Website: http://ferm.mtu.edu

Instructor: Jim Rivard  
Forester/Lecturer  
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Office Hours: T,W 1:00pm – 2:00pm;Th 12:00pm – 1:00pm and by appointment

Course Objective and Description: To gain real world experience by working on projects involving active management of our natural resources.

Weekly Meeting: This semester the FERM team will meet weekly on ______ at ______ in room ______.

Philosophy
The FERM experience is designed to be an honors course in which you attain practical experience. Because it is an honors course, the FERM team is expected to be self initiated. While you will be operating within the framework of the ongoing FERM project, the level of achievement and success your team attains is wholly dependent upon yourselves. Unlike most courses, your endeavors are not only academic, but also actual, real life implementations of forest and environmental resource management. The decisions you make and the work you accomplish directly impact the resource, the environment, the School of Forest Resources and Environment Science, and our society. In addition to traditional activities accomplished by resource managers, the FERM residency will provide unique experiences that are not part of most standard undergraduate training programs.

Course Policies
1. Professional behavior. Be on time, show up, dress appropriately, etc…
2. Three hours/credit hour/week of project time.
4. Turn in photographs, reports and presentations to instructor by the end of class.
5. All computer work/files should be stored on the “FERM” drive (\kiwi\ferm).

Course Requirements

Equipment:
Compass with Azimuths (Suunto Navigator or Silva Ranger) – approximately $50 from MTU bookstore or Forestry Suppliers (www.forestry-suppliers.com); required. If you are 90%+ sure you will become a forester, think about getting the Suunto KB-14D (azimuths with declination adjustment).

Hard hat – available from Swift’s hardware ($7-$10) and other area hardware stores, Forestry Suppliers, or local chainsaw dealers. (required).

Rain gear (highly recommended).

Dress: If the wind is blowing or we are in an area that has recently been logged, you will need to wear a hard hat. Work boots with good ankle support are highly recommended to avoid sprained ankles. Steel shanks are recommended to prevent branches and twigs from penetrating the sole. A “gear bag” with the following is recommended: light jacket, warm coat, warm hat, gloves, rain gear, extra socks and bug spray (bugs should not be a big problem this time of year).
**Reporting and Grading**

FERM team members are to keep a journal of all activities accomplished as part of class. For each field/office day, record information about the activities you worked on.

As an honors course it is assumed that if a student has exerted appropriate effort and gained professional experience that will benefit him or her in their career, then that student has earned an “A”. Grades will be weighted in the following method:

Performance reviews with instructor and instructors assessment of your performance: 40% (reviews are informal; students should have their journal of activities with them for discussion with the instructor; scheduled monthly or as needed)

Team Leader Evaluations: 20% (The instructor will evaluate team leaders)

Weekly Meeting Attendance: 10% (5% off for each missed meeting; 2.5% off for being late)

Implementation report and presentation: 30% (team members that do not contribute or contribute very little will be given minimal points).

A  93%+, AB 88-92%, B 83-87%, BC 78-82%, C  73-77%, CD 67-72%,  D 60-67%

**University Policies**

Academic regulations and procedures are governed by University policy. Academic dishonesty cases will be handled in accordance the University's policies.

If you have a disability that could affect your performance in this class or that requires an accommodation under the Americans with Disabilities Act, please see me as soon as possible so that we can make appropriate arrangements. The Affirmative Action Office has asked that you be made aware of the following:

*Michigan Tech complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disabilities Act of 1990. If you have a disability and need a reasonable accommodation for equal access to education or services at Michigan Tech, please call the Dean of Students Office, at 487-2212. For other concerns about discrimination, you may contact your advisor, department head or the Affirmative Action Office, at 487-3310*

**Academic Integrity:** [http://www.studentaffairs.mtu.edu/dean/judicial/policies/academic_integrity.html](http://www.studentaffairs.mtu.edu/dean/judicial/policies/academic_integrity.html)

**Affirmative Action:** [http://www.admin.mtu.edu/ao/](http://www.admin.mtu.edu/ao/)

**Disability Services:** [http://www.admin.mtu.edu/urel/studenthandbook/student_services.html#disability](http://www.admin.mtu.edu/urel/studenthandbook/student_services.html#disability)


**Professional Skills Training Topics**

*these sessions can be offered upon request from students.*

**GARMIN GPS/DNR Garmin Utility** - Basic use of the Garmin GPS and DNR Garmin Arcview extension.

**Field Work Planning Session** - Before you go into the field on a new property it's important to have a plan of action in order make efficient use of your time. This training session will include the practical use of DOQ's, topo maps, GPS/GIS and basic stand mapping from the DOQ air photo. A route to the site will also be planned and programmed into the GPS.

**Cruise and Tally Software** (Cruise Sheet, TCruise) - Short training session on how to use these software packages to quantify your cruise data. Use of pocket PC handheld to collect data.
**Suunto line running compass/hip chain** - Instruction on use and adjustment of the Suunto compass and hip chain to run lines. This method allows one person to establish property lines. GPS will also be used. This exercise could be done at the Nara Nature Trail.

**Selection system marking** - Training on the selection system of hardwood marking for those that have not had it yet. "Crop Tree Release", which is used by the Michigan DNR locally will also be discussed.

**Trimble GPS/Arcpad, Recon/SoloForest** – Learn how to use the Trimble GPS with Arcpad for GIS/GIS integration and data collection and/or Recon with SoloForest and TCruise.

**Tree seedling care and planting** – If time permits, we will be doing some extensive tree planting. Seedling care prior to and during planting is critical to survival. Proper planting techniques will also be demonstrated.

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**Mentorship**

The FERM is designed to be an environment in which the process of mentoring takes place. This can occur between instructors and students, but should also occur between upper level and lower level students. Those in the course whom are juniors and seniors have a responsibility to provide leadership and training to sophomores and freshmen whom have not been through fall camp or been involved in the FERM previously.

**Equipment/Supplies**

As part of the FERM initiative, a collection of field equipment is being compiled that will provide you with access to state of the art tools. An equipment and supply list is available on the FERM web under Team Resources. All equipment MUST be checked out in writing from the FERM equipment room (room 134).

**Vehicle Use Policy/Procedures**

Four vehicles are available for student use on a 1st come 1st serve basis.

1. These vehicles are owned by the FERM and must be treated with care to prolong their life.
2. Take corners slow and accelerate slowly unless safety is an issue.
3. The vehicles are labeled with the school name!!!!
4. Do not use 4x4 or 4WD on dry pavement.
5. Antilock brakes are dangerous on snowy/icy roads. While you will be able to steer, you may not be able to stop as fast as without them. Give yourself lots of stopping room.
6. Drivers must have under 5 points on their license.
7. Be aware of ground clearance. Avoid rocks, chunks of ice/frozen soil, ruts, etc….
8. Do not step on the gas hard in slippery conditions when in 4WD. The front wheels don’t kick in until the back wheels slip and you can destroy the 4WD mechanism.
FERM Projects – Spring 2010

Huron Creek Recreational Trail

*Unit 9 Hardwood Timbersale – inspections

*Dow Tract – inspections

*Tech Trails Timbersale – red pine, Pilgrim Rd.;

*Unit 10 hardwood Timbersale – cruise, start marking.

Keweenaw Trail signage – contact Don Kauppi

Mass Tract – inspections?

Wildlife Camera – use one from Joe Bump

Otter River Camp Property – cruise and Stewardship Plan.

Sugarbush

Jack Pine – post sale measurements; basic cruising in 20-30 yr old – for thinning

Dow Tract and Techtrails – wildlife habitat assessment (snags, wildlife trees)

BMP Project – probably nothing until snowmelt

Nursery – establish white spruce, hemlock and other species.

MNA – management plans for properties.

Estivant Pines – line work.

Deer Exclosure - Checkup/Tree Planting

Ground Truth new cover type map – visit stands, sample, verify cover definition.

Conferences/Training – 2/16/2010 – DNR Marking/Cruising training in Marquette

Organizations – Forest Guild (free to students); http://www.forestguild.org
  - SAF ($35/year); includes Journal of Forestry, Forestry Source, all kinds of online info
  - Online Journals

* must be completed this semester.