



**FiW 4214 – Wildlife Field Techniques – Spring 2012**  
**Wednesday 2:30-5:30 pm @317B Cheatham Hall**  
**Plus 10-day intensive at Mountain Lake Biological Station**



---

**Instructors:**

Dr. Marcella J. Kelly  
147 Cheatham Hall  
(540) 231-1734  
makelly2@vt.edu  
Office Hours: TBA

Claudia Wultsch  
318 Cheatham Hall  
(540) 231-7710  
wultschc@vt.edu  
Office hours: TBA

**TAs:** Kristen Booher (booherkm@vt.edu), Jasmine Bryant (jasmineb@vt.edu), Lance Harvey (lance82@vt.edu), Heather Meslar (hmeslar@vt.edu), Kat Miles (zookat13@gmail.com), Vance Nepomuceno, (vnepo07@vt.edu), Sarah Webster (sarah752@vt.edu)

---

**Course Format**

This course will meet during the first 6 weeks of the spring semester 2012. This will be followed by a 10-day intensive field course in August (15<sup>th</sup> to 25<sup>th</sup>) at Mountain Lake Biological Station (MLBS), which is about a 30-40 minute drive from Blacksburg.

**Required Text**

Braun, C.E. (ed.). 2005. Techniques for Wildlife Investigations and Management. Sixth Edition. The Wildlife Society Inc., Bethesda, MD. 740pp.

**Required Equipment**

A field notebook. Preferably rite-in-the rain type of notebook. <http://www.riteintherain.com/> or [www.amazon.com](http://www.amazon.com)

A hand held, pocket field compass - Silva Ranger 360° or Suunto MC-2D. These can be purchased through Forestry Suppliers [www.forestry-suppliers.com](http://www.forestry-suppliers.com) or [www.amazon.com](http://www.amazon.com) (Costs: approx. \$ 35-50). *You will need your compass by the 4<sup>th</sup> lab.*

A respirator & completion of respirator training. The department of Health and Safety at VT will give a 30m presentation on respirators and other health issues related to handling wild animals during. The Health and Safety Building is right next to Parking Services on Tech Center Drive. Cost of you personal respirator run \$13-30 depending on the type of and fit you need.

**Course Objectives:**

This course is designed to acquaint students with the great variety of techniques and skills commonly used in wildlife research and/or management and to help students gain understanding of and an appreciation for the appropriate use of these tools. Upon completion of the course successful students should be able to:

- a) Understand and convey the philosophy and intent of wildlife research.
- b) Identify, describe and employ appropriate techniques to capture and mark a variety of wildlife
- c) Identify, describe, and employ a variety of noninvasive survey methods commonly used for wildlife research
- d) Assess the habitat requirements of wildlife species.

Students will gain hands-on field experience including: orienteering by compass and GPS unit, capture and handling of live birds, mammals, and herps, instruction in radio telemetry, habitat measurements for wildlife, experimental design and data collection, analysis of data collected and presentation to the class of group field project.

**Course Schedule: Lab meets for 6 Wednesdays (beginning of spring semester 2012)... last one is lab practical exam!**

<b>Dates</b>	<b>Topic</b>	<b>Assigned Readings</b>
January 18	<b>Lab 1</b> 1. Introductions and course mechanics 2. Lecture on Scientific Method, Research Planning, ACUC 3. Knots! Learn 6 useful knots 4. Respirator Training – Presentation from EHS  <i>Online Quiz 1</i>	<i>Braun: Chapter 3: pages 43-64 Chapter 7</i>  <i>Check Scholar</i>
January 25	<b>Lab 2 <u>Invasive Capture Techniques</u></b> 1. Why capture and mark wildlife? 2. Various techniques for birds, mammals, other wildlife - Lecture, handouts - Practical: setting various traps - Guest speakers – invasive trapping methods  <i>Online Quiz 2</i>	<i>Braun: Chapters 10 and 13, skim 11</i> <b><u>Bring book to Lab</u></b>  <i>Check Scholar</i>
February 1	<b>Lab 3 <u>Noninvasive Survey Techniques</u></b> 1. Natural Animal Signs 2. Remote Camera Trapping 3. Noninvasive Genetic Sampling 4. Acoustic Monitoring Techniques - Lectures, handouts - Practical: tracking and camera sessions  <i>Online Quiz 3</i>	Selected papers & book chapters - see additional reading in Lab 3 folder on scholar  <i>Check Scholar</i>
February 8	<b>Lab 4 <u>Orienteering – Compass &amp; Map</u></b> - Lecture, handouts - Practical: complete outdoor orienteering assignment & map (due Feb. 15)  <b><i>Orienteering Assignment &amp; Map</i></b> <i>Online Quiz 4</i>	Selected book chapters - see reading in Lab 4 folder on scholar  <b><i>Due Feb. 15</i></b> <i>Check Scholar</i>
February 15	<b>No Lab <u>Self-guided Lab Assignment</u></b> Create your own plaster casts of tracks <b><i>Orienteering assignment due</i></b>	Details will be announced in class
February 22	<b>Lab 5 <u>Lab Practical Exam</u></b> <b><i>Hand in your plaster casts &amp; worksheet!</i></b>	Material will be announced



## Field Intensive Portion of the Course FiW 4214 Summer 2012



Meet at Cheatham Hall parking lot at **9:00 am on Wednesday, August 15<sup>th</sup>** for carpool to Mountain Lake Biological Station (MLBS - <http://www.mlbs.virginia.edu/>). **We will need volunteer drivers!** The course will finish by 12 noon on August 25<sup>th</sup>. We will distribute the course schedule and a more detailed equipment list for the field portion of the course by the end of the spring semester labs.

### Requirements

- All students must stay on-site at Mountain Lake Biological Station.
- Students must bring their own food for 10 days: cooking groups will be organized during spring semester lab sessions.
- All students must bring their own sleeping bag. Make sure it is a good one as it may be cold at night.
- Students must bring appropriate field clothes (e.g. hiking boots, warm clothes, warm hat, sunscreen, etc.)
- Students must bring an alarm clock
- All students must bring their compasses
- All students must bring their headlamps
- All students must bring their textbooks and lab notes
- It is highly recommended to bring your laptop to the field course (if available) since we only have a limited amount of computers at the MLBS computer lab. If not available, students must bring a USB flash drive to save and complete computer assignments.

### Optional Gear

- Camera
- Binoculars – if you are interested in birds or doing a bird project, bring binoculars
- Personal GPS unit
- Bug repellent

### Evaluation of Student Performance will be based on:

*(This is subject to change as determined by the instructor)*

VT – at Virginia Tech; MLBS – at Mountain Lake Biological Station

• Lab practical exam (one per student) - VT	100 points
• Orienteering map (one per student) - VT	40 points
• Plaster cast assignment (one per group)- VT	35 points
• Online quizzes (4 at VT - each 10 pts & 2 at MLBS - each 10 pts)	60 points
• Orienteering field trial (one per 2 students) – MLBS	30 points
• Telemetry triangulation assignment (one per group) - MLBS	40 points
• Written project (one per group) - MLBS	100 points
• Oral presentation of project (one per group) - MLBS	50 points
• Peer evaluation of group project - MLBS	30 points
• Instructors and TAs evaluation of field ability - MLBS	60 points
• Final exam (one per student) - MLBS	100 points
<b>Total points</b>	<b>645 points</b>

Start thinking about a *field project* that you would like to work on. Students will be divided into groups for data collection and analysis and will present results of their field work and data analysis to the entire class at the end of the field course.

### **Field Group Projects at MLBS:**

*There will be five main research projects (see below) – we listed potential research objectives (others are possible – e.g. response of wildlife to human activity etc.):*

- A. **Bats** – use of acoustic ANABAT detectors to study bat diversity, activity, and habitat associations.
- B. **Birds** – use DISTANCE estimation to study the influence of habitat associations on bird density for target species and/or determine status over time (use of past data required)
- C. **Herps** - use of area constrained searches (i.e. quadrat sampling) to study herp diversity, habitat associations, and/or population demography and/or status over time (use of past data required)
- D. **Small mammals** – conduct small mammal trapping to study the small mammal diversity, habitat associations, determine density through mark-recapture and/or population demography or status over time (use of past data required)
- E. **Remote Camera Traps** – use of remote camera traps to study wildlife diversity for especially large mammals, habitat associations, activity patterns, trap success, and/or population status over time (use of past data required).

**Accommodations:** If you need adaptations or accommodations because of a disability (learning disability, attention deficit disorder, psychological, physical, etc.), if you have emergency medical information to share with us, or if you need special arrangements in case the building must be evacuated, please make an appointment with one of us as soon as possible.

