

Georgia Tech School of Earth and Atmospheric Sciences

**Recommendations for Best Practices for Promoting a Safe, Educational,
and Inclusive Atmosphere when Off-campus with Trainees**

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Overview

The value of field experience in an Earth Science education at both the undergraduate and graduate level is unquestioned. These field experiences take on many forms, from remote backpacking trips, to setting up instrumentation for urban air-quality measurements, to highly structured environments such as ships and field stations. Positive field experiences drew many of us into the field, and we hope to pass on the joy of fieldwork to our students. However, living or travelling in close quarters can blur the boundaries between work and life. At the same time, field work in hazardous situations or remote areas may heighten existing power relationships between faculty and students. The many traditions and expectations of field work need to be periodically re-evaluated to reflect the increasing diversity in motivations and backgrounds of our students. While some specific recommendations and procedures follow below, we suggest a few guiding principles:

- The trip leader is responsible for the safety of the students. Field work will never be risk free, but leaders should work to identify and reduce unnecessary risk.
- Our students come from a variety of cultural backgrounds and may have different experiences and attitudes about camping, outdoors, food, alcohol, personal privacy, risk, etc. Trip leaders should work to create an inclusive environment that acknowledges these differences.
- The trip leader should be cognizant of the power they hold as professor or advisor and empower students to express any concerns they have.
- Highly structured field environments such as ships and polar research bases will have their own set of rules that must be followed. However, you are encouraged to identify and implement additional safeguards that are needed to create a safe and inclusive environment for students.

Itinerary

- It is highly recommended that field trip leaders provide a field guide with a detailed itinerary at least a week prior to the field trip so that students have plenty of time to prepare for the trip and ask the leader any questions.
- Prior to departure, a copy of the itinerary and student information (emergency contacts) should be provided to the EAS Director of Undergraduate Education (for an undergraduate course), the EAS Director of Graduate Education (for a graduate course), or the School Chair (for a field research program involving students).

Student Contact

- Bring a list of all students and their cellphone numbers
- Take attendance prior to departure from each destination
- Encourage students to use a “buddy system” at any stops
- Encourage students to bring cell phones as appropriate
- Give students your cell phone number
- Exchange cell phone number with bus driver

Emergencies

- In the event of an emergency (injury, accident) while on the field trip, contact in the following order:
 - 911 for medical assistance (or local international emergency number)
 - Emergency contact persons provided by individual before the trip
 - GT Police: 404-894-2500
 - For undergraduates: Dean of Students 404-894-2564
 - EAS School Chair
- You may also need to contact:
 - Legal Affairs for some types of emergencies: 404-894-4812
 - If this is an international based field course Office of International Education: 404-894-7475

Travel and outdoor education

- Trip leaders and PIs supporting student travel are encouraged to consider that not all students have any experience with flying on airplanes, using public transportation, etc. It is recommended that trip leaders and PIs check with students prior to their first trip as a Georgia Tech student/employee to check if they have previous experience with travel.
- If the student indicates that they have minimal prior travel knowledge, the trip leader or PI is encouraged to educate the student on the basics of travel. Remember that some students have never set foot in an airport, on an airplane, in a hotel, or on a subway train, and that these students would gain confidence and comfort from a trusted advisor's explanations of the travel experience.
- Similarly, leaders of field trips should not assume that all students will have any knowledge of outdoor education, working from small boats, camping, etc. Prior to the trip, it is recommended that trip leaders provide some online resources for students new to outdoor experiences to learn the essentials and that the leader review expectations with the group.
- Identify and share cultural norms, expectations, jargon, policies, and rules practiced in field communities that may be unfamiliar to the fieldwork team.

Resources for Camping:

REI: <https://www.rei.com/learn/expert-advice/camping-for-beginners.html>

National Park Service: <https://www.nps.gov/subjects/camping/what-to-bring.htm>

Additional Considerations for International Travel

- Investigate any vaccine requirements or recommendations.
- Determine if there are any local health and safety issues and the quality of hospital and clinical care.
- Determine if any prescription medicines may be illegal.
- Investigate whether there are any local customs or religious beliefs that you will need to respect.
- Investigate whether there are any common stereotypes or biases that may impact members of your field party.

- Ensure students are aware of the Passports and visas they will need and the lead time to obtain them.
- Check the Department of State travel advisories for the region in which you will work.

<https://wwwnc.cdc.gov/travel>

<https://travel.state.gov/content/travel/en/traveladvisories/traveladvisories.html/>

Equipment

- In order to reduce the burden on low-income students, trip leaders should procure all necessary camping equipment (tents, cookware, etc.). Safety and other field gear should be the responsibility of the project or class (work gloves, first-aid kits, radios, clipboards, any technical gear, including crampons, compasses, etc.).
- EAS has some limited field gear, including a few tents and cooking gear that may be used (within L2 storage area). Please make sure gear is completely clean before returning to storage.
- REI and GT Campus Recreation center both have camping gear available for rentals. REI generally has more readily available equipment.
- Personal gear is normally the responsibility of the individual student. Personal gear may include items like boots, protective clothing (hats, coats, etc), water bottle. Provide detailed guidance on boots and protective clothing, including lower cost solutions.
- Students may wish to provide their own sleeping bag and sleeping pad, but these can also be rented from REI.

Financial limitations

- It is recommended that students obtain travel advances for field work as well as having the university purchase their airfare, instead of being reimbursed afterwards. Long reimbursement wait times are very difficult for financially limited students.
- Normal clothing, medical, and personal care items are not reimbursable, however some of these costs are appropriate portions of a per diem.
- If there are more expensive specialized items (e.g. vaccines, preventative medicine, testing, etc.) required for fieldwork or fieldtrips that are too large to constitute a per diem cost and do not appear to be an allowable cost for Federal Grants or state accounts, it may be that other resources can be found. It doesn't hurt to ask, especially if they are presenting a burden to the students.
- While travel costs are generally covered by the grant or department, for some educational (non-research) field trips a student contribution to the costs of the program and/or their travel cost may be necessary in order to cover the costs. If this is the case, it is strongly recommended to try to identify funds (travel scholarships) for students who could not otherwise afford to attend.

Accessibility

- It is highly recommended that trip leaders inquire about any disabilities or other physical limitations prior to the trip, in order to accommodate them as well as possible on the trip. It is essential that students are aware of their environment and their potential limitations before traveling.

- In addition to disabilities, inquire about and attempt to accommodate any other accessibility issues such as those experienced by nursing mothers, pregnant women, etc.
- More info:
 - [Serrato, Gabi. 2018. How to Make Professional Conferences More Accessible for Disabled People: Guidance from Actual Disabled Scientists. Blog, Union of Concerned Scientists](#)
 - [Christopher L. Atchison, Anita M. Marshall & Trevor D. Collins \(2019\) A multiple case study of inclusive learning communities enabling active participation in geoscience field courses for students with physical disabilities, Journal of Geoscience Education](#)

Food and Diet

- It is highly recommended that trip leaders ask for dietary limitations in a survey prior to the trip.
- Students may need to be made aware of local limitations for available foods.
- It is highly recommended that trip leaders accommodate dietary preferences/needs indicated in the surveys.
- Food items for fieldwork and field trips are generally reimbursable through per diems or through direct receipts (no alcohol and receipts must be itemized).

Bathroom access

- For field trips, it is highly recommended that trip leaders provide a detailed itinerary with rest stops listed. Stops with toilets should be indicated.
- More info:
 - [Greene, Ashley, Dunne, Edgar, Giles & Hanson. Toilet stops in the field: An educational primer and recommended best practices for field-based teaching. University of Birmingham](#)

Rooming

- It is recommended that faculty do not share rooms with trainees, regardless of gender, unless there are severe space and financial limitations.
- Trip leaders should inquire about room sharing preferences on waiver (e.g. for student room sharing, indicate any students with whom the student would prefer not to room).

Harassment/general climate issues

- Harassment, including unwelcome sexual advances, verbal, or physical conduct of a sexual nature, and offensive comments related to gender, gender identity and expression, sexual orientation, physical appearance, race/ethnicity, and body size are prohibited.
- Hazing (any strenuous, uncomfortable, dangerous, or humiliating activity that serves to initiate a member into a group) is not permitted on field activities involving students. Hazing in Earth Science fieldwork can take place as part of organized rituals such as equator crossings on ships or can develop spontaneously in isolated situations.
- Each trip should have a designated person of each gender for reporting sensitive issues.

- It is highly recommended that all trip leaders complete Safe Space training (<https://lgbtqia.gatech.edu/safe-space>).
- It is highly recommended that either before the trip or at the beginning of the trip, the leader verbally transmits the policy on harassment and avenues for reporting harassment. The message from the top has been shown to have a strong influence on the climate of field experience for members of non-dominant groups.
- The trip leader is responsible for the climate of the field class or trip and for intervening as necessary.
- *More info:*
[Clancy KBH, Nelson RG, Rutherford JN, Hinde K \(2014\) Survey of Academic Field Experiences \(SAFE\): Trainees Report Harassment and Assault. PLoS ONE 9\(7\): e102172. https://doi.org/10.1371/journal.pone.0102172](https://doi.org/10.1371/journal.pone.0102172)

Prevention of racial and sexual violence

Before the trip:

- Receive training(s) in antidiscrimination, allyship, bystander intervention, and prevention of racial and/or sexual violence. Encourage field participants to take trainings including [5D strategy](#) for bystander interventions.
- Reach out to local authorities, businesses, and community leaders, especially in white communities, to provide early notice of the diverse nature of the team. Vet owners and employees of any property on which students are working, for potential signs of racial discrimination (bumper stickers, tattoos, etc).
- While planning the trip, undertake a risk assessment:
 - Is there white supremacist activity in this area?
 - Can I count on Law Enforcement be supportive of our group and activities?
 - How will I ensure the safety of Black students if they are pulled over by the police?
 - How will I ensure the safety of female, trans, and non-binary students, especially if the trip extends into the evening?
 - What is my exit plan for relocation of the field party to a place of safety if other strategies fail?

During field work:

- Be present to introduce all team members to the host community and other stakeholders.
- Ensure that students are always working in teams. Black students should be paired with at least one white student at all times. (This is the unfortunate nature of our country, that Black students are more at risk from racial violence if no white students are present.)
- If a property owner/tenant becomes hostile/angry:
 - Do not confront them.
 - If necessary, leave any field equipment/gear, and have someone else come to get it later.

After field work:

- Document hostile encounters that team members face during field visits regardless of severity, including microaggressions.
- File a written report on any safety-related incidents that occurred in the field (PI mandatory) as well as a survey to all participants (optional, anonymous).

More info:

[Anadu, J., H. Ali, and C. Jackson \(2020\), Ten steps to protect BIPOC scholars in the field, *Eos*, 101, <https://doi.org/10.1029/2020EO150525>.](https://doi.org/10.1029/2020EO150525)

[Giles, S., Jackson, C. & Stephen, N. Barriers to fieldwork in undergraduate geoscience degrees. *Nat Rev Earth Environ* 1, 77–78 \(2020\). <https://doi.org/10.1038/s43017-020-0022-5>](https://doi.org/10.1038/s43017-020-0022-5)

Environmental and Cultural Impact

- Ensure that appropriate permits have been secured for field research and share information about permitting process with students.
- If research will take place in an environmentally sensitive area such as a designated Wilderness Area, Park, or cultural heritage site, share applicable regulations for field work and camping in the pre-trip briefing documents.
- Consider ways in which the environmental impact of your field party can be minimized (<https://lnt.org/why/7-principles/>).
- Consider how a group of largely white or American researchers might be perceived if a field trip is taking place in a different country or neighborhood within our own city. Brief the students on areas of cultural sensitivity, and strategies to ensure respectful and inclusive interactions with these communities. This may include assigning pre-trip readings on contemporary social issues in addition to the scientific background material.
- To the extent possible, reach out to members of the local community and welcome their involvement in the field research.

General Safety

- Write a timeline of activities “before the field”, “in the field”, and “after the field” with relevant activities. For example, sit down with all participants, in private, and talk about the physical and mental hazards of the field site, and invite them to share any concerns, or invite them to follow up with their doctor to make sure that they are prepared and will be safe.
- In the field, review every day what the expected hazards are going to be, and prepare a list of safety steps you will take as the leader, and a list of safety steps participants must take to keep themselves safe (drink 2L of water, TALK TO ME about how they are feeling, etc).
- Identify location of nearest hospital in advance of trip.
- It is recommended that at least one trip leader have first aid and CPR training (<https://ehs.gatech.edu/content/cpraedfirst-aid-training-offered-ehs>).
- Bring a First Aid kit that is tailored to the length and environment of the field trip.
- Prepare for any specific hazards for a region e.g. dangerous flora/fauna, civil unrest, weather.
- Off-road/gravel/snow/ice driving conditions/risks (know how to get unstuck).

Roadside Safety

- Vests must be worn at all times when stopped on the side of the road and headphone use is not permitted while on the roadside so that you can listen to all instructions. Make sure to discuss the rules with students before they first exit the van.
 - If travelling with multiple vans then make sure to explain rules over walkie talkies, walk to each van, and/or have each driver review rules.

Water Safety

- If you will be working in or around water, ask trip participants about their swimming and boating experience before you leave. Encourage a basic swimming and water safety course if necessary.
- Make sure students are aware of tide schedules and amplitudes, strength of currents, and any other water hazards.
- If trip involves small boats, review boating safety with participants and require personal flotation devices to be worn at all times for those with weak swimming skills. It may be best to require life vests for all participants in some situations.

Outdoor Safety

- Brief students on any anticipated dangerous conditions (snakes, poison ivy, lightning, etc.).
- An individual should never be left alone in remote environments, or with individuals with whom they're uncomfortable.
- Wilderness safety training is recommended for extended field trips in remote areas without easy access to medical care.
- In areas of steep topography, students should have appropriate gear (hard hats, boots, and work gloves) and should be aware of rock, other falling debris, and falling hazards.

Resources:

<https://www.weather.gov/safety/lightning>

<https://srelherp.uga.edu/snakes/index.htm>

Van Rentals and Safety

- For in-state travel passenger van rental, make the reservation through Enterprise, and indicate that you are with Georgia Tech to get the contracted rate.
- Students are encouraged to use university provided transportation if available. Students that intend to take personal transportation will be required to sign a waiver releasing the University from any and all liability associated with the unsanctioned travel activities.
- Arrange drivers ahead of time and make sure that each driver is licensed and has taken van safety course.
- All drivers need to take the “15 Passenger Van Safety” course:
<https://training.osp.gatech.edu>

Alcohol and Drugs

- Please consider how alcohol use will impact the physical safety of all participants, the inclusion of students of all backgrounds including those whose culture/religion discourages or restricts alcohol consumption, and the role alcohol often plays in gender-based harassment and sexual assault. A culture of drinking does not have to be an inherent part of field work.
- If trip is an activity with undergraduate participation or an undergraduate class, no alcohol is allowed in camp, field research facility, vans or bus, or for group meals or other organized group activities. Outside of camp and group activities, undergrads are responsible for following local laws. Trip leaders should not consume alcohol with undergraduate students, even outside of camp. The trip leader is responsible for safety of camp and students and may set additional rules for camp as necessary.
- If the trip is a primarily graduate student or research activity, no use of alcohol is permitted during field activity and during transportation to/from the field. Heavy use of alcohol (intoxication) in field settings is not permitted. The PI may allow limited alcohol consumption with meals after field activity has concluded subject to local laws and rules of field research facility. PI is responsible for safety of camp and may set additional rules for camp as necessary. Outside of camp and group activities, students must follow local laws.
- Possession or use of illegal drugs on EAS sponsored field trips is never permitted. This includes marijuana on EAS trips that originate in the state of Georgia.

Weapons

- Firearms or other weapons are not allowed on EAS sponsored class field trips.
- For field work involving graduate or undergraduate students, the PI must present a safety plan to the chair in advance of the fieldwork if firearms or other weapons will be required for research or safety reasons. (Polar bears, shooting leaves from tree-tops, etc.)

Conduct Violations

- A code of conduct form should be signed by each member on each field trip prior to departure, and is required for all fieldwork involving students, whether part of a formal class or a research project.
- Students may be sent home for serious or ongoing conduct violations.
- Students who are sent home should be taken to the nearest location where transportation is available (e.g. bus station, train station, or airport) and are responsible for any costs incurred.
- If it comes to this, it is highly recommended that the EAS Chair be contacted in advance.