DEPARTMENT OF BIOLOGICAL SCIENCES
COURSE OUTLINE

1. Course: ECOLOGY 429 – ECOLOGY OF INDIVIDUALS

Lecture Section(s)	L01	MWF	13:00-13:50	MS 527	Fall 2016
LABS:	B01/02	T	09:00/12:00	BI 234A	
	B03/04	R	15:00/09:00	BI 234A	

Course Coordinator: Dr. L.D. Harder

Instructor(s):	Dr. L.D. Harder	BI 276A	220-6489	harder@ucalgary.ca
	Dr. M. Reid	BI 339	220-3033	mreid@ucalgary.ca
	Dr. R. Cartar	BI 355	220-3640	cartar@ucalgary.ca

Desire 2 Learn (D2L) course name https://d2l.ucalgary.ca/d2l/home/156197

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
wwww.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 12**	**6:30-8:30PM**	**ENE 241**	**21%**
Midterm Exam II	**Wednesday, November 9**	**6:30-8:30PM**	**ENE 241**	**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 (laboratory report, midterm test or final examination) submitted by the student will be assigned a numerical score. A student's scores for the various components weighted as indicated above will be combined to produce an overall percentage for the course, which will be used to determine the course letter grade, except that a F grade will result if the student does not pass the overall lab component and two examinations.

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

A+	≥ 90%
A	86%
A-	82%
B+	79%
B	76%
B-	74%
C+	70%
C	66%
C-	62%
D+	57%
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 12**	**6:30-8:30PM**	**ENE 241**	**21%**
Midterm Exam II	**Wednesday, November 9**	**6:30-8:30PM**	**ENE 241**	**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 http://www.ucalgary.ca/secretariat/privacy.

(f) **Student Union Information:** VP Academic Phone: 403 220-3911 Email: suvpaca@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

(g) **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.

(h) 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: _____

ECOLOGY 429 – FALL 2016 TENTATIVE LECTURE SCHEDULE

Date		Topic
Section I Physiological and Morphological Ecology – Cartar		
September	12	Introduction to the ecology of individuals and physiological ecology
	14	Allometry & Scaling I
	16	Allometry & Scaling II
	19	Evolution I
	21	Evolution II
	23	Photosynthesis
	26	Metabolism I
	28	Metabolism II
	30	Metabolism III
October	3	Metabolic Theory of Ecology I
	5	Metabolic Theory of Ecology II
	7	Metabolism & climate change
	10	**THANKSGIVING – NO LECTURES**
Section II Behavioural Ecology – Reid		
October	12	Intro to Behavioural Ecology
	14	Fundamentals of optimal behaviour
	17	Fundamentals of optimal behaviour
	19	Fundamentals of optimal behaviour
	21	Social systems
	24	Social systems
	26	Social systems
	28	Reproduction
	31	Reproduction
November	2	Reproduction
	4	Reproduction
	7	Applications
Section III Life Histories – Harder		
November	9	What is a life history?
	11	**READING DAYS – NO LECTURES**
	14	Tradeoffs and optimal life histories
	16	Quality – quantity compromises
	18	**NO LECTURE**
	21	Allocation to competing functions
	23	Costs of reproduction
	25	Reproductive intensity
	28	Longevity and senescence
	30	Body size
December	2	Growth
	5	Complex life cycles
	7	Clonality
	9	Population consequences