

**Anchors Aweigh!**

**Middle & High School Teachers**

**Earn 2 Graduate Credits  
from Michigan Tech  
University (ED5661)**

**Application Deadline:  
Friday, May 13**

**Limited to 12 participants**



# Teaching Mathematics through Navigation

**Monday, June 27 - Friday, July 1, 2011 - Michigan Technological University**

**Cost:**

**\$300 Off Campus**

**\$540 On Campus** includes  
4 nights lodging & meals

Explore innovative ways to teach geometry, measurement, and algebra through the practice of marine navigation. Teachers will learn navigation techniques via daily hands-on experiences aboard Michigan Tech's Research Vessel, *Agassiz*, and become proficient in solving navigation problems using mathematics, charts, and electronic instruments.

Instructor: R. Stephen Roblee, Professor Emeritus, Michigan Tech Dept. of Mathematical Sciences and Captain R/V *Agassiz*.

**For Information:**

**Joan Chadde**, Institute Coordinator  
Center for Science & Env. Outreach  
Michigan Technological University  
1400 Townsend Dr.  
Houghton, MI 49931

Phone: 906-487-3341

Fax: 906-487-1620

Email: [jchadde@mtu.edu](mailto:jchadde@mtu.edu)



**Great Lakes Maritime  
Research Institute**

*A University of Wisconsin - Superior and  
University of Minnesota Duluth Consortium*



**CFIRE**

University of Wisconsin-Madison



**Michigan Tech**

**Michigan Technological University**

## Cost

**\$300** registration includes: 2 graduate credits, half-day trips daily aboard the R/V *Agassiz*, instructional materials. **\$540** also includes 4 nights lodging, 4 breakfasts and 4 dinners. (Grants from the Great Lakes Maritime Research Institute and CFIRE at University of Wisconsin-Madison, along with a departmental stipend from Civil & Environmental Engineering, reduces official cost of Michigan Tech graduate credit (2010-11 official Michigan Tech Applied Science Education graduate tuition for Residents/Non-Residents is \$431 per credit).

**Full payment is due June 3** via check payable to: *Michigan Tech University D93720*; or by credit card (Visa, MC, Discover) by calling the MTU Cashier's Office at 906-487-2247. Refunds only if space filled.

## Financial Aid

Michigan applicants who teach grades 4-10 may apply for a COSEE Great Lakes Marine Immersion scholarship through Steve Stewart (stew@msu.edu) at Michigan Sea Grant. Wisconsin applicants should contact: Jim Lubner (jflubner@aqua.wisc.edu) at Wisconsin Sea Grant.

## Course Credit & Requirements

Participants earn 2 graduate credits (ED5680) from Michigan Tech. To receive credit, participants must:

- Complete pre-course readings.
- Actively participate in the entire Institute.
- Design TWO lessons (rubric provided) on a topic related to the institute that address state/national standards. **Lessons due by September 1, 2011.**

## About Michigan Tech & Local Area

Michigan Technological University is located east of downtown Houghton (pop.7,000).and served daily by United Airlines (800-864-8331 or united.com) from Chicago to the Houghton County Airport. Neil's Taxi is available from the airport to campus for about \$20 per person (906-482-5515). Houghton has its roots in the copper mining days of the mid-19th century. Hiking and mountain biking are outstanding at Michigan Tech Recreational Trail System, or stroll the Lake Superior beach at McLain State Park, or visit a nearby nature sanctuary. Learn more about MTU: <http://www.mtu.edu> and Keweenaw Tourism:

[www.keweenaw.info](http://www.keweenaw.info)

**Michigan Technological University**  
Houghton, Michigan



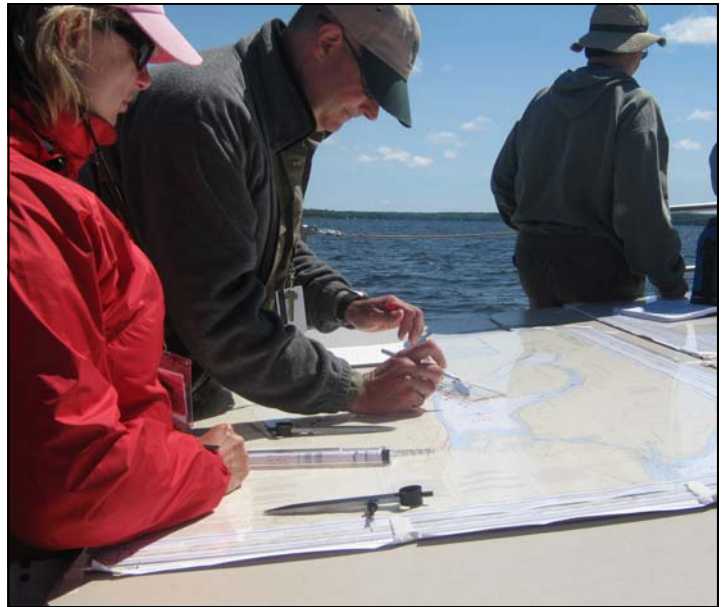
## How to Apply

Application forms available at: <http://wupcenter.mtu.edu>

**Application deadline: Friday, May 13**

**Submit applications to:**

Joan Chadde, Institute Coordinator  
Center for Science & Environmental Outreach  
105 Dillman Hall—Michigan Technological University  
1400 Townsend Dr., Houghton, MI 49931  
Phone: 906-487-3341 FAX: 906-487-1620  
Email: [jchadde@mtu.edu](mailto:jchadde@mtu.edu)



## Accommodations

For an additional \$240, participants will receive four nights lodging (single room) in MTU's new Hillside Place 4-person suites with two bathrooms, kitchen and living room, along with 4 dinners and 4 breakfasts. Michigan Tech Trails and downtown Houghton are within easy walking distance.

