

WATER RESOURCES IN GEOMATICS AND GEOSPATIAL EDUCATION

Facilitating Technical Learning



UNG
UNIVERSITY *of*
NORTH GEORGIA™
LEWIS F. ROGERS INSTITUTE
FOR ENVIRONMENTAL AND
SPATIAL ANALYSIS

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<https://youtu.be/eRvH2w0l2vY>

Applying Geospatial and Engineering Technology

Objective:

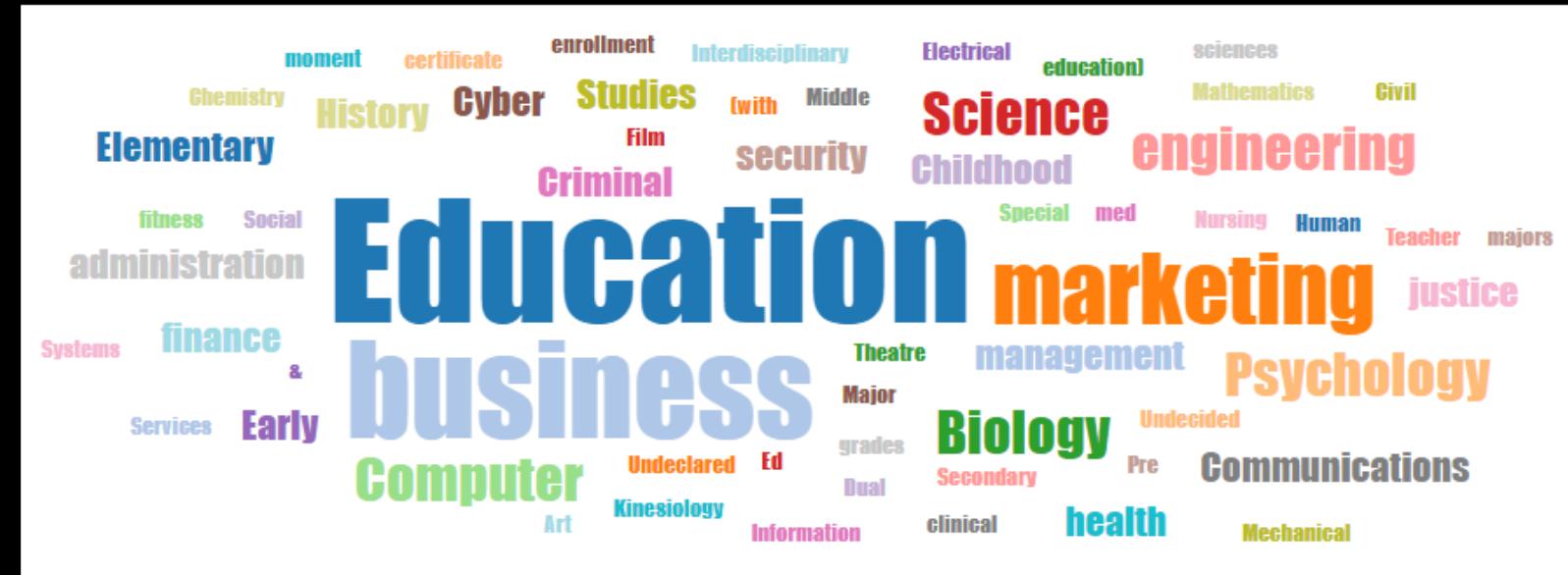
students engage with technical geospatial methods while learning essential water resources concepts.



Pedagogical Approach

- **Open educational resources** (OER) support reuse and increase access.
- Student leaders facilitate GIS exercises within courses through **peer teaching** and encourage non-science majors to thoughtfully engage with spatial concepts.
- Interactive, **experiential learning** exercises explore geospatial topics through **practical applications**.

What is your major?



What was the most interesting thing you learned today?



GIS LABS

The following lab materials were generated as part of the National Science Foundation **Advanced Technological Education Program (Award #1700568)**. All lab materials are provided free for educational purposes. If you require content in another format for accessibility, please make a request using: <http://www.visualecogeo.com/contact>

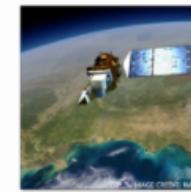


LAKE LANIER PLACE-BASED EDUCATION

Learn science through a place-based exploration of the Lake Sidney Lanier Watershed.

Lab generated by Dr. Amber Ignatius and Margi Flood

LAKE LANIER PLACE-BASED RESOURCES



REMOTE SENSING OF DEFORESTATION

Examine Landsat satellite imagery to investigate deforestation across Earth's surface.

- Module 1: Google Earth Timelapse (10-15 minutes)

<http://www.visualecogeo.com/iesa-ate#/gis-labs>



Place-Based Education

VISUAL ECO GEO

Exploration of environmental data visualization & geospatial analysis • Amber Ignatius

RESEARCH IESA NSF ATE ABOUT BLOG

LEARN THROUGH EXPLORATION OF THE LAKE SIDNEY LANIER WATERSHED



History

Water Quantity & Quality

Data Collection & Sensors

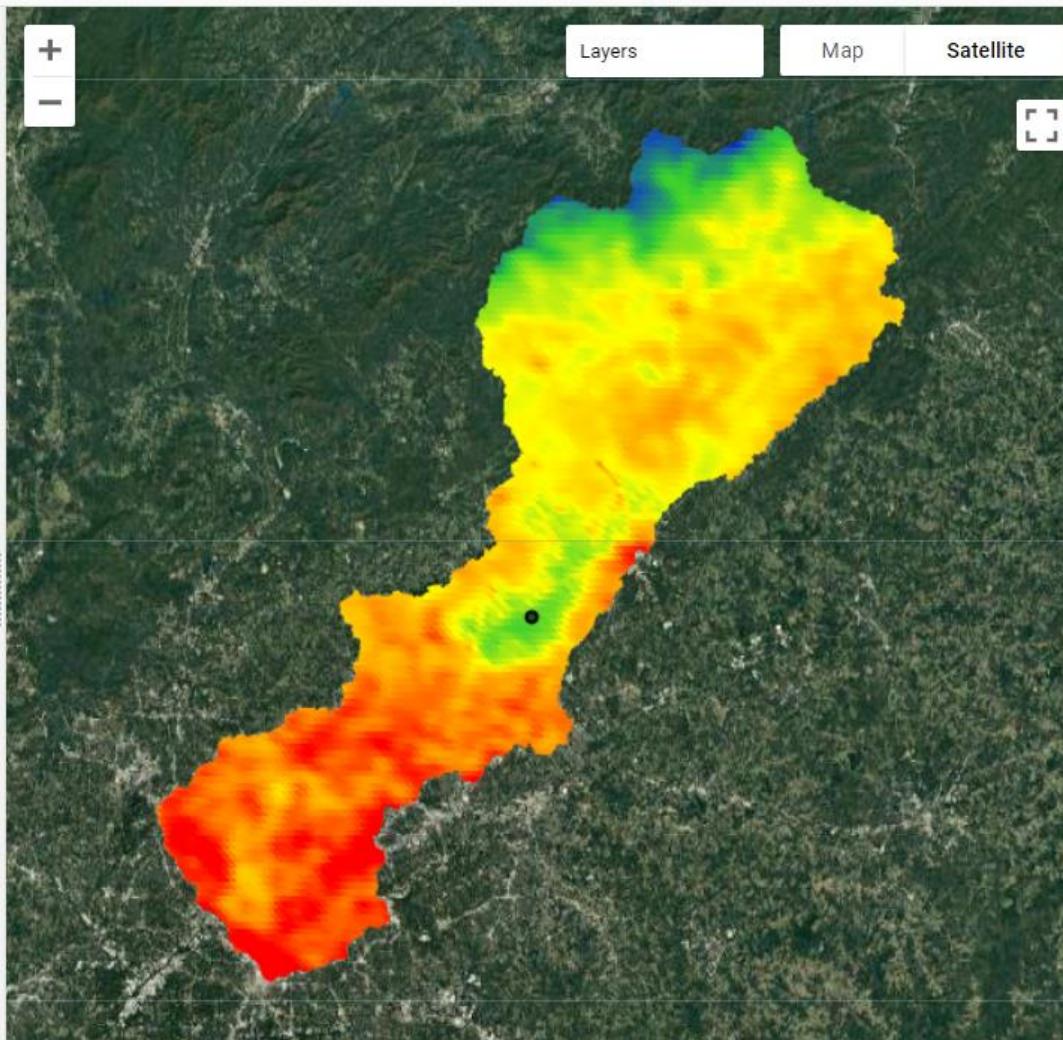
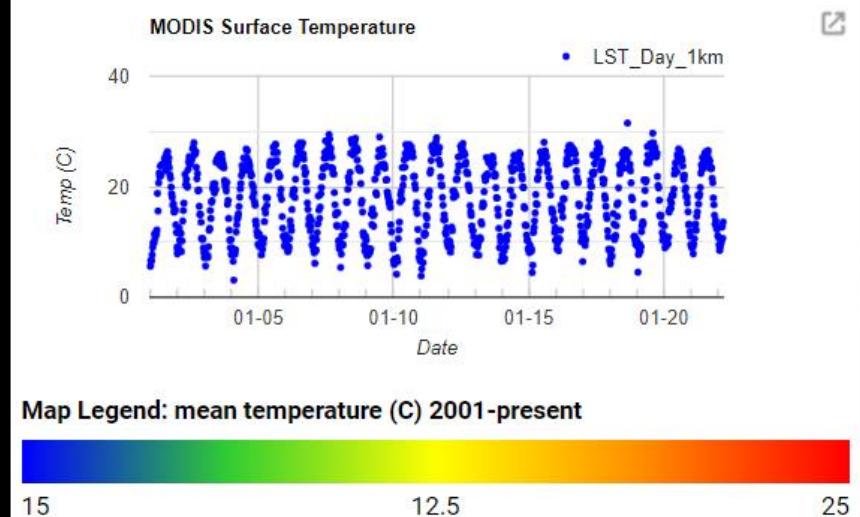
<http://www.visualecogeo.com/lake-lanier>



Upper Chattahoochee River Basin - Temperature Timeseries

Click a location to see satellite-based surface temperature estimates over time. Interactive map by Amber Ignatius based on GEE code.
www.VisualEcoGeo.com

lon: -83.98 lat: 34.21



<https://arignatius.users.earthengine.app/view/upper-chattahoochee-temperature>



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