APPLIED STATISTICS AND DATA SCIENCE (MINOR)

This program was approved for students entering the university in the Summer 2019–Spring 2020 catalog year. For more information about catalog year, go to Catalog Year Information (http://catalog.louisville.edu/undergraduate/university-wide-unit-specific-policies/catalog-year).

Minor in Applied Statistics and Data Science
Unit: School of Public Health (http://louisville.edu/sphis) & Information Sciences (http://louisville.edu/sphis)
Academic Plan Code(s): ASDSMINOR

Program Information
A demonstrated working knowledge in statistical and data science methods has become a vital component for students in many disciplines such as business, journalism, natural and social sciences, political science, psychology, and public health. As evidenced by nationwide employment statistics, employment prospects, and rates, both demand and compensation 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 to the minor requires 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 (or an equivalent) or higher with a minimum grade of B-minus as part of the 30 credit hours. The minor is open to any undergraduate who meets these prerequisites, regardless of major.

Program Requirements
The program consists of three required courses and three elective courses, where one of the electives must be a Statistical Computing course (see table below). One of the required courses, PHST 301, may be substituted by an approved equivalent course from another unit.

A laptop capable of running basic statistical software is a requirement for coursework in this program.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHST 301</td>
<td>Quantitative Methods in Public Health ¹</td>
<td>3</td>
</tr>
<tr>
<td>PHST 302</td>
<td>Intermediate Statistical Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHST 310</td>
<td>Applied Statistical Regression Models</td>
<td>3</td>
</tr>
<tr>
<td>PHMS 430</td>
<td>Elements of Data Mining</td>
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</tbody>
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Minimum Total Hours 18

Students must complete all program coursework with a grade of C-minus or higher.

1. Approved substitutions include: IE 360, MATH 109, PAS 408, PSYC 301, SOC 301, BIOL 350.
2. Student must complete at least one of PHST 520 or PHST 421.