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## Certificate in Biostatistics

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Director: K.B. Kulasekera, Ph.D.  
Coordinator: Lisa Bell  
Website: [Certificate in Biostatistics](#)

### **Introduction**

This program can be completed in a traditional classroom format or entirely online (<http://louisville.edu/online/programs/>).

The Department of Biostatistics offers this certificate to deliver core biostatistics instruction to a wide spectrum of the industrial workforce. Students are required to complete at least 15 semester hours of core and elective coursework. This program provides an ideal path for students and professionals seeking to enhance their data analytic and decision making skills. In addition, individuals who are interested in the possibility of entering the MS program in Biostatistics can use this program as a stepping stone to the masters degree.

### **Competencies**

The core competencies of the Certificate in Biostatistics program include knowledge of basic Biostatistical methods, basic knowledge of data management and statistical computing and a preliminary exposure to research design.

Competencies\*:

- Analyze moderately complex research data using statistical methods involving common linear statistical models. [C4]
- Manage data and conduct elementary statistical computing using SAS software. [C3]
- Critique/design basic methods for moderately complex research problems [C6]

\* Bracketed codes represent cognitive domain levels from Bloom's Taxonomy

Demonstration of the competencies is accomplished by successful completion of all certificate curriculum activities.

### **Admission**

#### **Admission requirements:**

- Bachelor's degree or its equivalent in basic sciences, economics, psychology, or in a closely related discipline from an accredited institution. The curriculum must contain a

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statistics or biostatistics course at sophomore level or higher and at least two courses in basic sciences.

- Preferred minimum GPA is 2.75 on a 4.0 scale. Applicants with lower GPAs will be considered on a case-by-case basis.
- [Graduate application](#) submitted to the School of Interdisciplinary and Graduate Studies (SIGS).
- Non-refundable application fee.
- At least two letters of recommendation written within past twelve months, submitted as part of the application.
- Postsecondary transcripts. Transcripts from institutions outside of the U.S.A. may require a foreign credential evaluation.
- Proficiency in English language is a requirement and a key to the success in the program.

### Information contact(s)

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### Curriculum

The curriculum calls for completing 15-16 credit hours using courses listed below. PHST-684 requires the completion of the sequence PHST 680-681 as prerequisites.

### *Faculty Advisor*

On matriculation, each student is assigned a faculty advisor and is requested to meet at least once a semester (face-to-face or using a video conferencing tool) with his or her advisor. The faculty advisor works with the student to develop a program of study and serves as academic mentor and counselor on career and employment opportunities, professional development, and opportunities beyond the certificate.

### Certificate Requirements

#### Coursework

At least 15 total credit-hours of required coursework

Course #	Course Title	Credit-Hours
PHST-680	Biostatistical Methods I	3
PHST-681	Biostatistical Methods II	3
PHST-620	Introduction to Statistical Computing (SAS)	3
PHST-684	Categorical Data Analysis	3
<b>Electives:</b>	<i>Choose either the following 3-credit course:</i>	(3 or 4)

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PHST-640	Statistical Methods for Research Design	3
	<i>Or choose BOTH of the following 2-credit courses</i>	
PHST-624	Clinical Trials I	2
PHST-625	Clinical Trials II	2
	Total	<b>15-16</b>

If a student chooses to pursue the Masters of Science in Biostatistics degree at any time after enrolling in or completing the Certificate program, then all relevant coursework completed within the preceding five years with a grade of B or better may be applied towards the coursework for the MS in Biostatistics degree.

### **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) (<http://louisville.edu/sphis/accreditation>).

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<i>Program Data</i>	
<b>Name</b>	Graduate Certificate in Biostatistics
<b>Degree</b>	Certificate in Biostatistics
<b>Department</b>	Department of Bioinformatics and Biostatistics
<b>Unit</b>	School of Public Health and Information Sciences
<b>Version</b>	2017.07.28-01

<i>Program History</i>				
<i>Version</i>	<i>Submitted</i>	<i>Approved</i>	<i>Change Summary</i>	<i>Author(s)</i>
2017.07.28	8/22/17	11/20/17	<ul style="list-style-type: none"> <li>• Initial version</li> <li>• AA/CC recommendation: 8/30/17</li> <li>• Faculty Forum approved: 9/8/17</li> <li>• Faculty Senate approved: 10/4/17</li> <li>• Board of Trustees approved: 11/20/17</li> </ul>	K.B. Kulasekera C. Winton Reynolds
2017.07.28-01	9/7/18	11/05/18	<ul style="list-style-type: none"> <li>• Removed PHST-640 from required coursework and moved to electives option</li> <li>• Added additional electives option of PHST-624 and PHST-625 sequence</li> <li>• Curriculum credit total is now 15-16 credit hours</li> <li>• Added Lisa Bell as Coordinator</li> <li>• Approved by SPHIS 10/19/18</li> <li>• Approved b provosts' office: 11/05/18</li> </ul>	K.B. Kulasekera