

NSF/EarthScope's Mid-continent Rift Educators Program

Congratulations! You have been selected to be a participant in the Mid-continent Rift Educators Program. The program officially begins on Sunday, August 10, 2014 with a welcome reception from 7:00 p.m. to 8:00 p.m. The program ends Friday afternoon, August 15, 2014. This document provides information that may help as you make plans to attend this summer workshop at Michigan Technological University.

Travel

MRSEP provides a \$1,000.00 stipend to participants which will be mailed after the workshop. It is expected that you will cover your own travel expenses using part of this stipend. Driving will be the cheapest way to get to the workshop for many of our participants. If you want to fly to the workshop, you will need to fly with United Airlines. All flights to the Houghton/Hancock Airport fly out of Chicago O'Hare. The Sunday flight that will get you to the workshop on- time is:

Flight # UA5295
 Depart:
10:51 a.m.
Sun., Aug. 10, 2014
 Chicago, IL (ORD - O'Hare)

Arrive:
1:11 p.m.
Sun., Aug. 10, 2014
 Houghton/Hancock, MI
 (CMX)

Travelers on this flight will be picked up at the airport by MRSEP. If you arrive on a different flight, as soon as you know your itinerary, please send it to Carol at caengelm@mtu.edu or call her at 402-212-8047. We will try to accommodate everyone.

Another option you have, with more choices and with flights on multiple airlines, would be to fly into Marquette, MI, and then rent a car to make the two hour drive from Marquette to Houghton.

Packing List

Recommended:

day pack	hat
light rain jacket/poncho	walking shoes (at least one pair with closed toes)
fleece or sweatshirt	clothes to layer: shorts, t-shirts, jeans, etc.
sunscreen/bug repellent	camera
toiletries (shampoo, soap, etc.)	cloth bag for collecting mid-continent ridge rocks
alarm clock	pens/pencils for writing in journal
water bottle for refilling	personal laptop or tablet

Optional:

head bug net
 GPS/ computer connector/ compass

Provided for you when you check-in:

Name Badge and Key card to enter the building
 Meal card for on-campus meal plan (some meals will be eaten off-campus)
 Your Michigan Tech log-in and password
 Bedding/ towels/ washcloth (ask for additional items, like two towels, if you want)



Location

Michigan’s Upper Peninsula
 Michigan Technological University
 1400 Townsend Drive
 Houghton, MI 49931
<http://www.mtu.edu>

Lodging

Hillside Place
 1801 Woodland Rd.
 Houghton, MI 49931-1148



Front of Hillside Place

MTU University map at <http://www.mtu.edu/maps/>
 Hillside Place is #48 on the MTU University map
 Parking is available behind the building- look for the signs

All participants and presenters are provided with lodging in Hillside Place with check-in on Sunday, August 10th and then check-out on Friday, August 15th. Be sure to contact Carol Engelmann (cengelm@mtu.edu) if you will need lodging for an additional night.

Hillside Place is open early on Sunday, it would be best to plan to arrive Sunday afternoon so you can get settled in your room and meet your apartment mates before the 7:00 p.m. meeting.



Hillside Place Apartment Floor Plan

As you can see on this Hillside Place apartment floor plan, there are four bedrooms that are connected to each other. Each participant will have his or her own individual bedroom. Each apartment has two bathrooms; each bathroom is shared by two participants. All four bedrooms share a kitchen and a living area.

Food

All breakfasts will be eaten in the cafeteria on-campus. They begin serving breakfast at 7:00 a.m. You will want to plan your morning so you have time to eat and arrive to the classroom on time for the morning presentation. Some days we will be eating a picnic lunch and/or dinner off-campus. Please inform us if you have special dietary requirements/requests. Please be specific, as we will do our best to accommodate your requests.

When you arrive at the cafeteria, you will present your meal card at the door so it can be swiped. You have credit for meals beginning Monday breakfast through Friday at lunch. Modifications in your meal plan can be made if your travel plans require you stay Friday night, or, that may be an opportunity to enjoy some of the local cuisine.

Schedule

There is a tentative schedule attached to this document. You will be given a final schedule on Sunday evening along with other materials.

Questions?

Call Carol's cell at 402-212-8047 if you have questions that need to be answered before you arrive in Houghton. Once in Houghton, you can still call Carol's cell if you need help or an immediate answer.

MRSEP 2014 Summer Workshop Agenda Draft

Prior to arrival- participants will be asked to visit IRIS website to review AED Modules and read GSA Article

SUNDAY- 8/10- WELCOME

Date	Time	Facilitator/s	Location	Activity
8/10	Noon-6pm	Engelmann and project facilitators	Hillside Dorm	Participants obtain room keys, towels, sheets and internet log-in from main desk. Settle into dorm rooms.
	6pm-7pm		Hillside Great Room	Light snacks will be provided in the Hillside Great Room beginning at 6pm. Welcome Reception(Introductions and participants provided with name tags, equipment, agendas, meal information, typical daily schedule, how to use the field journals, notebooks, etc.)
	7-8 pm	Engelmann/Waite/Van der Lee/Stein/Robinson/Olds/McQuillan	Hillside Meeting Room	<p>Introduce the Storyboard for AED: Telling the story of what we know and how we know about the MRS:</p> <ol style="list-style-type: none"> 1. MRS and the Wilson cycle, 2. MRS and surface features, 3. MRS and geomagnetism, 4. MRS and gravity, 5. MRS seismic imaging (SPREE and GIMCR), 6. Earthquakes and plate tectonics, 7. MRS compared to modern active rifts. <p>Pre-Intervention Assessment (Content and Community Place-based)</p>

MONDAY- DAY 1- 8/11 Rift Geology of the Keweenaw from land				
8/11	7:00-7:45	Breakfast	On Campus	
	8:00-8:15	Robinson	Hillside Dorm Meeting Room	Introduction to EarthScope with handouts
	8:15-8:30	Van der Lee	Hillside Dorm Meeting Room	Short explanation connecting MRSEP to EarthScope's SPREE/GIMCR
field	8:30-9:00	Rose	Hillside Dorm Meeting Room	Intro to map of Monday's field stops Depart to vans
	9:30-?	Rose (Waite)	1 st Stop	Field activities examining basalt rock and flow features Reading geologic maps and Greenstone Flow formation Vesicular Basalt and mineral deposits Basalt Sample Collection Intro to modern rifts and rift sediments Lake Superior and MRS Tilted layers of Peninsula and Isle Royale (Maps) Examine massive Copper Harbor Conglomerate?
	12:00-12:30	Lunch in the field		
	12:30-1:30	Rose (Waite)	2 nd Stop	
	2:00-2:30	Rose (Waite)	3 rd Stop	
	3:00-3:30	Rose (Waite)	4 th Stop	
	4:00-6:00	Rose (Waite)	5 th Stop	
	6:00-7:00	Dinner in the field	Cu Harbor	
rtn	7:00-8:00	Rose (Waite)		Travel back to Houghton
	8:00-8:30	Engelmann	Hillside	Arrive at dorm- staple and turn in field journal original pages. MSREP Facilitators debrief the day and look for misconceptions in journals.

TUESDAY- DAY 2- 8/12- “Potential Fields” Day				
8/12	7:00-7:45	Breakfast	On Campus	
	8:00-8:45	Waite/ Engelmann Waite/ van der Lee	Hillside Dorm Meeting Room	Debrief participants on previous day’s activities Address misconceptions found in journals Introduction to today’s agenda and field activities
field	8:45-9:00	Depart to Vans		
	9:30-11:30	Waite/ van der Lee	1 st Stop + additional stops for readings	Intro to potential fields activities (gravity and magnetic), conduct gravity readings across the peninsula (perpendicular to the rift)
	12:00-12:30	Lunch in the field		
	12:30-1:30	Waite	At lunch stop?	Map making and analysis of potential fields data collected in the morning
	2:00-4:00?	Waite/ van der Lee	Next stops??	Reading gravity and magnetic data maps of MRS
rtn	4:30-5:00	Break		
	5:00-6:00	Dinner on campus		
	6:30-6:45	Engelmann	Hillside Dorm	Staple and turn in field journal original pages. MSREP Facilitators debrief the day and look for misconceptions in journals.
	6:45-7:45	McQuillan	Hillside Dorm or DOW?	IRIS Activity- “East African Rift Mystery”
	7:45-8:15	McQuillan/Olds/Engelmann/Robinson	Same as above	Participants work on developing skits

WEDNESDAY- DAY 3- 8/13- SEISMIC DAY-SPREE/GIMCR and EARTHSCOPE				
8/13	7:00-7:30	Breakfast	On Campus	
	8:00-8:45	Engelmann/ Waite		Debrief participants on previous day's activities Address misconceptions found in journals Introduction to today's agenda and field activities
field	8:45-9:00	Depart to Vans		
	9:30-12:00	Waite/ van der Lee		Set up seismometer Intro to seismic activity, conduct seismic field work activity Whole group debrief seismic activity, data collection, data analysis
	12:00-12:30	Lunch in the field		
rtn	1:00-2:45	Waite/ van der Lee	610 DOW?	Use of seismic data collection for the SPREE and GIMCR research projects Findings from the SPREE and GIMCR research projects
	2:45-3:45	Waite/ van der Lee/ McQuillan/Olds/Engelmann	610 DOW?	Brainstorm how to connect data and findings from the SPREE and GIMCR research projects to the MRS AED Module and Chapters Partnerships determine which topic each will be responsible for creating. Begin making an outline/draft/etc. for first assignment due at next meeting and discussing these with MRSEP facilitators.
	3:45-4:15?	McQuillan/Olds	610 DOW?	Present overview of on-line IRIS and UNAVCO educational activities.
	5:00-6:00	Dinner on campus		
	6:15	Engelmann	Hillside Dorm	Staple and turn in field journal original pages. MSREP Facilitators debrief the day and look for misconceptions in journals.
	6:20-7:20	Olds	Hillside Dorm	UNAVCO Activity- Geodesy and Iceland Rift

			or DOW?	
	7:20- 8:00	McQuillan/Olds/Engelmann/Robinson	Same as above	Participants work on developing skits

THURSDAY- DAY 4- 8/14- Rift Geology from the Water				
8/14	7:00-7:45	Breakfast	On campus	
	8:00-8:45	Engelmann/ Waite		Debrief participants on previous day's activities Address misconceptions found in journals Introduction to today's agenda and field activities
field	8:45-9:15			Depart to Boat Dock and Board
	9:30-10:30	Stein	On boat	Wilson Cycle, relation to the MRS and determining type of rift
	10:30-12:00	Waite/Rose?		Examine rift deposits and discuss rift geology
	12:00-12:45	Cookout Lunch on shore	Which shore?	
	1:00-3:45	Waite/Rose?		Examine rift deposits and discuss rift geology
rtn	3:45-4:15?	Engelmann/Waite/ McQuillan/Olds	On boat?	Brainstorm how to use rift geology in the and rift sediments in the AED
	5:00-6:00	Dinner on campus		
	6:15-6:20	Engelmann	Hillside Dorm	Staple and turn in field journal original pages. MSREP Facilitators debrief the day and look for misconceptions in journals.
	6:20-7:30	McQuillan/Olds/Engelmann/Robinson	Hillside Dorm	Presentation of skits
	7:30-8:30	Waite	Hillside Dorm	AEDs and process to acquire touch screen computers for classrooms and kiosks for informal institutions.

FRIDAY- DAY 5 - 8/15 - Paleomagnetism and Planning for Future				
8/15	7:00-7:45	Breakfast	On campus	
	7:45-8:45	Engelmann/Waite		Debrief participants on previous day's activities Address misconceptions found in journals Instructions for applying for stipend Post-Intervention Assessment
field	8:45 - 9:00	Depart to Vans		
rtn	9:00-10:30	MTU GeoPhysics?	1 st Stop?	Paleo magnetism presentation
	11-12:00	Seaman Mineral Museum		
	12:00-1:00	How about catered lunch at the museum (outside)?		
	1:00-3:00	Engelmann/Waite/McQuillan/Olds	Hillside	Storyboard chapters and sub-pages for AED. Establish expectations for first follow-up meeting: Teams will have located all images, all text, animations, etc., for their pages by first meeting. Establish locations and dates for 2 follow-up meetings: Fall 2014 and Spring 2015. Post Intervention Assessment
	3:00-3:30			Turn in dorm keys and depart for drive home.