Undergraduate Minor in Applied Statistics and Data Science

Contact: For more information or to apply to this minor field program, please contact:
Linda Dillman
Student Services
Phone: 502-852-5559
Email: linda.dillman@louisville.edu

Introduction

A demonstrated working knowledge in statistical and data science methods has become a vital component for students in many disciplines such as business, engineering, journalism, life and social sciences, political science, psychology, and public health. As evidenced by nationwide employment statistics, employment prospects and rates, compensation and demand for individuals with strong quantitative sciences backgrounds are much higher than graduates with minimal exposure to these areas. The Applied Statistics and Data Science minor exposes students to several commonly applied statistical methods and data science techniques bolstering and complementing a wide variety of undergraduate majors by enhancing their career opportunities. Students in this program will be trained in data management, analysis, reasoning and decision making using various types of data.

Admission

Admission to the program requires the completion of at least 30 hours of degree-applicable credits with a minimum cumulative GPA of 2.0. In addition, students must have taken MATH 111 College Algebra, or an equivalent, with a minimum grade of B- as part of the degree-applicable 30 credit hours. The program will be open to any undergraduate with these prerequisites.

Program of Study

The program consists of three required courses and three elective courses where one of the electives must be a Statistical Computing course (see course table below). One of the required courses (PHST 301) may be substituted by an equivalent course listed below from a different unit. A laptop capable of running basic statistical software is required for coursework in this program. Completion of the minor requires a minimum grade of C- in all course work applied to the minor.

Coursework

18 total credit-hours of coursework:
9 credits of required courses
9 credits of electives

Required Courses			
Course #	Course Title	Credit-Hours	Semester Offered
PHST 301	Quantitative Methods in Public Health or equivalent*	3	Fall
PHST 302	Intermediate Statistical Analysis	3	Spring
PHST 310	Applied Statistical Regression Models	3	Fall
	Required Course Total	**9**	
Guided Electives (choose 9 credits from the following list)			
Course #	Course Title	Credit-Hours	Semester Offered
PHST 315	Sports Statistics	3	Summer
PHST 520	Statistical Computing and Data Management with SAS **	3	Spring
PHST 421	Statistical Computing in R **	3	Spring
PHST 431	Principles of Statistical Learning	3	Spring
PHST 440	Statistical Study Design and Research Methods	3	Fall
PHMS 430	*Elements of Data Mining*	3	
	Electives Total	**9**	
	Program Total	**18**	

Notes:
***** Approved substitutions for PHST-301 include: IE 360, MATH 109, PAS 408, PYSC 301, SOC 301, BIOL 350
******At least one of these courses (PHST-520 or PHST-421) must be taken

Accreditation

The School of Public Health and Information Sciences is accredited by the Council on Education for Public Health (CEPH).

The University of Louisville is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

For more information, see the School's accreditation webpage (http://louisville.edu/sphis/accreditation). v2018.08.22

Program Data	
Name	Undergraduate Minor in Applied Statistics and Data Science
Degree	Minor in Applied Statistics and Data Science
Department	Bioinformatics and Biostatistics
Unit	School of Public Health and Information Sciences
Version	2018.08.22

Program History				
Version	***Submitted***	***Approved***	***Change Summary***	***Author(s)***
2018.08.22	8/24/18	1/28/19	• Initial version • Approved by SPHIS: 12/14/18 • Approved by Provost's Office: 1/28/19	KB Kulasekera, PhD