

An Update on the IGUaNA Modules for Teaching Geophysics at the Introductory Level

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The IGUaNA modules (Introducing Geophysics for Urban and Near-surface Applications) are designed to broaden exposure to geophysics at the early undergraduate level.

The modules feature applications of geophysical techniques to societally-relevant real-world problems. They are designed for flexible use in introductory-level undergraduate science courses through lectures, labs, or online assignments. Tools in the modules include apps that can run on computers or phones, animations, a GIS Storymap, narrated Powerpoints, and Excel spreadsheets. Instructors can borrow equipment through EarthScope or the University of Wyoming to conduct class field experiments.

In practice, faculty have also found the teaching materials useful for undergraduate geophysics courses as well, when introducing new topics.

Peer-reviewed and tested modules are available by googling “serc iguana”:

- Measuring Depth to Bedrock for an Urban Renewal Project (seismic refraction)
- Pipes, Tree Roots, or Unmarked Graves? Forensic Geophysics (GPR)
- Evaluating the Health of an Urban Wetland (resistivity)

What’s new?

- In 2022 we ran a two-day workshop with 21 teachers from two-year colleges, four-year colleges, and large state universities. Participants got experience in acquiring and processing their own geophysical data.
- In 2022 we had 957 visitors to the IGUaNA site, with 2,769 page views.
- We now have a module covering gravity and magnetic methods that is currently being beta-tested at several institutions. Please contact us if you are interested in teaching gravity or magnetic methods – danielle.sumy@earthscope.org or skruse@usf.edu.

What’s coming up?

- Look out for an announcement for an IGUaNA workshop in August 2023.
- We are developing animations and apps as part of the gravity and magnetics module.

