HEALTH GEOINFORMATICS — CERTIFICATE

Program director
Seth Wiafe

The purpose of the health geoinformatics certificate is to prepare participants to apply geospatial information science and technologies to public health practice, research, and learning. These skills are highly desired today as an integral part of health informatics competencies that are needed by health professionals—according to the 2011 RAND Corporation report, "Mapping the Gaps."

The Health Geoinformatics Program certificate is designed primarily for health professionals and students who have completed a bachelor's degree (or equivalent) from an accredited college or university with a cumulative G.P.A. of at least 3.0. Qualified candidates must demonstrate computer proficiency, although no previous experience with geographic information systems (GIS) technology is required. Advanced placement can be considered for applicants with previous GIS experience/training. In addition, interested Loma Linda University students, staff, and faculty who would like to learn about GIS applications in health may also apply.

Program learning outcomes

By the end of the program, students will be able to:

1. Apply principles of geospatial information science to health research and practice.
2. Use state-of-the-art GIS software and techniques for accessing the spatially defined health information for building useful geodatabases.
3. Use effective geospatial data while producing and publishing customized maps and other visual displays of health data.
4. Employ GIS-based methods and techniques of spatial analysis that support health research and decision making in public health practice and policy.
5. Competently apply geospatial technology and methods in at least one key area of health geographics, such as disease mapping, tracking and assessment of environmental hazards exposure, health planning and policy, population health, health education and communication, and analysis of access to health services.
6. Implement and manage health GIS projects in government, nongovernment, and community settings.

Indicators of educational effectiveness

1. Class project (course specific, at the discretion of the instructor).
2. Oral presentation (course specific, at the discretion of the instructor).
3. Portfolio (course specific, at the discretion of the instructor).
4. Participation in a qualifying examination offered annually by SkillsUSA, an organization that has partnered with the geospatial industry to develop a competition program that provides universities, colleges, and their students a way of validating their geospatial programs and measuring them against national standards.

Note: Indicators 1, 2, and 3 are course specific at the discretion of the instructor.

The program is open to health professionals, current Loma Linda University students enrolled in a master's or doctoral degree program, Loma Linda University faculty and staff (tuition benefits may apply), and anyone interested in GIS applications in the health field.

Admissions

In addition to Loma Linda University (http://llucatalog.llu.edu/about-university/admission-policies-information/#admissionrequirementstext) admission requirements, the applicant must have a:

- Bachelor's degree from an accredited college or university
- G.P.A. of 3.0

Program requirements

Required

HGIS 522	Principles of Geographic Information Systems and Science	2
HGIS 524	GIS Software Applications and Methods	3
HGIS 535	Integration of Geospatial Data in GIS	2
HGIS 536	Spatial Analytic Techniques and GIS	3
HGIS 547	GIS for Public Health Practice	2
REL_ 5__	Graduate-level religion elective	1
Total Units		**13**

Normal time to complete the program

One (1) year — based on less than full-time enrollment