Department\*

Degree:\*

Degree:\*

Hospitality Business Analytics (PhD)

Provide a brief summary of the proposed program and describe the rationale:\*

Program Mission

The mission of the proposed PhD program is to provide advanced training to students in the field of Hospitality Business Analytics with the goal of preparing students for research-based careers. Areas of in-depth study that can be applied in hospitality business analytics are driven by faculty research in domains such as revenue management, digital marketing, finance, customer experience management and human resources management. The programmatic emphasis is on analytics which is possible because by the large amounts of data being generated by information and communication technologies in industry. New techniques and models will be developed and disseminated. The mission of the proposed program is to provide high quality instruction through a curriculum comprising courses in hospitality business, analytics and methodology, research, and seminars.

Rationale in Brief

Data science has become a key domain of interest and inquiry in the hospitality and travel sectors due to the vast amounts of data generated. The need for skills in this area is strong and business analytics holds great promise in both the hospitality academy and corporate levels of industry. UD has identified data science as a key domain of interest, and thus enhancing our department expertise and contribution in this area specific to the hospitality industry will support UD’s strategic goal.

Detailed Rationale

In today’s information economy, a clear need has arisen for individuals who are skilled in managing and analyzing information in the hospitality industry. The burgeoning mass of information now demands greater levels of oversight, dynamic decisions and strong analysis to keep firms in the industry up to date. Across functional areas of hospitality such as strategy, finance, accounting, marketing, information systems, the quantity and quality of information has risen and created demands for knowledge workers who can effectively make critical decisions. The following are areas of emerging change that underscore the rationale for a Ph.D. in Hospitality Business Analytics.

A. Revenue Management:  From forecasting demand and probability assessments, through dynamic pricing and optimization algorithms to continue feedback loops of performance measurement and evaluation, data analytics, and a growing set of intelligent and autonomous systems change the manner in which hospitality organizations operate profitably.

B. Marketing Analytics: Firms in the hospitality and tourism space are diverting significant resources towards digital initiatives such as paid search, social networks and sentiment analysis.

C. Financial Analytics: Value is increasingly being created at the enterprise level by harnessing information for strategic financial decisions in the hospitality industry.

D. Service Automation & Analytics: Service automation has increased and the industry is seeing significant growth in the use of self-service technologies, robotics and location based services. This has induced the growth of domains such as smart tourism and smart service systems.

E. Human Capital Analytics: Analytical human resources (HR), human-capital investment analysis, workforce forecasts, the talent value model, and the talent supply chain are particularly important for the hospitality industry where 46 cents of every dollar earned is used for human capital.

In summary, to respond to this fast changing environment, hospitality companies require professionals who are both knowledgeable and also possess the right analytical skill sets to make effective decisions. Our proposed pioneering doctoral program in hospitality analytics is designed to address this need.

Competitive Advantage and Positioning

There are no academic programs in hospitality business management that concentrate or offer a Ph.D. in Hospitality Business Analytics;

The program will build upon the research strength and infrastructure at the Institute for Financial Services Analytics (IFSA) and from Departments across the College of Business and Economics;

A Ph.D. program in Hospitality Business Analytics will enhance graduate student recruitment and help to attract and retain talented faculty;

The number of faculty positions in analytics and decision-making in the hospitality academy has increased significantly. Preparing students with a focus on analytics can be of immense value to UD’s department of Hospitality Business Management and increase its visibility in the hospitality research community;

Data analytics is a broad domain and the potential for interdisciplinary research is high and can provide opportunities for interactions among researchers from diverse disciplines;

The program will offer graduate education in an area that is important for UD as a major research university. It aligns with the University’s strategic priorities in the intersection of business, science, technology, and data applications;

The department has accomplished faculty in the realm of hospitality business analytics research. (a) Dr. Tim Webb is an affiliated faculty of the Data Science Institute at UD, (b) Dr. Zvi Schwartz is an affiliated faculty in the Institute for Financial Services Analytics (IFSA) and has chaired a dissertation committee here, and (c) Dr. Srikanth Beldona has served on a committee of an IFSA dissertation. The department’s research-oriented faculty’s efforts in research specific to hospitality business analytics is also worth leveraging.

List only New Courses that are being currently submitted for this program:\*

HOSP 890 - Hospitality Business Analytics

HOSP 892 - Hospitality Research Seminar

HOSP 880 - Independent Research

List any courses from outside departments being utilized in the curriculum:\*

FSAN 815 Analytics I: Statistical Learning

FSAN 830 Business Process Management Innovation

STAT 601 Probability Theory for Operations Research and Statistics

STAT 602 Mathematical Statistics

STAT 611 Regression Analysis

STAT 613 Applied Multivariate Statistics

STAT 615 Design and Analysis of Experiments

STAT 620 Nonparametric Statistics

STAT 675 Logistic Regression

ECON 803 Applied Econometrics

EDUC 856 Introduction to Statistical Inference

EDUC 826: Mixed Methods in Social Science Research

EDUC 812: Regression and Structural Equation Modeling

EDUC 874: Applied Multivariate Data Analysis

Resolution:\*

WHEREAS, there is currently no doctoral program at the University of Delaware specifically for students wishing to specialize in hospitality business analytics, and

WHEREAS, there is interest and expertise in hospitality and business analytics within the Alfred Lerner College of Business and Economics and across other academic units in the University, and

WHEREAS, the absence of a focused doctoral program specific to hospitality business analytics makes it difficult to recruit excellent faculty as well as students interested in this area, and

WHEREAS, the Alfred Lerner College of Business and Economics has in place the faculty, facilities and other resources needed in order for the proposed Ph.D. in Hospitality Business Management to be successful, and

WHEREAS, the proposed program contributes to the University’s desire to be among the world’s premier research universities, be it therefore

RESOLVED, that the Faculty Senate recommends approval provisionally, for seven years, the establishment of a new interdisciplinary Ph.D. in Hospitality Business Analytics.

DEGREE REQUIREMENTS (54 Credits)

Hospitality Business Core - 15 Credits  
Analytics and Methodology Core - 24 Credits  
Independent Research - 6 Credits  
Doctoral Dissertation - 9 Credits

Total Credits - 54 Credits

HOSP848 is mandatory. These courses can be waived for students who can demonstrate that they have competence in the specific subjects. The determination of waiving these courses is made by the Graduate Director in consultation with the faculty member teaching these courses. In the event that the course is waived, alternative courses have to be taken in consultation with the Dissertation Adviser or Graduate Director as applicable. Students need to take a total of 15 credits to complete meeting the requirements for this section.

HOSP890 is mandatory. An additional 21 credits of analytics and methodology courses have to be taken to meet the 24 Credits requirement of this section. Courses have to be taken in consultation with the Dissertation Adviser or Graduate Director as applicable.

All students in residence are required to take at least six research seminars (0 Credits) offered every semester of the year and as listed in the curriculum outline.

Courses

ECON 803 Applied Econometrics I (3cr.)

EDUC 812 Regression and Structural Equation Modeling (3cr.)

EDUC 856 Introduction to Statistical Inference (3cr.)

FSAN 815 Analytics I: Statistical Learning (3cr.)

FSAN 830 Business Process Management Innov (3cr.)

HOSP 801 Hospitality Industry Foundations (3cr.)

HOSP 802 Customer Experience Management (3cr.)

HOSP 845 Advanced Restaurant Management (3-6cr.)

HOSP 848 Research Methods in Hospitality (3cr.)

HOSP 887 Revenue Management in Hospitality (3cr.)

STAT 601 Probability Theory for Operations Research and Statistics (3cr.)

STAT 602 Mathematical Statistics (3cr.)

STAT 611 Regression Analysis (3cr.)

STAT 613 Applied Multivariate Statistics (3cr.)

STAT 615 Design and Analysis of Experiments (3cr.)

STAT 620 Nonparametric Statistics (3cr.)

STAT 675 Logistic Regression (3cr.)

NEW: HOSP 890 - Hospitality Business Analytics (3cr.)

NEW: HOSP 869 - Doctoral Dissertation (9cr.)

NEW: HOSP 892 - Hospitality Research Seminar (0Cr.)

NEW: HOSP 880 - Independent Research (3Cr.)

ECON - 803 - Applied Econometrics I (3cr.)

EDUC - 812 - Regression and Structural Equation Modeling (3cr.)

EDUC - 856 - Introduction to Statistical Inference (3cr.)

FSAN - 815 - Analytics I: Statistical Learning (3cr.)

FSAN - 830 - Business Process Management Innov (3cr.)

HOSP - 666 - SPECIAL PROBLEM (1 to 12cr.)

HOSP - 667 - SEMINAR (1 to 12cr.)

HOSP - 801 - Hospitality Industry Foundations (3cr.)

HOSP - 802 - Customer Experience Management (3cr.)

HOSP - 845 - Advanced Restaurant Management (3-6cr.)

HOSP - 848 - Research Methods in Hospitality (3cr.)

HOSP - 887 - Revenue Management in Hospitality (3cr.)

STAT - 601 - Probability Theory for Operations Research and Statistics (3cr.)

STAT - 602 - Mathematical Statistics (3cr.)

STAT - 611 - Regression Analysis (3cr.)

STAT - 613 - Applied Multivariate Statistics (3cr.)

STAT - 615 - Design and Analysis of Experiments (3cr.)

STAT - 620 - Nonparametric Statistics (3cr.)

STAT - 675 - Logistic Regression (3cr.)