



UNIVERSITY OF
CALGARY

DEPARTMENT OF BIOLOGICAL SCIENCES
COURSE OUTLINE

1. **Course:** ECOLOGY 429 – ECOLOGY OF INDIVIDUALS

Lecture Section(s)	L01	MWF	13:00	EDC 255	Fall 2015
Instructor(s):	Dr. L.D. Harder		BI 276A	220-6489	harder@ucalgary.ca
	Dr. M.R. Lein		BI 334	220-6549	mrlein@ucalgary.ca
	Dr. S.M. Vamosi		BI 395	210-8508	smvamosi@ucalgary.ca

Desire 2 Learn (D2L) course name <https://d2l.ucalgary.ca/d2l/home/53709>

Biological Sciences Department BI 186 403-220-3140 biosci@ucalgary.ca

2. **Prerequisites:** Biology 313 and 315

See section 3.5.C in the Faculty of Science section of the online Calendar
www.ucalgary.ca/pubs/calendar/current/sc-3-5.html

3. **Grading:** The University policy on grading and related matters is described sections F.1 and F.2 of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Midterm Exam I	Wednesday, October 7	6:30-8:30PM	TBA	21%
Midterm Exam II	Monday, November 9	6:30-8:30PM	TBA	21%
Lab Reports				37%
Final Exam (Scheduled by the Registrar's office)				21%

* There will be a final exam scheduled by the Registrar's office

Passing grades in both the laboratory components and two examinations are required for a student to pass the course as a whole.

Each piece of work (assignment, laboratory report, midterm test or final examination) submitted by the student will be assigned a percentage score. The student's average percentage score for the various components listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade, bearing in mind that an F grade will result if the student does not pass the overall lab OR the overall lecture component.

Tentative grade breakdown (thresholds may be lowered slightly, but will not be raised):

A+	≥ 90%
A	86%
A-	82%
B+	79%
B	76%
B-	73.9%
C+	70%
C	66%
C-	62%
D+	56.9%
D	50%
F	< 50%

Percentages will be rounded to the nearest 0.1 (e.g., 72.45 → 72.5%, 72.44 → 72.4%)

4. **Missed Components of Term Work:** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in [Section 3.6](#). It is the student's responsibility to familiarize himself/herself with these regulations. See also [Section E.6](#) of the University Calendar

5. **Scheduled out-of-class activities:** Dates and times of approved class activities held outside of class hours.

Midterm Exam I	Wednesday, October 7	6:30-8:30PM	TBA	21%
Midterm Exam II	Monday, November 9	6:30-8:30PM	TBA	21%

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a clash with this out-of-class-time-activity, please inform your instructor as soon as possible so that alternative arrangements may be made for you.

6. **Course Materials:** No textbook. Laboratory manual available via Desire 2 Learn
7. **Examination Policy:** Wireless access devices, including cell phones, **cannot** be used during the examination. Calculators can be used with permission of the Instructor. See also [Section G](#) of the University Calendar.
8. **Writing across the curriculum statement:** "In this course, the quality of the student's writing in laboratory reports will be a factor in the evaluation of those reports. See also [Section E.2](#) of the University Calendar.
9. **Ethics in the Biological Sciences**
Studies in the Biological Sciences involve the use of living and dead organisms. Students taking laboratory- and field-based courses in these disciplines can expect involvement with and experimentation on such materials. Students perform dissections on dead or preserved organisms in some courses. In particular courses, students experiment on living organisms, their tissues, cells, or molecules. Sometimes field work requires students to collect a variety of living materials by many methods, including humane trapping.

All work on humans and other animals conforms to the Helsinki Declaration and to the regulations of the Canadian Council on Animal Care. The Department strives for the highest ethical standards consistent with stewardship of the environment for organisms whose use is not governed by statutory authority. Individuals contemplating taking courses or majoring in one of the fields of study offered by the Department of Biological Sciences should ensure that they have fully considered these issues before enrolling. Students are advised to discuss any concern they might have with the Undergraduate Program Director of the Department.

10. OTHER IMPORTANT INFORMATION FOR STUDENTS:

- (a) **Academic Misconduct:** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties
- (b) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
- (c) **Student Accommodations:** Students needing an Accommodation because of a Disability or medical condition should contact Student Accessibility Services in accordance with the Procedure for Accommodations for Students *with Disabilities available at* http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities_0.pdf.
Students needing an Accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to the Associate Head of Biological Sciences, Dr. H. Addy by email addy@ucalgary.ca or phone 403 220-3140.
- (d) **Safewalk:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- (e) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information see also
- (f) <http://www.ucalgary.ca/secretariat/privacy>.
- (g) **Student Union Information:** VP Academic Phone: 403 220-3911 Email: suypaca@ucalgary.ca
SU Faculty Rep. Phone: 403 220-3913 Email: science1@su.ucalgary.ca, science2@su.ucalgary.ca and science3@su.ucalgary.ca;
Student Ombuds Office: 403 220-6420 Email: ombuds@ucalgary.ca; <http://ucalgary.ca/provost/students/ombuds>
- (h) **Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.
- (i) At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses (www.ucalgary.ca/usri). Your responses make a difference - please participate in USRI Surveys.

Department Approval ORIGINAL SIGNED Date _____

Associate Dean's Approval for
out of regular class-time activity: ORIGINAL SIGNED Date: _____
E429 F15; 8/25/2015 11:44 AM

UNIVERSITY OF CALGARY
DEPARTMENT OF BIOLOGICAL SCIENCES
COURSE OUTLINE

ECOLOGY 429
ECOLOGY OF INDIVIDUALS

TERM: Fall 2015 SECTION NO: L01

PREREQUISITE(S): Biology 313 and Biology 315

A student may not register in a course unless he/she has a grade of at least C- in each prerequisite course.

COURSE COORDINATOR: Dr. L. D. Harder BI 276A 220-6489 harder@ucalgary.ca

LECTURERS: Dr. L. D. Harder BI 276A 220-6489 harder@ucalgary.ca
Dr. M.R. Lein BI 334 220-6549 mrlein@ucalgary.ca
Dr. S. M. Vamosi BI 395 210-8508 smvamosi@ucalgary.ca

LECTURES: MWF 13:00 EDC 255

LABS: B01/02 T 09:00/12:00 BI 234A
B03 R 15:00 BI 234A

TEXT: Required: None.

RESERVE READING ROOM: See attached list.

MARK DISTRIBUTION:

A. Composition of Final Grade

Midterm Exam I	Wednesday, October 7 6:30-8:30PM	TBA	21%
Midterm Exam II	Monday, November 9 6:30-8:30PM	TBA	21%
Lab Reports			37%
Final Exam (Scheduled by the Registrar's office)			21%

B. Final Exam

There will be a Final Examination scheduled by the Registrar's Office.

C. Components of course for which a passing grade is essential

A passing grade is required for at least two examinations and the laboratory reports.

ECOLOGY 429 – FALL 2015 TENTATIVE LECTURE SCHEDULE

Date		Topic
Section I Life History Ecology – Harder		
September	9	What is a life history?
	11	Tradeoffs and optimal life histories
	14	Quality – quantity compromises
	16	Allocation to competing functions
	18	Costs of reproduction
	21	Reproductive intensity
	23	Longevity and senescence
	25	Body size
	28	Growth
	30	Complex life cycles
October	2	Clonality
	5	Population consequences
Section II Behavioural Ecology – Lein		
October	7	Introduction to behavioural ecology
	9	Foraging behaviour I
	12	THANKSGIVING – NO LECTURE
	14	Foraging behaviour II
	16	Social behaviour I
	19	Social behaviour II
	21	Social behaviour III
	23	Anti-predator behaviour I
	26	Anti-predator behaviour II
	28	Reproductive behaviour I
	30	Reproductive behaviour II
November	2	Reproductive behaviour III
	4	Reproductive behaviour IV
Section III Physiological and Morphological Ecology – Vamosi		
November	6	Adaptation
	9	Allometry I
	11	READING DAYS – NO LECTURES
	13	READING DAYS – NO LECTURES
	16	Allometry II
	18	Plants: photosynthesis and seed size
	20	Plants: herbivory
	23	Insects: gas exchange
	25	Insects: water
	27	Insects: temperature
	30	Vertebrates: temperature
December	2	Vertebrates: osmoregulation
	4	Vertebrates: ion exchange
	7	Vertebrates: distributional limits