

# Geology and Geohazards in Taiwan

Geologic Field Course and Study Abroad Experience

Winter Break 2015

Interested in field geology?

Interested in environmental hazards and climate?

Want to visit the tropics over winter break?

# GEOLOGY AND GEOHAZARDS TAIWAN 2013



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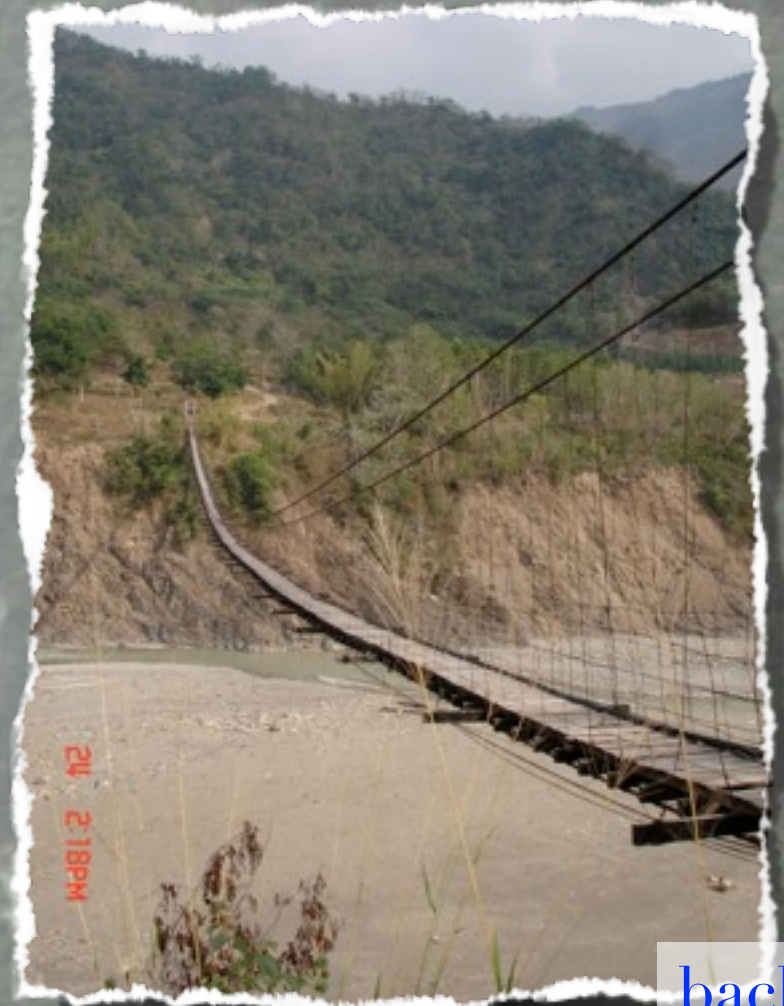
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# Geology and Geohazards in Taiwan

This is a 3-week course for students interested in mixing field-based geologic mapping with an introduction to Chinese culture and history.



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# Geology and Geohazards in Taiwan

**Course Details:**  
The course will consist of a suite of weekly lectures and discussions during fall semester and a 3-week trip to Taiwan where students will participate in 3 or 4 four-day mapping modules consisting of field mapping, data collection and synthesis. Students will be outdoors hiking and collecting data most of time while in Taiwan. Weekly classroom lectures in the fall (at UConn) and in January (in Taiwan) will discuss fundamental geologic processes and how these processes lead to geologic hazards. Students will be in the field or classroom 8-10 hours a day with one day off each week. Students will be staying in a combination of hotels, dormitories, guest houses and hostels.

## **Prerequisites:**

Two courses in geology or permission of the instructor.

## **Course registration:**

Fall Registration (1 credit) -  
GSCI 4999-002

Winter Registration (3  
credits) GSCI tba : Foreign  
Study

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# Why Taiwan?



Taiwan is one of the most tectonically active and biologically diverse places on Earth. National Taiwan University, our host institution, is also one of the premier educational institutions in Asia, and provides ideal base for exploring the geologic and natural history of the island. Sitting on the Tropic of Cancer in the western Pacific and having over a hundred peaks above 3000 m, natural environs range from the warm and dry rolling hills and broad beaches of southern Taiwan to the tropical rain forests that cover much of the lower elevations in northern Taiwan. Above 1000 m, drier air results in thinner forest dominated by hard woods and conifers and, at the highest elevations, alpine-like meadows and rolling hills.

Geologically, the island sits on the boundary between two converging tectonic plates. To the east the continental crust of China marks the eastern edge of Eurasia and is colliding headlong into the Philippine Sea plate, forming the island of Taiwan. Convergence at 8 cm/yr is among the highest in the world, which explains the high relief and high tectonic activity. A high erosion rate, related in part to the dozen or so typhoons that cross the island each year, also exposes a wide range of rock types with a diverse history, providing one of the world's most spectacular natural laboratories.

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# Why Taiwan?



Taiwan is only slightly larger in area than Massachusetts, but home to over 20 million people most of whom have friends and/or family in China, the United States, or both. Consequently, Taiwan provides a unique opportunity for UConn students to bridge Eastern and Western cultures through a third country with its own unique history and economic and cultural place in the world. The field modules and classroom lectures will include an equal number of Taiwan students and the lectures and field exercises will be co-lead by faculty from UConn and National Taiwan University. Students will also be sharing housing and meals with Taiwanese students. This combination will truly immerse students in Taiwan and Chinese cultures and it will allow both groups of students see each others worlds first hand.

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# Logistics



*Taipei City, population, 2.6 mil.  
Taipei region, population, 7 mil.  
Taiwan population, 23 mil.*

The trip will start and end in Taipei, Taiwan. Our host university is National Taiwan University is conveniently located in the southern edge of Taipei, a short distance from Taipei 101 (second tallest building in the world), the Taipei Zoo, the Gonggang shopping district and night market, and the Chiang Kai-shek Memorial Hall.

The National Palace Museum, which has one of the largest collections of Chinese artifacts artworks in the world, is located in the northern part of the city.



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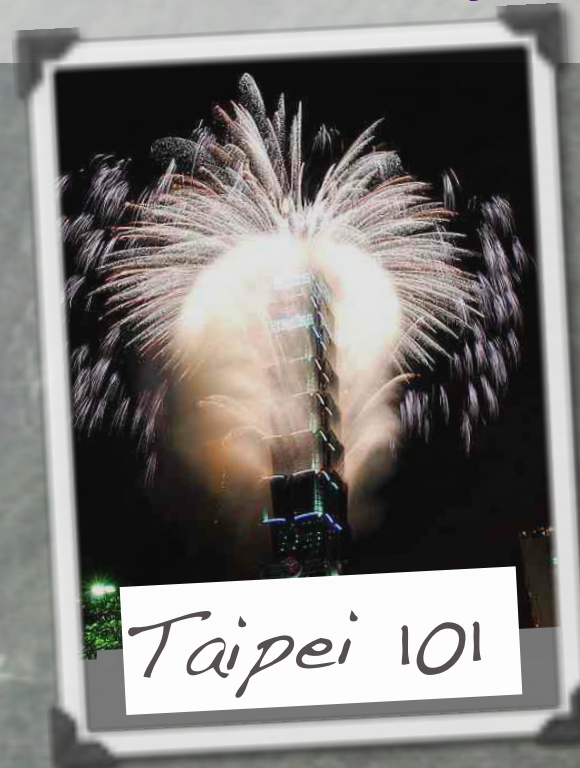
# Logistics



We plan to arrive in Taipei on Dec 31 so we can tour Taipei 101 and watch the New Year's Eve celebration. Jan 01 will include a tour of NTU and an introduction to Chinese culture and trip logistics. We will be returning to the US on Saturday, Jan. 17.

## **Preliminary trip stops:**

1. Chi-Chi earthquake museum
2. Juo-Feng-Err landslide area
3. Oil and gas-bearing anticline
4. Taiwan Slate belt in the Central Range
5. Typhoon Morakot destruction and reconstruction in southern Taiwan
6. Exhumed metamorphic rocks in Taroko Gorge
7. Several day hikes, including the top of a volcanic and the crest of the Central Range
8. Natural hot springs in an ancient magmatic arc



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# The Instructors



**Name:** *Tim Byrne*  
**Occupation:** *Associate Professor*  
**Institution:** *UConn*  
**Favorite Taiwan Sites:** *High Central Range & Taroko Gorge*  
**Favorite Tour Book:** *The Rough Guide to Taiwan, 2nd edition, 2011*  
**Taiwan Movies:** *[http://en.wikipedia.org/wiki/List\\_of\\_Taiwanese\\_films](http://en.wikipedia.org/wiki/List_of_Taiwanese_films)*

Tim has been working and traveling in Taiwan for nearly 20 years. He has advised or co-advised with Dr. Jean Crespi several graduate and undergraduate students and organized and/or lead international meetings and field trips around Taiwan. In 2006 he spent a semester at the Institute of Earth Sciences at Academia Sinica in Taipei on a Fulbright Scholarship. His research has been supported the National Science Foundation in the US and the National Science Council in Taiwan. He is also currently collaborating with faculty from National Taiwan University, National Chung Kung University and National Chung Cheng University. One of his current Ph.D. students, Chung Huang, is from Taiwan and maybe assisting us on the trip.

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# The Instructors



Name: *Will Ouimet*  
Occupation: *Assistant Professor*  
Institution: *UConn*  
Favorite Taiwan Sites:  
Favorite Tour Book:  
Taiwan Movies:

**Will** studies the history, mechanics and evolution of landscapes around the world at human timescales within individual watersheds and at the much longer and larger scales of actively evolving orogens.

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# Estimated cost, assuming 10 students

\$3000 including housing, meals, local transportation, HTH Worldwide travel insurance (<http://www.hthworldwide.com/>) and all lectures and field expeditions.

Air fare to and from Taipei is not included.



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# Comments From 2013

## Best Aspects

"The field work was awesome. I learned a lot and loved the way the professors handled field time, course time and free time."

"availability to answer questions and to help and encourage students"

"showing us how to better understand geology"

"using actual methods used in the field"

"Their enthusiasm for the course"

## Best Stops

"swimming beach, pillow lavas, Toroko gorge, mud volcanoes"

"The Central Range, Toroko Gorge"

"ChiChi earthquake museum because I learned geoscience and culture in one stop"

## Overall

"I thought the course was great"

"Awesome experience"

"Loved this course. Thank you!"

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# Fact Sheet and Useful Links

## Fact Sheet

Class status: 2nd year, 3rd year, 4th+ year, by approval

Academic area: Geosciences, Environmental Sciences, Geography, Natural Resource and the Environment, Engineering

Prior language study required: None

Type of program: UConn faculty led

Language of instruction: English

Open to non-UConn students: Yes

Required GPA: 2.75

## Useful Links

UConn Study Abroad: <http://studyabroad.uconn.edu>

National Taiwan University: <http://www.ntu.edu.tw/english/>

Taiwan Tourist Bureau: <http://eng.taiwan.net.tw>

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