This syllabus is for a 2-cr biology course I taught at Grinnell College

Methods in Forensic Entomology

Thursdays 1:00 pm – 3:50 pm; 1007/1021 Noyce

INSTRUCTOR:
1. Dr. Susan Villarreal
2. Science 1820
3. villarre@grinnell.edu
4. OH: M 1-5; T 9-11, 1-5

Forensic entomology is the use of insect biology and development in litigation, including cases of pestiferous infestations of insects in urban and agricultural environments, as well as in establishing timelines and locations of human and animal corpses. This course focuses on the utility of insect biology to provide evidence in criminal cases, including identification of medically important insects, establishing postmortem timelines, and hands-on practice with live, preserved, and decaying specimens.

REQUIRED:
Forensic Entomology:
An Introduction
by Dorothy E. Gennard,
2nd ed., Wiley-Blackwell

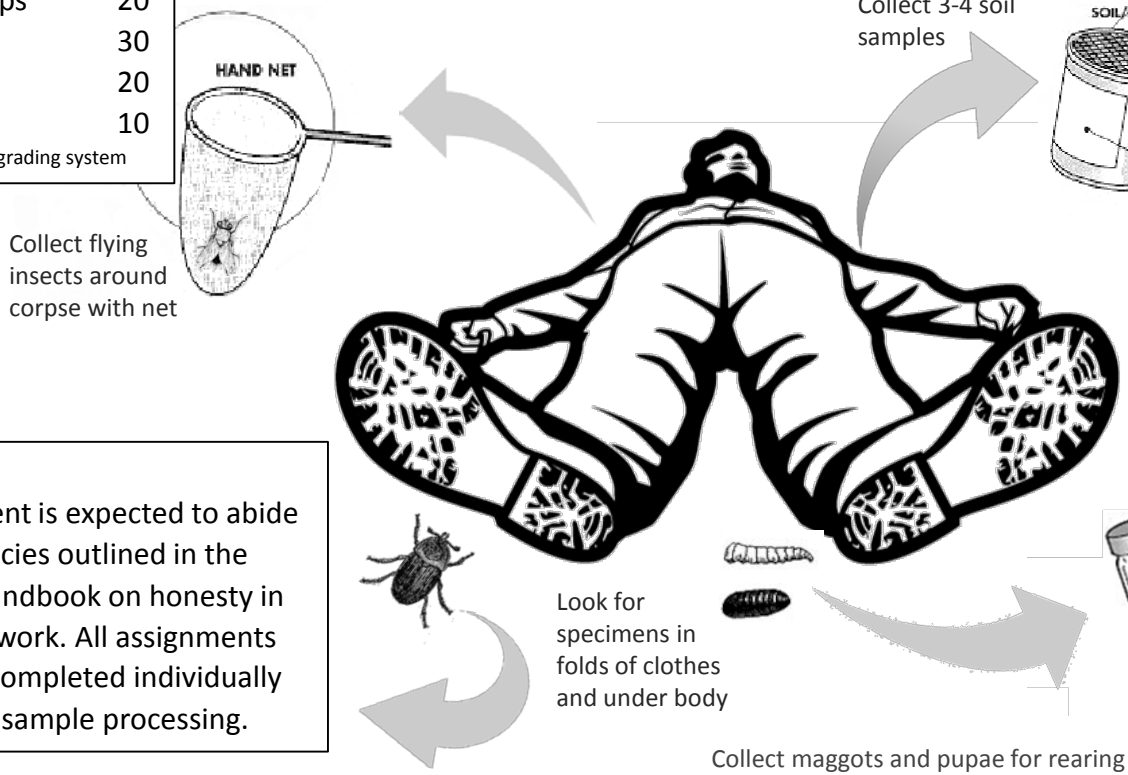
Take temperature maggot mass – this will be important for calculating post-mortem interval

COURSE GOALS:
1. Apply concepts from multiple levels of biological organization to animal decomposition and insect succession to a corpse
2. Learn the utility of insects in criminal cases via case studies
3. Assess the role of the forensic entomologist as expert witness

SAMPLING A CRIME SCENE:
1. Insect net
2. Forceps/trowel
3. Thermometer
4. Sampling jars/vials/bags
5. Weather data: previous & 5-7 days after
6. Photo/video crime scene
7. Time/date/location sample

ASSIGNMENTS:	**%**
Lab Practical	20
Worksheets/Write-ups	20
Case report	30
Sample processing	20
Participation	10

*Letter grade follows Grinnell grading system



WORKLOAD/LATE WORK:
1. Reading assigned material required/assumed prior to class
2. You're responsible for all readings topics regardless of their mention in lecture
3. Work > 24h late: ½ credit
4. Penalty free extension: illness or advanced notice of issues

HONESTY:
Each student is expected to abide by the policies outlined in the student handbook on honesty in academic work. All assignments are to be completed individually outside of sample processing.

ACCOMMODATIONS:
1. Let me know
2. John Hirschman
3. 3rd fl JRC x3089

Class Schedule / Stages of Decomposition

Fresh | Bloated | Active Decay | Advanced Decay | Skeletal

Week	Date	Topic	Readings
0	Aug. 24	Introductions Visit “crime scene”	Gennard: Ch. 7
1	Aug. 31	Intro. to FE Insect anatomy	Gennard: Ch. 1,2 Tarone & Sanford 2017
2	Sept. 7	Insect orders Insect development	Gennard: Ch. 10,11 Greenberg 1985
3	Sept. 14	Species of importance Decomposition stages	Gennard: Ch. 3,4,6 Durdle et al. 2013
4	Sept. 21	Estimating PMI Analysis of samples	Gennard: Ch. 8,9 Magni et al. 2012
5	Sept. 28	Analysis of samples Case studies	Shoenly & Reid, 1987 Boulton & Lake, 1988 Schoenly & Reid, 1989
6	Oct. 5	Analysis of samples Case studies	Benbow et al. 2013 Madra et al. 2014
7	Oct. 12	Lab Practical Future of FE	Gennard: Ch. 13

Calliphoridae

Muscidae

Silphidae

Sarcophagidae

Phoridae

Dermestidae

Trogidae