

**University Graduate School  
2007-2008  
Academic Bulletin**

**Applied Statistics**

**School of Science  
Indianapolis**

**Director**

Associate Professor Krzysztof Podgorski\*

**Graduate Faculty**

(An asterisk [\*] denotes membership in the University Graduate School faculty with the endorsement to direct doctoral dissertations.)

**Professors**

Benzion Boukai, Robert M. Kleyale (Emeritus)

**Associate Professors**

Krzysztof Podgorski, Jyotirmoy Sarkar

**Academic Advisor**

Associate Professor Krzysztof Podgorski, Department of Mathematical Sciences, LD 270, IUPUI, (317) 274-8070

**Ph.D. Minor in Applied Statistics**

The Department of Mathematical Sciences in the School of Science at IUPUI has developed a master's degree program in mathematical sciences with a specialization in applied statistics. Accordingly, some doctoral students in the Department of Basic Medical Science in the School of Medicine may find it useful to have a minor in applied statistics as an additional option in their program of study.

**Course Requirements**

Twelve credit hours in courses approved for the minor in applied statistics, including STAT 511, STAT 512, and 6 additional credit hours chosen in consultation with the minor representative. For students in medical and molecular genetics, a common option would be to take two of the courses from 523, 524, and 533. Statistical Quality Control (513) might be a desirable elective for students in pharmacology and toxicology. Students who have successfully completed Q650 Biostatistics I and Q651 Biostatistics II in the School of Medicine will be exempted from STAT 511.

**Examinations**

The exact requirements for the minor and the examination procedure prior to admittance to candidacy are determined by the student's minor representative on his or her advisory committee from the Department of Mathematical Sciences.

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## **Courses**

### **Core Courses**

**STAT 511 Statistical Methods (3 cr.)**

**STAT 512 Applied Regression Analysis (3 cr.)**

### **Other Courses**

**STAT 513 Statistical Quality Control (3 cr.)**

**STAT 514 Design of Experiments (3 cr.)**

**STAT 515 Statistical Consulting Problems (3 cr.)**

**STAT 519 Introduction to Probability (3 cr.)**

**STAT 520 Time Series and Applications (3 cr.)**

**STAT 522 Sampling and Survey Techniques (3 cr.)**

**STAT 523 Categorical Data Analysis (3 cr.)**

**STAT 524 Applied Multivariate Analysis (3 cr.)**

**STAT 528 Mathematical Statistics I (3 cr.)**

**STAT 529 Bayesian Statistics and Applied Decision Theory (3 cr.)**

**STAT 530 Mathematical Statistics II (3 cr.)**

**STAT 532 Elements of Stochastic Processes (3 cr.)**

**STAT 533 Nonparametric Statistics (3 cr.)**