

COURSE DESCRIPTION  
GEOS 424/624: INTERNATIONAL VOLCANOLOGICAL FIELD SCHOOL  
KATMAI TRIP  
(3 CREDITS)

INSTRUCTORS

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Dates: June 10-24, 2025

Estimated costs: \$2,964 plus UAF tuition & fees plus roundtrip airfare to Anchorage\*

Application deadline: February 28, 2025

The strenuous, two-week field trip to the Katmai National Park, Alaska (figure 1) provides a unique opportunity to explore the site of the largest volcanic eruption on Earth in the 20<sup>th</sup> century. Participants will learn about volcanic processes through direct examination of volcanic products while exploring the Valley of Ten Thousand Smokes and the neighboring volcanoes - Mount Katmai, New Trident, and Mageik (figure 2). The session will be led by Pavel Izbekov

\*Please refer to the section COST for details



Figure 1: Map showing the Kamchatka Peninsula (left) and a portion of Alaska (right). Yellow diamonds denote locations of the Mutnovsky/Gorely (left) and Katmai (right) school sites.

## STUDENT LEARNING OUTCOMES

### GEOS 424:

Students will learn to identify pyroclastic flow deposits, lava flows, and tephra fall deposits, as well as describe their characteristics and discuss the origins of these volcanic deposits.  
Students will gain the ability to make informed decisions while conducting scientific fieldwork in remote environments, adhering to safety requirements and communication protocols.  
Students will develop and improve their skills in effective communication with peers from diverse cultural backgrounds.

### GEOS 624:

All of the above.  
Students will develop and refine their skills in presenting scientific concepts to peers.  
Students will be able to make informed decisions about research opportunities in the North Pacific subduction region and engage in discussions on current topics and controversies in volcanology.  
Students will build collegial relationships with peers from other countries, fostering future collaborative research opportunities.

## COURSE STRUCTURE

The course consists of daylong hikes interspersed with lectures. During the hikes, students will examine lava flows, pyroclastic flows, air fall tephra, craters, fissures, faults, vents, crater lakes, and fumaroles spanning the common range of volcanic rock types from basalt to rhyolite. Field discussions and subsequent lectures will delve into the processes and mechanisms behind these volcanic phenomena.

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sets, tents, field guides, and have a dinner together. We will discuss safety requirements and communication protocols. We will also practice using MSR cooking stoves and setting up our tents.

Day 3: Flying to Brooks Lodge via King Salmon

We will depart Anchorage for King Salmon on the Alaska Peninsula, flying over the Cook Inlet volcanoes. Weather permitting, we will see Redoubt, Iliamna, and St. Augustine volcanoes. In King Salmon, we will split into two or three small floatplanes and fly to Brooks Lodge located at Naknek Lake. Upon arrival, the National Park Service will

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will have dinner and spend the night in the cabins. That evening we will play "tourist" and watch the bears catch salmon at Brooks Falls – the location where most of the iconic brown bear pictures were likely taken.

Day 15: Flying back to Anchorage via King Salmon

We will have breakfast at the Lodge, following which you will take a test with 15-20 multiple-choice questions. We will also collect your field notebooks for grading. The notebooks will be returned to you before we depart from Brooks Lodge. You will be able to visit Brooks Falls again and/or explore other "tourist" activities at the Brooks Lodge, such as

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STUDENT PROTECTIONS AND SERVICES STATEMENT

Every qualified student is welcome in our classroom. We are hclassroom. We are

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Long underwear

Long sleeve fleece sweater or pullover

Packable down/synthetic sweater or jacket

Cold-weather hat (fleece or wool)

Cap or hat for rain

Clothing: socks, underwear, shirts, pants (quick drying material recommended)

Trekking poles - highly recommended, yet not required

Goggles (for windblown ash; glacier goggles or cheap plastic safety goggles will do)

Sunglasses

Sun block

Gloves or mittens

Gaiters (mostly to keep snow and loose pumice out of your boots)

Sleeping bag good to at least 0°C, maybe a bit colder to be safe

Sleeping bag insert. Adds 5°C thermal value and keeps the sleeping bag clean.

Sleeping pad

1L water bottle. For a

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Lunch: Power bars, cheese, crackers, nuts, jerky, dried fruits with cold drinks (stream water with optional additives such as Gatorade powder).

Dinner: We will prepare freeze-dried dinners with boiled water 6 times. Each participant will carry 6 pouches of the freeze-dried food. We will use them after strenuous day hikes. In addition, we will cook 3 dinners on the days of light physical activity. Each member of a food group will have t



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for field science and a strong interest in fostering collaborative relationships with students and scientists from diverse cultural backgrounds.

The application deadline is February 28, 2025. Once students have been notified of their acceptance, they will be able to register and pay fees. Since travel arrangements require significant financial commitments from organizers, *a non-refundable deposit of \$250 is required to reserve a spot in the group.* The remaining portion of the payment should be received by US

FREQUENTLY ASKED QUESTIONS

Q: Is Internet, cell phone connection, and electricity available in the Valley of Ten Thousand Smokes?

A: None of these is available in the Valley of Ten Thousand Smokes. You can charge your devices at Brooks