Forestry Field School
FOR 312 Syllabus
Fall 2017

Instructor: **Jim Kiser**
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Course Credits: This course combines approximately 90 hours of instruction and assignments for 2 credits. The course is an intensive 2-week course that combines lecture, field laboratories, and discussion periods. Field activities will be in our local McDonald-Dunn Forest for the first week. Breakfast and lunch and transportation from the College and back are provided. The second week activities will be on the Eastside Oregon Forests. Transportation, all meals, and housing will be provided for the second week.

Prerequisite: Admittance to the College of Forestry Professional School

Course Format: First Class Meeting – Sunday, September 3rd, 7:00 a.m.
Richardson Hall, Room 107

Week one will be on the Oregon west side forests, primarily in McDonald-Dunn Forest, Corvallis Oregon.
Week two will be on the Oregon east side forests. Sites will vary.
Details and accommodations will be discussed during the first week

Recommended Texts: Kiser. 2010. **Surveying for Forestry and the Natural Resources. 2nd ed.** (from FE210)**;** Bell and Dilworth. **Log Scaling and Timber Cruising. 2007** (will be used in FOR321).

Required text: Kiser, 2015. **Field School Workbook Manual** (I will provided this for you).

Required Materials:

Hardhat – (a hardhat will be made available to you if you don't have one) -
Handheld scientific calculator – Recommended calculator is the Texas Instruments TI-30Xa, available at the OSU bookstore – around 10 bucks
Transit style field notebook - Provided
Field boots – does not have to be caulks
Photo scale ruler
Full-circle protractor
Small plastic triangle
Field School Manual – Provided
Reference Book - Provided

Optional Materials: **Level style field notebook** - Provided
Field survey vest

Personal lockers: Personal lockers are not available at this time

The Sequence of the Field School Course:
The Field School is the entry point course for students who have been admitted to the College of Forestry Professional Program.

Course Objectives:
The new Professional Forestry program will be a mix of current OSU College of Forestry students and transfer students from various community or other colleges. The key objective for the Field School course is the establishment of core baselines for forestry knowledge, forestry equipment use, and forestry field measurement techniques for all of these students entering the professional school. The objective will be met through an integration of field measurement exercises and examination/discussion of the development stages of managed forest stands in both western and eastern Oregon. Key topic areas will include the biological, mensurational, operational, and supply chain assets associated with each of the primary development stages in both of the geographic areas.
Success in this objective will be met by students' abilities to:

1. Become very familiar with the traditional tools of Professional Foresters including the use and maintenance of:
    - Aerial photos
    - Relaskop and prisms
    - Cruiser's stick
    - Pacing
    - Spencer tapes
    - Compass, both Silva and staff compass
    - Increment core
    - Field safety and safety equipment

2. Become very familiar with the traditional measurements of Professional Foresters including:
    - Ground measurements
        - Horizontal and slope measurements
        - Area measurements
        - Vertical measurements
    - Tree measurements
        - Standing tree diameter (DBH, diameter at specified height,
        - Standing tree height (live crown, total)
    - Plots
        - Fixed area
        - Variable

    - Log measurements

    - Log scaling
        - Log defect
        - Log merchandising
    - Log volumes

3. Become very familiar with the characteristics of stands at different management stages including 1) Regeneration, 2) Growing from non-merchantable to merchantable (thinning stage), 3) Merchantable, and 4) Older stands.

    - Planting stock considerations
    - The planting process
    - Stocking levels
    - Crown area and basal area relationships
    - Understory
    - Management strategies

4. Become familiar with the characteristics of the harvesting process
    - Ground-Based
        - Felling
        - Merchandising
        - Transportation
        - Logging safety
    - Steep-ground-Based
        - Felling
        - Merchandising
        - Transportation
        - Logging safety

5. Become familiar with the characteristics of the working forest supply chain
    - Domestic
        - Product
        - Transportation
    - Export
        - Product
        - Transportation

6. Hydrology
    - Understand vegetation components of the riparian zone
    - Understand mapping units of streams
        - Pools
        - Riffles
    - Understand aquatic habitat function
    - Understand stream discharge
    - Understand components of stream life

The second and third objectives for the field school will be the development of team/group skills and development of sense for the role of team/classmates and the College in the present and future. These objectives

will be met through a series of discussion/presentations led by both instructors and students throughout the two week term.

Students with Disabilities
Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098.

Oregon State University policy on Student Conduct
http://oregonstate.edu/studentconduct/code/index.php Students are expected to uphold the Academic Honor Code published by their respective Academic Unit. The code is based on the assumption that all persons must treat one another with dignity and respect in order for scholarship to thrive, (2) Students are also expected to follow the academic and professional standards of the academic units, and (3) Choosing to join the Oregon State University community obligates each member to a code of responsible behavior.

College of Forestry Code of Professional Conduct
http://studentservices.forestry.oregonstate.edu/college-forestry-code-professional-conduct The College of Forestry is a community of faculty, staff, students, and visitors that stretches across all spectrums. Every member of the College community is responsible for conduct that creates, promotes, and maintains a learning and work environment that is open to and welcomes all persons. As a community, we embrace each member through the acknowledgement, honoring, and celebration of our commonalities and our differences.
The foundation for maintaining this environment requires that all persons must treat all others with dignity and respect at all times. The College fully supports the mission and goals of Oregon State University and affirms its support of the University policy against discrimination (http://oregonstate.edu/dept/affact/policy/discrimination.html), as well as the University's policies on honesty, ethics, and substance abuse (including alcohol) (http://oregonstate.edu/admin/stucon/).

Course Policies

1. Students are expected to be present for all of the course days

2. To receive credit, assignments must be turned in on time.

3. All work must be neat, legible, and complete. All steps should be shown. Sample calculations and a summary table may be used to illustrate repetitive calculations. Use words to explain the computations where necessary. Use sketches and drawings where required or helpful. Incomplete, undocumented work is unacceptable.

4. All figures, drawings, and tables should be titled.

5. **Any requests for deviations in the course policies, schedule, or deadlines must be made in writing to the instructor. These requests should be made in the form of a typed business style letter that clearly states and defends your request. E-mail is acceptable but should be confirmed as having been received.**

Grading:

Final grades for the course will be based on the planned following:

Item	Total points
Attendance and Participation	140
Daily Worksheets	70

Letter grades will be based on the following:

Letter grade	% of total
A	90
B	80
C	70
D	60
F	<60

Plus and minus grades will be given where appropriate.

2017 Field School Schedule

Sunday 9/6	Time	Topic	Led by:
Day 1	7:00-8:00	**Welcome, settle in, refreshments – Peavy 027**	All
		Introductions and introduction to the course	Jim/Class
		Rules and Roles of the course – Assign role groups	Jim
			Jim/Class
	8:00-8:30	**Head to College Forest – Club Cabin**	
	8:30-9:00	**Field Lab – Pacing and field notes-Peavy Field**	Jim
	9:00-12:00	**Establishing your pace**	Field Lab
		Establishing your pace error	Field Lab
		Pacing with obstacles	Field Lab
		Pacing and compass – Cronemiller Lake	Field Lab
	12:00-1:30	Lab Debrief/Traverse calculations review	
		Lunch and back to OSU	All
	1:30-2:00	**Aerial Photo review**	Jim/Class
	2:00-2:30	Stereo vision	Jim /Class
	2:30-3:00	Photo exercise – Interpretation	Class Lab
	3:00-4:30	Plot Layout	Jim /Class
	4:45-5:00	Daily wrap-up	All

Assignment:

Field books should be cleaned up and checked. Copies made if needed.
Field books and worksheets are due Tuesday at 7:30 a.m.
Reading: Safety section notes - pages 34-50
Reading: ODF Forest Practices Notes – pages 75-82
Hand in the signed safety acknowledgement sheet – Tuesday morning

Tuesday 9/8	Time	Topic	Led by:
Day 2	7:00- 8:00	Settle in-breakfast - Field safety talk	Everyone
	8:00-9:30	Statistics review/questions	Jim/Class
	8:30-9:00	Regeneration sampling methods/tools	Jim/Class
	9:00-9:45	Drive to regeneration sites	Student drivers
	9:45-11:00	**Regeneration Biology/Management – field**	
		discussion – Infiltraion field lab	Eric/Class
	11:00 – 2:00	**Regeneration sampling lab – includes lunch**	Class Lab
		time	All
	2:00-3:00	Regeneration lab calculations	Jim
	3:00-4:00	Results/discussion	All
	4:00-4:45	Return	Jim
	4:45-5:00	Daily wrap-up	All

Assignment:

Field books should be cleaned up and checked. Copies made if needed.
Field books and workbooks are due Wednesday at 7:30 a.m.
Reading: Tree physiology - pages 97-102
Reading: Writing scientific abstracts – pages 105-109
Reading: Thinning systems for western Oregon – pages 131-138

Wednesday 9/9	Time	Topic	Led by:
Day 3	7:00-7:30	Settle in-breakfast - Highlights	Student drivers
	7:30- 8:00	Variable Plot Sampling methods	Everyone
	8:00-9:00	New Tools – Prism, Clino, Increment Borer	Jim/Class
		New Tools Measurement Lab – Field Lab	Jim
		Drive to Five Rivers	
	9:00-10:30	**Thinning Stand Walk Through**	
	10:30-12:00	Lunch/discussion/observations	Mike/Jim/Class
	12:00-12:30	**Young Stand sampling lab – Fixed plots/V-Plots**	
	12:30-1:00	**Young Stand Biology/Management/Dendrology**	Class
	1:00-3:30	**– field talk**	Mike/Jim/Class
		Return to Cabin/Break	Student drivers
		Spencer Tape maintenance – hands on demo	All
	3:30-4:45	(time permitting)	
	4:45-5:00	Daily wrap-up	All

Assignment:

Field books should be cleaned up and checked. Copies made if needed.
Field books and workbooks are due Thursday at 7:30 a.m.
Reading: Stream protection rules - pages 232-237
Reading: Stream Ecology – pages 238-253
Reading: Riparian Area Functions – pages 254-266

NOTE

Day 4 and Day 6 in the manual have been switched due to field guests' schedules

Thursday 9/10	Time	Topic	Led by:
Day 4	7:00-7:30	Settle in-breakfast-**Peavy 024**	Student drivers
	7:30- 8:00	**Tree Measurements Trials II**	Everyone
	8:00-8:45	Forest Hydrology Setup	Arne/Amy/others
	8:45-9:30	Travel to Honeygrove field site	Student Drivers
	9:30-11:30	Aquatic Habitat lab	Arne/Amy/others
	11:30-12:00	Field site discussion	Arne
	12:00-12:45	Aquatic Invertebrates (Bugs)	Bill Gerth
	12:45-2:00	Lunch and travel to Mary's River field site	Student Drivers
	2:00-4:30	Field site visit and lab	Arne/Amy/others
	4:30-5:00	Return to OSU	Student Drivers
	5:00-5:30	Daily wrap-up - Eastside logistics	All

Assignment:

Field books should be cleaned up and checked. Copies made if needed.
Field books and workbooks are due Friday at 7:30 a.m.
Reading: Day setup - pages 188-189
Reading: Harvest systems – pages 190-196
Reading: Cable Yarding Systems – pages 197-231 (PowerPoint slides)

Friday 9/11	Time	Topic	Led by:
Day 5	7:00-7:30 7:30- 8:30 8:00-4:00 4:30-5:00	Settle in-breakfast- logging safety Drive to the logging sites Logging safety on site Shovel Logging and Cable Logging Day Return to OSU	 Jay Christensen – Weyerhaeuser Company

Field books should be cleaned up and checked. Copies made if needed.
Field books and workbooks are due Saturday at 7:30 a.m.
Reading: Site Index pages 162-166
Reading: Timber Products, Log Grading pages 172-177

Saturday 9/12	Time	Topic	Led by:
Day 6	7:00-7:30 7:30- 8:00 8:00-8:30 8:30-9:00 9:00-9:30 9:30-10:00 10:00-1:30 1:30-3:00 3:30-4:40 4:45-5:00	Settle in-breakfast - Highlights New Tools – The Relaskop, the Biltmore Stick., Volumes – Bd. Ft., Cubic, Tarif tables Break and travel **New Tools Measurement Lab – Field Lab** Return to cabin and Lunch Mature stand Mature stand data analyses Return to OSU Daily wrap-up and logitistics for the eastside trip	Everyone Jim/Class Jim Jim/Class All All Student Drivers All Jim/Class All

Field books should be cleaned up and checked. Copies made if needed.
Field books and workbooks are due Sunday at 7:30 a.m. at Peavy Hall
Reading: Snotel site pages 268-269
Reading: Snow Survey Guide Pages 270-286

Sunday 9/13	Time	Topic	Led by:
Day 7	7:00-7:30 7:30- 8:00 8:00-8:30 8:30-10:30 12:30-2:30 2:30-3:30 3:30-5:00 5:00 - 	Settle in-breakfast Prep for Eastside trip in Peavy 272 Briefing on the Eastside logistics – equipment check Drive to the Sno-Tel Site (ODOT Cinder yard) Sno-Tel field visit (includes lunch) Drive to Suttle Lake – check in/settle in Drive to Loren Kellogg's firewood facility in Redmond Tour and demonstration of firewood facility Barbecue at Loren's Head back to Suttle Lake	Everyone Jim/Class Jim/Class Student Drivers Arne Student Drivers All All Loren Kellogg Drivers

Reading: Soil Types for east side pages 288-295
Reading: Plant Association Groups Pages 296-306

Monday 9/14	Time	Topic	Led by:
Day 8	7:00-7:30	Settle in-breakfast	Everyone
	7:30- 8:00	East Side over view day	Everyone
	8:00-8:30	Drive to field site	Student Drivers
	8:30-3:00	East side Plant associations	Jim/Arne/Jeff
		Soils – soils exercise	Jeff/All
		Side Trip- Origins of a river	All
	3:00-4:30	Daily wrap up – Large cabin	All
	4:30-5:00	Dinner	Dinner Group 1

Field books should be cleaned up and checked.
Field books and workbooks are due Tuesday at 7:00 a.m. at Suttle Lake
Reading: Climate Comparisons pages 307-308
Reading: Pipe Model Theory pages 319-323
Reading: Host resistance to bark beetles pages 331-332

Tuesday 9/15	Time	Topic	Led by:
Day 9	6:30-7:30	Settle in-breakfast	Everyone
	7:30- 9:00	Drive to the Lava regeneration and thinning units	Student Drivers
	9:00-11:30	Regeneration sampling	All
	11:30-12:00	Discussion of thinning treatments	Jim
	12:00-3:30	Cruise and marking – Across the road stand	All
	3:30-5:00	Marking presentations	Student groups
	5:00-5:30	Return to Suttle Lake	Student Drivers
	6:30	Dinner, Daily wrap up – Large Cabin	All
			Dinner Group 2

Field books should be cleaned up and checked.
Field books and workbooks are due Wednesday at 7:00 a.m. at Suttle Lake

Wednesday 9/16	Time	Topic	Led by:
Day 10	6:30-7:00	Settle in-breakfast	Everyone
	7:00- 9:00	Drive to the Gilchrist mature site	Student Drivers
	9:00-1:00	Cluster sampling mature stand	All
		Field calculations	Jim
		Presentations/ discussion	All
	1:00-3:00	Return to Suttle Lake	All
		Free time	
	4:00-6:30	Dinner - Daily wrap up – Large Cabin-Setup for mill tour on Thursday	Dinner Group 3

Field books should be cleaned up and checked.
Field books and workbooks are due Thursday at 7:00 a.m. at Suttle Lake
Reading: Gilchrist History pages 344-345
Reading: Interfor Information pages 346-351
Reading: Pine lumber grades pages 352-353

Thursday 9/17	Time	Topic	Led by:
	6:00-6:30	Settle in-breakfast	Everyone
	6:30- 8:30	Drive to Fall River Logging Site	Student Drivers
	8:30-9:00	Meet with Interfor folks – Tailgate on logging safety for the day	All
	9:00-9:30	Drive to the active site	Student Drivers
	9:30-12:00	Logging site demo Residual stand cruise Time study/discussion	Interfor
	12:00-1:00	Drive to mill – Follow loaded truck out	Student drivers
	1:00-4:00	East side scaling/merchandising Mill Tour	Interfor scaler Interfor
	4:00-6:00	Return to Suttle Lake	Student Drivers
	7:00	Dinner - Daily wrap up – Large Cabin	Dinner Group 4

Friday 9/18	Time	Topic	Led by:
	6:00-8:30	Settle in-breakfast	Everyone
	8:30-11:30	Free time/ Prep for Westside return trip	Everyone
	11:30-1:30	Drive to OSU, check-in (equipment, lockers)	Jim/Class
	1:30-2:00	Debriefing on the Eastside visit	Jim/Class