alternative courses requiring advisor approval. Independent research may NOT be used as an elective.

Chemistry		Physics		Engineering	
C213	Chemical Kinetics	P134	Intro. to Modern Optics	Eng ECE 278	Laser and Photonics
C225	Polymer Chemistry	P213C	Modern Optics	Eng MSE 201	Intro.. to Polymer Science
C226/P226	Materials Science of Polymers	P224	Discoveries & Innov. of Modern Physics	Engr MSE259A	Electron Microscopy
C232C	Non Equilibrium Statistical Mech.	P233A/B	Fundamentals of Biomed. Imaging Systems		
C233	Nuclear and Radiochemistry	P238A	Solid State Theory		
C248	Electrochemistry				
C249	Analytical Spectroscopy				

YEAR 3: Orals and Advancement to Candidacy

To be completed within one year of completion of the Masters and/or starting the Ph.D. Program

YEARS 4-6: Ph.D. Dissertation

Once the advancement to candidacy exams are passed, the last requirement for obtaining a Ph.D. is to complete a research project and write a dissertation. As with the Masters thesis, there is no required length or specific content for the Ph.D. thesis, and the details should be discussed with your research advisor. The format of the thesis is specified by the library. Usually, the Ph.D. thesis contains one or more research publications that have, or will be, submitted to archival library journals in a condensed format.

Check ChaMP website for updates/changes to the Academic Plan: <http://www.champ.uci.edu>