

Student Name: \_\_\_\_\_

Perm: \_\_\_\_\_

**DOCTOR OF PHILOSOPHY – STATISTICS AND APPLIED PROBABILITY –  
EMPHASIS IN FINANCIAL MATHEMATICS AND STATISTICS  
2011-12**

*In addition to departmental requirements, candidates for graduate degrees must fulfill University requirements described in the “Graduate Education” section of the UCSB General Catalog.*

*A total of 72 graduate-level units are required for this degree. The core courses must be passed with a grade of B or better, and the overall minimum GPA requirement is 3.0. There is no language requirement for this degree. The time-to-degree for the Ph.D is five years.*

<b>CORE COURSES (44.0 units total)</b>			
All of these core courses are required. A grade of B or better is required for each core course.			
COURSE #	COURSE NAME	UNITS	GRADE
PSTAT 207A	Statistical Theory		
PSTAT 207B	Statistical Theory		
PSTAT 207C	Statistical Theory		
PSTAT 213A	Introduction to Probability Theory & Stochastic Processes		
PSTAT 213B	Introduction to Probability Theory & Stochastic Processes		
PSTAT 213C	Introduction to Probability Theory & Stochastic Processes		
PSTAT 223A	Financial Modeling		
PSTAT 223B	Financial Modeling		
PSTAT 223C	Financial Modeling		
MATH 201A	Real Analysis		
MATH 201B	Real Analysis		

<b>ELECTIVE COURSES (28.0 units total)</b>			
Electives should be chosen from the list below. Other courses not listed may be counted as electives only with approval from the FMS Director.			
COURSE #	COURSE NAME	UNITS	GRADE
PSTAT 220A	Advanced Statistical Methods		
PSTAT 220B	Advanced Statistical Methods		
PSTAT 220C	Advanced Statistical Methods		
PSTAT 221A	Advanced Probability Theory		
PSTAT 221B	Advanced Probability Theory		
PSTAT 221C	Advanced Probability Theory		
PSTAT 222A	Advanced Stochastic Processes		
PSTAT 222B	Advanced Stochastic Processes		

PSTAT 222C	Advanced Stochastic Processes		
PSTAT 262FM	Seminars in Probability and Statistics		
PSTAT 274 or ECON 245B	Time Series Analysis/Economic Theory		
ECON 210A	Theory of Consumption and Production		
ECON 210B	Game Theory		
ECON 210C	Markets and Incentives		
ECON 235A	Finance		
ECON 235B	Finance		
MATH 201C	Real Analysis		
MATH 206A	Matrix Analysis and Computation		
MATH 206B	Numerical Simulation		
MATH 206C	Numerical Solution of Partial Differential Equations – Finite Difference Methods		
MATH 206D	Numerical Solution of Partial Differential Equations – Finite Element Methods		
MATH 228A	Functional Analysis		
MATH 228B	Functional Analysis		
MATH 228C	Functional Analysis		
MATH 246A	Partial Differential Equations		
MATH 246B	Partial Differential Equations		
MATH 246C	Partial Differential Equations		
	<b>Total Elective Units (minimum 28)</b>		
	<b>Total Units (minimum 72)</b>		

**QUALIFYING EXAMS**

All students seeking the PhD in Statistics need to pass two Qualifying Examinations with at least a “PhD Level” pass on each exam. Students seeking the FMS Emphasis must pass the Mathematical Statistics and the Probability and Stochastic Processes Qualifying Exams. Both of these exams are offered once per year and consist of a 3-hour in-class exam. Students are given two attempts to pass each exam.

**PhD QUALIFYING EXAM 1 – Mathematical Statistics**

Passed on: \_\_\_\_\_

Month/Day/Year

**PhD QUALIFYING EXAM 2 – Probability and Stochastic Processes**

Passed on: \_\_\_\_\_

Month/Day/Year

### ADVANCEMENT TO CANDIDACY/DISSERTATION RESEARCH

A student is eligible to advance to candidacy after the core coursework is completed and the qualifying exams are passed. Students are expected to advance to candidacy during their second or third year, but no later than the end of the third year. In order to advance to candidacy, students must nominate a dissertation committee and successfully pass the preliminary advancement oral exam. The oral exam requires a satisfactory presentation by the student of his/her proposed research topic and the results of the preliminary reading and research on the topic. Students are urged to officially add the Emphasis in Financial Mathematics and Statistics via Graduate Student Petition after advancing to candidacy.

**Doctoral Committee:** Chair: \_\_\_\_\_

Member: \_\_\_\_\_

Member: \_\_\_\_\_

Member: \_\_\_\_\_

**Advancement to Candidacy Oral Exam passed on:** \_\_\_\_\_  
Month/Day/Year

**Emphasis Officially Added on:** \_\_\_\_\_  
Month/Day/Year

### DISSERTATION

The final requirement for the doctoral program is for the candidate to complete a dissertation, which must be an original work based on independent research, and a public oral dissertation defense.

**Dissertation Defense passed on:** \_\_\_\_\_  
Month/Day/Year