

**The University of Louisville  
College of Business**

**The National Model PhD Entrepreneurship Program Award**

**Executive Summary**

**Submitted by**

**Dr. David A. Dubofsky  
Program Director**

**Initial version: September 30, 2009  
This version: November 23, 2009**

This executive summary nomination is submitted on behalf of the Entrepreneurship PhD Program at the University of Louisville.

### **Program Purpose**

The University of Louisville has long been recognized for entrepreneurial thinking. Its Entrepreneurial MBA program received USASBE's National Model MBA Entrepreneurship Program in 2001, two years before our PhD program began. Our undergraduate and graduate (MBA) entrepreneurship programs are consistently ranked in the top 20 by *US News and World Report*, *Princeton Review* / *Entrepreneur Magazine*, and other sources. The PhD program complements our masters and undergraduate programs in entrepreneurship.

The purpose of the program is to create exceptional researchers and educators in entrepreneurship by providing a world-class education for students who desire careers in academia.

### **Contact Person for Additional Information:**

Dr. David A. Dubofsky  
Director, Entrepreneurship PhD Program  
College of Business  
University of Louisville  
Louisville, KY 40292  
Email: [d.dubofsky@louisville.edu](mailto:d.dubofsky@louisville.edu)  
Phone: (502) 852-3016  
Fax: (502) 852-6072

### **Program Objectives**

- Provide the broadest, most in-depth entrepreneurship curriculum in the world, which is designed to train the next generation of entrepreneurship scholars.
- Bring together a world class faculty to complement our own faculty and provide state-of-the-art, disciplinary-based perspectives on entrepreneurship research questions.
- Provide training in the latest advances in research design and statistical analysis.
- Provide a 20 hour/week research assistantship, which offers opportunities for students to learn the craft of entrepreneurship research.
- Provide opportunities for students to present their work at scholarly conferences.
- Provide instruction and practice in pedagogy so that students will be prepared to succeed in the classroom, teaching entrepreneurship to college students.

## **Students Served**

The Entrepreneurship PhD is the only PhD program offered by the College of Business. Our program has just started its sixth year of existence.

Admission into the program is very competitive. The average GMAT score of the students that we have admitted is 650. All students must have graduate degrees (one of our students has two masters, in public administration and in political science; all other students had MBAs before entering our program).

In the first three years of our program, we admitted students annually. We then switched to a biennial admission process, admitting just 4-6 students every other year. At this time, we have ten students enrolled in the program. In addition, three students have successfully graduated with their PhD degrees. We will admit 4-6 students in the next cohort that will begin in August 2010.

The program admits only students who have expressed an interest in learning to become entrepreneurship scholars, researchers, and teachers, and who understand that they can only accomplish this while studying full-time.

## **Program Description and Unique Aspects of the Program**

We offer a four-year full time program. Students take classes during their first two years, and write their dissertations during years three and four. All students receive graduate assistantships, working for three years as research assistants and one year as instructors in classes with full teaching responsibilities.

The distinguishing feature of our curriculum is that each cohort we admit participates in six intensive one-week seminars, taught by leading internationally known scholars who connect entrepreneurship to different adjacent disciplines. During its 5+ years of existence, the following individuals have taught in our program:

- Howard Aldrich (University of North Carolina) – The Sociological Foundations of Entrepreneurship
- Jay Barney (Ohio State University) – Strategic Management and Entrepreneurship
- Per Davidsson (Queensland University of Technology) - Issues and Developments in the Quantitative Approach to Entrepreneurship Research
- Charles Hofer (Kennesaw State University) – Entrepreneurship from a Strategic Perspective
- Bruce Kirchoff (New Jersey Institute of Technology) – Economic Foundations in Research in Entrepreneurship

- Simon Parker (University of Western Ontario) – The Economics of Entrepreneurship
- Scott Shane (Case Western Reserve University) – Theory Building and Empirical Testing in Entrepreneurship
- Dean Shepherd (Indiana University) – The Psychology of Entrepreneurship

Despite the condensed nature of these seminars, each offers the same number of contact hours as a semester-length course and covers an equivalent number of scholarly readings. Students prepare in advance for the seminars. After each seminar, each student writes a conceptual or empirical research paper.

Students also take several traditional 15-week courses taught by University of Louisville faculty, including Melissa Baucus, James O. Fiet, Richard Germain, Bruce Kemelgor, and others. Some of these doctoral-level seminars provide instruction in different areas of business in which important theories and empirical research play a role in understanding entrepreneurship. Other courses provide training in statistical and research methods.

Exhibit 1 presents the curriculum that will be offered to our 2010 cohort. It reflects some recent changes our faculty approved.

The program's unique one-week seminars taught by invited scholars allow us to offer the broadest, most in-depth coverage of entrepreneurship. In addition, it enables us to function with unmatched flexibility to be responsive to student needs and changing research opportunities.

Students also receive a \$1500 annual travel budget to attend prestigious academic meetings, to present their own research, learn, network, etc.

Students work as research assistants for three of their four years in the program. Our students have presented literally dozens of their papers at academic meetings, and received many "best of...." awards at these conferences. After completing a course in the pedagogy of entrepreneurship, students teach a total of four classes (typically just one preparation) during their third or fourth year in the program.

### **Sources of Funding/Support**

A major source of funding for the program is a \$2 million endowment gift from the Brown & Williamson Company, which provides recurring support. The University provides several hundred thousand dollars of support in the form of tuition waivers, annual stipends of \$20,000+ per student, and benefits, for **every** student we admit, for four full years. The College, of course, also contributes administrative help, time, sacrifice, instruction, space, computers, phones, copying access, supplies, etc.

## **Program Benefits for Students**

Here is what students can expect from the program:

- We provide them with an excellent education that is basically focused exclusively on entrepreneurship,
- Students get to meet, get taught by, and interact with some of the great academic researchers in the field of entrepreneurship, No single department offering a PhD program in entrepreneurship, can offer the diversity, quality and prestige of the external faculty we bring to teach in our one-week seminars.
- A challenging yet collegial environment,
- Top-notch students with whom to study and collaborate,
- Rigorous seminars taught by leading, internationally known faculty,
- Challenging, supervised research opportunities,
- Financial support during their studies, including a \$20,000 annual stipend plus \$1500 per year to travel to academic conferences.
- Learn how to ask theoretically interesting questions and design research suitable for theory testing,
- Learn how to articulate and present their views, which will help as they disseminate findings and improve their skills as a teacher,
- Build the confidence that they are well-prepared to work in the demanding environment of a research university.

## **Program Outcomes, Both Short and Long Term**

We measure the success of our program by the quality of the research output generated by our students, both while students and also in their careers. In addition, success is measured by the academic positions are students accept when they leave the University of Louisville. At this time, four of our students have begun work in academia (three of the four have actually graduated; one is ABD), at Ball State, Northern Kentucky, Northeastern, and Dayton. We are pleased with the placement results of our very young program, but have aspirations that our future graduates will be placed in even better schools.

All students in our first three cohorts have published and presented their research at the leading academic meetings, such as the AOM, Babson, USASBE, and the SMS conferences. As well, our students have published in the leading entrepreneurship journals. In total, our students have published sixteen journal articles and made 81 presentations at academic meetings.

## Exhibit 1: Curriculum

(This is the curriculum that will be offered to our forthcoming August 2010 cohort. Courses accompanied with an asterisk ( \* ) are new. Faculty names that appear are those who will likely teach the course for our next cohort)

### PRE-SUMMER

1. Students take an online or CD-based introductory statistics review course.
2. Statistics “boot camp”: an intense two week set of daily classes covering select statistical topics taught by several College of Business faculty.

### FALL I

#### **1. \* PhD Seminar in Management: Strategy**

This seminar introduces first-semester Ph.D. students to theory, focusing on what theory is, what it takes to make a theoretical contribution to the entrepreneurship, and the importance of theory as a foundation for research. We examine core theories in strategic management and organization theory and consider how they have been applied to study entrepreneurship. *Instructor: Dr. Melissa Baucus.*

#### **2. Entrepreneurship 761: Research Design**

The seminar is designed to teach students the fundamentals of research design in the social sciences. It is intended for entrepreneurship doctoral students who will conduct empirical research publishable in scholarly journals. Topics include philosophy of social science, theory building, causality analysis, overviews of statistical methods, overview of qualitative methods, and an overview of psychometric theory. *Instructor: Dr. Manju Ahuja*

#### **3. \* Economic Theory of the Firm**

Part 1 of the course will cover the basic microeconomic theory of the firm. Production functions. Cost functions. The basic firm profit maximization model. The basic cost minimization model. Firm supply. Competitive markets. Part 2 will cover the theory of monopoly. Price discrimination. Monopolistic competition. Oligopoly. Product differentiation. Entry, barriers to entry, and exit. Part 3 will cover managerial contracting and incentives. Contracting design and the principal-agent problem. Information asymmetry. Adverse selection, screening and signaling. Moral hazard. Agency theory. *Instructor: TBD*

#### **4. Entrepreneurship 725: Linear Statistics**

This seminar covers advanced linear statistical models, the distribution of quadratic forms, estimation and hypothesis testing in the general linear model, including special linear models and their applications. The prerequisites for this seminar are undergraduate matrix algebra and undergraduate mathematical statistics, which may be taken concurrently. *Instructor: Dr. Richard Germain*

### **SPRING I**

#### **1. Multivariate Statistics**

The purpose of the course is to develop an understanding of multivariate statistics by students, so that they can: (a) understand the use of these statistics in published research studies, (b) apply multivariate methods to quantitative research problems in their area of interest, (c) use statistical software to analyze data using multivariate methods, and (d) correctly interpret the results of computer analyzed multivariate data. *Instructor: Dr. Joe Petrosko*

#### **2. PhD Seminar in Finance and Venture Capital**

This seminar reviews research in the funding of new and growing businesses from the perspective of both the funds provider and the entrepreneurial team. The seminar acquaints students with what has been learned about financing the launch of a new business, as well as to prepare them to conduct their own research in this burgeoning area. *Instructors: Dr. James O. Fiet and Dr. David Dubofsky*

#### **3. Entrepreneurship 740 Organizational Behavior and Human Resources Issues in Entrepreneurial Firms.**

An intensive analysis of the dynamics between the individual and entrepreneurial firm as it faces the challenges related to growth and sustainability. This seminar integrates the perspective of the entrepreneur related to the start-up and launch of a new venture and the demands upon employees. Because early stage firms lack many initial resources, we critically examine and propose strategies and tactics to create a culture that is rich in motivational tactics, leadership skills and recruitment/retention of the firm's most valuable resource - its human capital. *Instructors: Dr. Bruce Kemelgor & Dr. Sherry Thatcher*

#### **4. \* PhD Seminar in Discovery (1.5 credits)**

Reviews research on entrepreneurial discovery from the perspectives of the aspiring entrepreneurs and scholars. The coverage is both theoretically descriptive and prescriptive. *Instructor: Dr. James O. Fiet*

#### **5. \* PhD Seminar in New Product Strategy from a Marketing Perspective (1.5 credits)**

The seminar is designed to teach doctoral students the fundamentals of new product strategy, from a marketing perspective. The course is designed to cover a range of topics and approaches (i.e. theory and method) and progresses through three main areas of discussion: a) conjoint and identification of the “best” new product concept, b) pioneer advantage versus “fast followers”, c) demand estimation for new products. *Instructor: Dr. Robert Carter*

### **SUMMER I**

#### **1. Entrepreneurship 750: Issues and Developments in the Quantitative Approach to Entrepreneurship Research**

This seminar integrates theoretical developments and research findings, as presented in previous seminars in the program, with their method implications. It also supplements the previous seminars on research design and statistical techniques by focusing on aspects that were not previously covered or by elaborating on issues that were only treated in passing. *Instructor: Dr. Per Davidsson*

#### **2. Qualifying exam preparation course**

Qualifying Exam (July)  
First year paper due (by mid-August)

### **FALL II**

#### **1. Entrepreneurship 780-03 Structural Equation Modeling and Measurement Theory**

The course is designed to provide the student with an understanding of the rationale underlying SEM, the use of SEM in research, the interpretation of SEM analyses, and the evaluation of research using SEM. A working knowledge of basic statistics, regression modeling, exploratory factor analysis, reliability analysis and validity, and multivariate statistics is assumed. *Instructor: Dr. Richard Germain*



## **2. Entrepreneurship 733: Psychological Foundations of Entrepreneurship**

This seminar has four fundamental purposes:

1. Increase familiarity with current research that addresses important questions about the psychology of entrepreneurship.
2. Assess “gaps” in these literatures and propose research agendas to address them.
3. Build an understanding of the seminal papers that underlie current contributions.
4. Write. Develop skills in “mapping out” and writing one’s own research papers.

*Instructor: Dr. Dean Shepherd*

## **3. Entrepreneurship 720: Economic Foundations in Research in Entrepreneurship**

The seminar includes the development of economic thought related to entrepreneurship, ranging from historical figures in economic theory such as Cantillon and Ricardo to contemporary schools of thought on entrepreneurship, including the Austrian perspective. In-depth analyses of pricing strategies, market structures, dynamic vs. static analysis, regulatory issues, and examples of applications of economics in research in entrepreneurship are presented. Other topics may include real options theory, rational expectations, the economics of information, econometrics, transfer pricing, transaction cost economics, and agency theory.

*Instructor: Dr. Simon Parker*

## **4. Elective #1 \***

## **SPRING II**

## **1. Entrepreneurship 710: Sociological Foundations of Entrepreneurship**

The course takes an evolutionary approach, examining six popular perspectives from sociology, economics, history, and political science in terms of their ability to explain organizational change. We examine the creation, persistence, transformation, and disbanding of organizations of many different types. The course begins by focusing on organizational emergence. We pay special attention to the role of entrepreneurs, not only in their role as founders of organizations but also in term of their place in society. We consider the importance of human and social capital, such as social networks, as well as the role of economic and social inequality. Next, we focus on social change and models for historical analysis. We

then turn to the emergence of new types of organizations and industries, as well as the forces that maintain and reproduce established populations. Last, we turn to the community level of analysis, focusing especially on social networks and interorganizational relations. *Instructor: Dr. Howard Aldrich*

## **2. Entrepreneurship 700: Current Topics in Entrepreneurship Research**

The focus is on theory building and empirical testing of the factors shaping the identification, evaluation, and exploitation of opportunities and the creation of new organizations. The objective of the course is to give students an introduction to the major theoretical threads and controversies in the field. It will also examine the methodologies that are important to research in this area. Students will learn about various perspectives, examine different methodologies, explore some original empirical research, make connections between theory and empirical research, and practice critiquing and identifying insight in research. *Instructor: Dr. Scott Shane*

## **3. Entrepreneurship 730: Entrepreneurship from a Strategic Perspective**

This seminar has two objectives: (1) to expose students to the central theoretical issues in the field of strategic management and (2) to assist students in developing their research to contribute to their chosen field of work. *Instructor: Dr. Jay Barney*

## **4. Elective #2<sup>\*</sup>**

### **SUMMER II**

#### **1. Entrepreneurship 780-05 Pedagogical Seminar**

Understand the theory and practical applications of university teaching with emphasis on the unique aspects of teaching entrepreneurship; begin to develop individual teaching skills relevant to the topic and student learning styles. *Instructor: Dr. Melissa Baucus*

Required paper must be completed and defended in order to progress into candidacy.

### **YEAR THREE - FALL**

#### **Dissertation Proposal**

### YEAR THREE - SPRING

#### **Dissertation**

### YEARS FOUR AND FIVE (IF NECESSARY)

#### **Dissertation**

\* One of the two electives must be in methods or statistics, and is taken outside the College of Business. Possible courses include:

- PSYC 610: Advanced Statistics I
- PSYC 611: Advanced Statistics II
- SOC 610: Seminar in Statistics II
- SOC 615: Seminar in Research Methodology
- SOC 618: Qualitative Field Research Methods
- PHST 620: Introduction to Statistical Computing
- PHST 630: Applied Statistical Models
- PHST 662: Mathematical Statistics
- PHST 684: Categorical Data Analysis
- PHST 691: Bayesian Inference and Decision
- PHST 780: Advanced Nonparametrics
- ELFH 602: Survey Research and Attitude Measurement
- ELFH 701: Intermediate Applied Statistics
- ELFH 704: Qualitative Field Research Methods
- ELFH 705: Qualitative Data Analysis and Representation
- MATH 560: Statistical Data Analysis
- MATH 561: Probability
- MATH 562: Mathematical Statistics