

Geographic Information Systems Intern

**Internship period is for Fall 2019*

Please send cover letter, C.V. and names and contact information for two references to kmccue@dbg.org by **June 30, 2019**. Cover letter should mention qualifications and desired learning objectives for the internship and how these objectives relate to your course of study or future goals.

Part-time. Unpaid, 6-12 hours per week with some flexibility to align with specific academic programs.

The Desert Botanical Garden is a major cultural institution in the Phoenix metropolitan area with a multi-faceted mission: conservation, education, research and exhibition of desert plants. It welcomes 450,000 visitors annually – roughly 50% local and 50% tourists.

The Research, Conservation, and Collections (RCC) Department maintains plant collections data in a GIS-augmented plant database called the Living Collections Management System. Each plant in the Garden's collection is mapped and documented with original collection information and progressive plant assessments. In addition to plant documentation, the Garden's GIS also houses utility maps and diverse additional GIS layers.

The RCC Department at the Desert Botanical Garden offers internships for undergraduate and graduate students and individuals interested in expanding their GIS skills. *The internship is offered once a year for approximately a three-month stay within one of the following periods: spring (*January to April*), summer (*May to July*) and fall (*August to December*).

The GIS Intern will assist with diverse GIS tasks and carry out a special project. All interns will help maintain the Garden's accurate plant map using mobile mapping technologies and ArcMap. The special project will be organized based on the current needs of the Garden and the intern's area of interest and background.

The purpose of the internship experience is to provide the intern with the opportunity to apply classroom knowledge to real work experience, develop valuable contacts in the field by networking with professionals, evaluate his or her commitment to the field while it is still relatively easy to change, identify technical and/or theoretical competencies that need further development, develop motivation, independence, and self-confidence, observe and develop the values/ethics of professionals, and assume professional responsibilities and substantive tasks.

Responsibilities:

With training and support from RCC staff, the GIS Intern will:

- Use diverse mobile mapping technologies (listed below) to update the plant map to reflect new, moved, and removed plants.
 - Living Collections Management System
 - Collector for ArcGIS app
 - Survey GPS
 - Total station
- Assist with plant inventory work.
- Perform data collection in the preserves surrounding the Garden.
- Use ArcMap to edit the Garden's GIS.
- Update/improve ArcGIS Online web maps.
- Work with GIS volunteers.
- Other duties as assigned.

Special Project Ideas:

- Develop web map functionality to improve a workflow.
- Write a well-documented Python script to automate a workflow.
- Collaborate with the Research or Horticulture departments to do a data collection project.

Qualifications:

Required skills:

- ArcMap
- Querying Attribute Table
- Using the Editing Toolset
- Basic cartographic design
- Basic understanding of GPS
- Ability to hike and carry 10-lb surveying equipment
- Ability to work outside in 95-degree weather

Desired skills:

- Plant ID
- ArcGIS Pro
- Python scripting
- Story Map customization with HTML/CSS
- Collector app
- Survey GPS, total station

Evaluation:

Mid-term and end-of-term evaluation using the Garden's performance evaluation system and any additional evaluation required by student's academic program.