



**UNIVERSITY OF
CALGARY**

DEPARTMENT OF BIOLOGICAL SCIENCES
COURSE OUTLINE

1. **Course: ZOOLOGY 403 - AN INTRODUCTION TO VERTEBRATE ZOOLOGY**

Lecture Section(s) L01 MWF 10:00-10:50 ENE 241 Fall 2017

Labs: B01/02/03 T 9:00/12:00 BI 044
B04/05/06 R 9:00/12:00 BI 044

Course Coordinator/

Instructor(s): Dr. J. Theodor BI 353 210-9819 jtheodor@ucalgary.ca

D2L site: ZOOL 403 L01 - (Fall 2017) - An Introduction to Vertebrate Zoology

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

2. **Prerequisites: Biology 371**

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

Antirequisite: Credit for Zoology 403 and either Zoology 477.01 or 477.02 will not be allowed

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 lecture exam (October 27, 2017) In Class	20 %	Final laboratory exam	15 %
Midterm laboratory exam (Nov. 07/09, 2017) In Lab	10 %	Final lecture exam	<u>25 %</u>
Lab assignments	15 %		
Quizzes (on D2L)	15%		100 %

Your letter grade for the course will be determined by summing the weighted numerical scores earned for each component listed above and converted using the table on the course outline and posted on the D2L site for the course. **Note:** Letter grades are not determined for any individual component but the table may be used to give you an approximate sense of your standing during the term.

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

Passing grades in both the lab and lecture components are essential if the student is 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.

Final Grade Scale :

A+: 90 or higher
A : 85 and under 90
A- : 80 and under 85
B+ : 77 and under 80
B : 73 and under 77
B- : 70 and under 73
C+ : 67 and under 70
C : 63 and under 67
C- : 60 and under 63
D+ : 55 and under 60
D : 50 and under 55
F : <50

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.3](#) of the University Calendar
5. **Scheduled out-of-class activities:** N/A
REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a conflict 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:** N/A
7. **Examination Policy:** No aids (calculators, etc.) are allowed on tests or examinations. Students should also read the Calendar, [Section G](#), on Examinations.
8. **Writing across the curriculum statement:** In this course, the quality of the student's writing in assignments will be a factor in the evaluation of the assignments. See also [Section E.2](#) of the University Calendar.

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.

9. **Human studies statement:** If you agree, your course work may be used for research purposes. Your responses will remain anonymous and confidential. Grouped data (no individual responses) may be used in academic presentations and publications. Participation in such research is voluntary and will not influence grades in this course. Students' signed consent forms will be withheld from instructors until after final grades are submitted. More information will be provided at the time student participation is requested. See also Section E.5 of the University Calendar.
10. **Lab photographic device policy:** No photography will be permitted in the lab section of this course. If you violate this policy, your device will be confiscated until the end of the lab period. Repeated abuse may result in a charge of misconduct.

11. 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 2205333 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 (FOIPPA). 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 _____
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COURSE OUTCOMES:

By the end of this course you will be expected to:

1. Contrast the features that distinguish vertebrates from other members of the Metazoa
2. Describe the major clades of vertebrates, their distribution, life history and evolutionary relationships
3. Explain the links between vertebrate metabolism and life history
4. Identify vertebrate specimens to major clade
5. Draw and describe vertebrate specimens using appropriate vocabulary and labels
6. Use a dichotomous key to identify vertebrate specimens to species for local fauna
7. Use calipers to take standard measurements of vertebrates
8. Identify the locomotor and feeding mode of vertebrates

Zoology 403 - An Introduction to Vertebrate Zoology

TEXTS: Required: Pough et al. *Vertebrate Life*, 9th ed. Pearson Education.
 ZOOL 403 Laboratory Guide, available on D2L

DATE			LECTURE TOPIC	LAB TOPIC	LAB READINGS
Sept.	M	11	Course introduction		
	W	13	Phylogenetics		
	F	15	Jawless Fishes		
	Lab	12/14		Introduction to vertebrate structure and diversity	
	M	18	Cartilaginous Fishes - 1		
	W	20	Cartilaginous Fishes 2		
	F	22	Cartilaginous Fishes - 3		
	Lab	19/21		Fishes – Diversity	Lab 1
	M	25	Ray-finned Fishes - 1		
	W	27	Ray-finned Fishes - 2		
	F	29	Ray-finned Fishes - 3		
	Lab	26/28		Fishes – Form and Function	Lab 2
Oct.	M	02	Fleshy-finned Fishes		
	W	04	Tetrapoda		
	F	06	Amphibians - 1		
	Lab	03/05		Amphibians – Diversity	Lab 3
	M	09	NO CLASS - THANKSGIVING		
	W	11	Amphibians - 2		
	F	13	Amphibians - 3		
	Lab	10/12		Amphibians – Form and Function	Lab 4
	M	16	Amphibians - 4		
	W	18	Amphibians - 5		
	F	20			
	Lab	17/19		Mammals – Diversity	Lab 5
	M	23	Mammals - 1		
	W	25	Mammals - 2		

	F	27	MIDTERM EXAMINATION		
	Lab	24/26		Mammals – Form and Function	Lab 6
	M	30	Mammals - 3		
Nov	W	01	Mammals - 4		
	F	03	Mammals - 5		
	Lab	31/02		OPEN LAB	Lab 7
	M	06	Mammals - 6		
	W	08	Reptiles -1		
	F	10	NO CLASS – READING DAYS		
	Lab	07/09		LAB EXAM	Lab 8
	M	13	NO CLASS – READING DAYS		
	W	15	Reptiles - 2		
	F	17	Reptiles - 3		
	Lab	14/16		Turtles and Lepidosaurians – Diversity	Lab 9
	M	20	Reptiles - 4		
	W	22	Reptiles - 5		
	F	24	Reptiles - 6		
	Lab			Turtles and Lepidosaurians – Form and Function	Lab 10
	M	27	Archosaurs – 1		
	W	29	Archosaurs – 2		
Dec	F	01	Archosaurs - 3		
	Lab	28/30		Archosaurs – Diversity	Lab 11
	M	04	Archosaurs - 4		
	W	06	Archosaurs - 5		
	F	08	Archosaurs - 6		
	Lab	05/07		Archosaurs – Form and Function	Lab 12