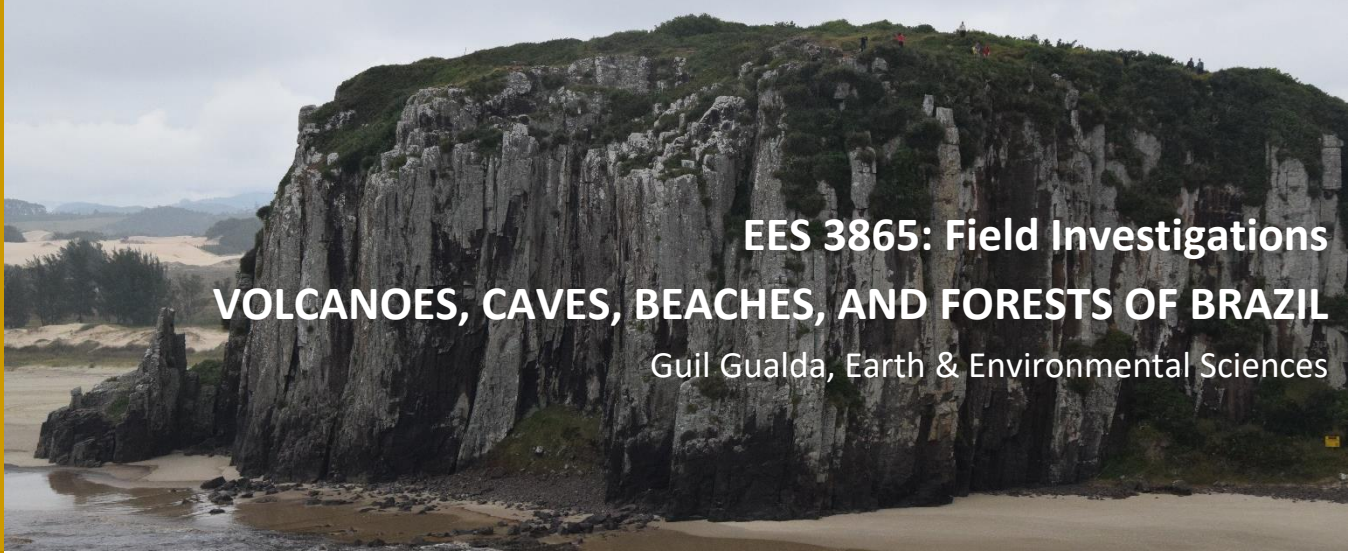




BRAZIL

MAYMESTER 2018

VANDERBILT



EES 3865: Field Investigations VOLCANOES, CAVES, BEACHES, AND FORESTS OF BRAZIL

Guil Gualda, Earth & Environmental Sciences

SCOPE: We will study Earth and Environmental processes and systems in the field, with an emphasis on field methods. In 2018, the course will be held in Brazil, which will give us the opportunity to study a variety of topics in the Earth and Environmental Sciences, including past volcanic activity, surface geomorphology, cave geology, and human dimensions of conservation, while travelling through various ecosystems of the Brazilian Atlantic forest.

MOTIVATION AND GOALS: Rocks preserve the most extensive record of the evolution of the planet, from which we are able to retrace Earth's history over 4.5 billion years. Field geology plays a particularly important role in decoding this complex record, but its interpretation requires proper understanding of geologic processes and of the methods of field geology. We will study volcanic supereruptions and their deposits, cave geology and associated underground water systems, and landform evolution since the opening of the South Atlantic Ocean. We will travel through some of the most pristine portions of the Atlantic rainforest in Brazil, which has biodiversity similar to that of the Amazon and it is highly threatened – we will discuss some of the challenges associated with conservation of these areas. Part of the fieldwork performed during the course will directly contribute to active research projects focusing on the evolution of supereruption-forming magma bodies being pursued by Gualda and graduate students.

PROGRAM: The course will start in Florianópolis on May 7 and finish in São Paulo on June 1, 2018. We will visit several areas:

- FAROL DE SANTA MARTA (Santa Catarina State): Rock types, plate tectonics, magmatism, sedimentation, field methods.
- SERRA GERAL (Santa Catarina and Rio Grande do Sul States): From oceans to deserts to volcanic landscapes; volcanism leading to the opening of the South Atlantic Ocean; Field research of supereruption deposits.
- FLORIANÓPOLIS (Santa Catarina State): Free days mid-course at a island city with beautiful beaches and plenty of activities.
- BLUMENAU and CURITIBA (Santa Catarina and Paraná States): Construction of a supercontinent, rain forests.
- ALTO RIBEIRA CAVE DISTRICT (São Paulo State): Evolution of karstic landscapes, cave development, and subterranean water systems; Highland Rain forests in São Paulo state; Human dimensions of conservation.

EVALUATION: Course evaluation will be based on participation, field exercises, short project reports, and oral presentations.

REQUISITES: Students with all levels of expertise in geology and biology are encouraged to apply. Activities will be adjusted to take into account prior experience and course-work. EES 3865 has no formal prerequisites. **CREDITS:** 3 (MNS)

EXPENSES: Course fee includes tuition, lodging, transportation, occasional meals (depending on location), and entrance fees to National and State Parks. It does not include airfare from Nashville to Florianópolis or from São Paulo to Nashville, transportation from and to airports, regular meals in major cities, or incidental expenses.

FINANCIAL SUPPORT: For information on the Global Summer Fellowship Program, offering scholarships of up to \$8,500, consult GEO: www.vanderbilt.edu/studyabroad (by Jan 17, 2018).

MORE INFORMATION: <http://tinyurl.com/ees210>
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TO APPLY: <http://tinyurl.com/o89uabt> (by Jan 31, 2018)

