

Introduction to Primatology (Lecture course)
Psychology 2850 A (CRN 20097)
Summer 2014 (Session I)

Lecturer: Jean-Baptiste Leca

E-mail: jeanbaptiste.leca@uleth.ca

Office: D851 (University Hall)

Office Hours: Wednesday from 1:00 – 3:00 pm or by appointment

Class Time: Tuesdays and Thursdays from 9:00 – 11:50 am

Classroom: L1060

General content and objectives:

What are the characteristic features of primates? What is their evolutionary history? How many living species of primates are there today? How are they classified? Where do they live? What do they eat? How do they move, communicate, socialize, and mate? How do non-human primates and humans compare in terms of brain evolution and cognitive abilities? What are the major threats they face? How and why do primatologists address all these questions?

In this introductory course, we will provide an overview of research on all the major primate taxa (i.e., prosimians, monkeys, and apes) to illustrate the great variety in the anatomy, physiology, behaviour, and ecology within the Primate Order. We will explore a number of primate adaptations, as well as basic evolutionary concepts, current trends and theories in the field of Primatology. By focusing on primates – one of the most diverse groups of mammals – we will address the following topics: evolutionary history, taxonomic classification, diet, predation, social systems, kin selection, cooperation, reproductive strategies, cognition, communication, and conservation.

Because this course is offered by the Department of Psychology, we will put a special emphasis on how evolved cognitive/psychological processes contribute – along with biological, social and cultural processes – to shape adaptive behaviours expressed by primates, as a way to solve their daily ecological and social problems, such as monitoring food availability in space and time, extracting embedded food items, moving as a group, avoiding predators, as well as predicting and manipulating the behaviour of conspecifics.

Lecture materials and required readings:

There is no textbook for this course. The lecture materials (available on Moodle) will consist of:

- (1) Series of powerpoint slides (one series per topic) highlighting key theoretical concepts, methodological aspects, and providing detailed examples of selected case studies;
- (2) Several academic journal articles (either data-based papers or review articles) and book chapters (about 1 or 2 reading(s) per topic). In general, the readings will be more conceptual, as opposed to empirical and data-rich, in scope;
- (3) As far as possible, I will also play short videos in class to illustrate specific points.

Evaluation: There will be three written-format in-class exams:

Exam #1 – 30% of the final grade (scheduled on May 22nd). This test will only include the lecture materials covered during the first four sessions (May 8th - May 20th).

Exam #2 – 30 % of the final grade (scheduled on June 10th). This test will only include the lecture materials covered during the next four sessions (May 27th – June 5th), as well as the videos played in class after Exam #1 on May 22nd.

Exam #3 – 40 % of the final grade (scheduled on June 24th). This exam will be more comprehensive, in that it will include about 70% of questions related to the lecture materials covered during the final three sessions (June 12th - June 19th), the videos played in class after Exam #2 on June 10th, and about 30% of questions related to all the lecture materials covered during the term.

Lecture materials will include:

- (1) lectures (based on a series of powerpoint slides that I will post on Moodle before each class),
- (2) required readings (i.e., pdf copies also posted on Moodle, please see list below),
- (3) videos played in class (also available on Moodle),
- (4) possible in-class discussions (if/when applicable).

The format of the exams will be multiple choice, matching, and/or short answers.

Bonus – Participation in studies in the Department of Psychology:

After your final grade has been calculated, you can have an additional 2% (maximum) added onto your final grade if you have participated in the research studies in the Department of Psychology. This will give you an opportunity to experience how psychological research is conducted.

Directions for studies: You will receive an email with your Login name and password. It is IMPORTANT that you keep this information. You will use your user name and password [psyc2850a], once you have signed in you may change your password. Please go to <http://psychleth.sona-systems.com> and sign in.

NOTE: There will be NO transferring of credits. If you are registered in another course that offers credits (a second email will be sent to you with a different email and password). Sign up in the course that you want your credits to be assigned. Further studies and timeslots will be added, please keep checking but remember this is on a first come basis. Note that there is no guarantee that all students will be able to achieve the maximum credit. Studies for Summer Session I will be running from May 11 to June 24, 2014 (please mark these dates on your calendar, and try not to register within the last few days, as you may not be able to get in). If you are experiencing problems, please contact Leanne Wehlage-Ellis at wehlage@uleth.ca.

Grading: The following ranges will be employed in assigning grades in this course:

A+: 93.1 – 100	C+: 69.1 – 73.0
A: 89.1 – 93.0	C: 65.1 – 69.0
A-: 85.1 – 89.0	C-: 61.1 – 65.0
B+: 81.1 – 85.0	D+: 57.1 – 61.0
B: 77.1 – 81.0	D: 50.0 – 57.0
B-: 73.1 – 77.0	F: < 49.9

In accordance with the University of Lethbridge Calendar,

A = Excellent
B = Good
C = Satisfactory
D = Poor
F = Fail

Lecture organization:

Classroom regulations:

- (1) Please arrive to class on time. If you are late, sit at the back to minimize disruption. The instructor will be careful not to run overtime so please remain seated until the end of class.
- (2) If you are disrespectful to other members of the class, you will be asked to leave.
- (3) Please turn off your cell phones while in class (this falls under being disrespectful).
- (4) If you want to use a laptop in class please sit along the back row or at the sides of the lecture theatre to minimize distractions.
- (5) Relevant interruptions and class participation are welcomed but please raise your hand in order to ask questions or to make comments. Questions that are emailed may also be discussed in class.

Exam regulations:

- (1) Exams #1 and #2 will be returned to you and corrected versions of the exams will be posted on Moodle. Exam #3 will not be returned but can be reviewed during office hours or by appointment. Marks will be posted on Moodle about one week after exams are taken. If you feel that you were marked unfairly or that marks were missed on your exam, please prepare a short statement explaining the problem. The question will then be re-graded and marks adjusted (up or down as is warranted) at the instructor's discretion.

- (2) No accommodation will be made for poor performance on exams. Additional work will not be assigned for those who wish to improve their grades.

- (3) Students can write missed exams **only on two conditions:**

- a) They must notify the instructor (jeanbaptiste.leca@uleth.ca) **BEFORE** the exam
- b) They must provide an appropriate documentation (i.e. a medical certificate). Non-medical reasons for missed exams (e.g. a death in the family) must also be supported with appropriate documentation.

These two conditions must be met before a make-up test can be scheduled. If not, missed exams automatically receive a score of zero.

Academic accommodations:

It is the students' responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodations and have not registered with the Disabilities Resource Centre, please contact them at 403-329-2766. Students who have not registered with the Disabilities Resource Centre are not eligible for formal academic accommodations. You are also required to discuss your need with your instructor no more than 14 days after the start of the course.

Lecture schedule:

(Note: This schedule may be subject to some changes depending how quickly material is covered)

May 8 – Overview of the course and in-class lecture:

- **Topic #1:** Introduction to primate diversity

Reading: Mittermeier RA, Schwitzer C, Rylands AB, Taylor LA, Chiozza F, Williamson EA, Wallis J (eds.). (2012). Primates in Peril: The World's 25 Most Endangered Primates 2012–2014. *IUCN/SSC Primate Specialist Group (PSG), International Primatological Society (IPS), Conservation International (CI), and Bristol Conservation and Science Foundation, Bristol, UK.*

- **Topic #2:** The basics of primate evolution (with an emphasis on the evolution of primate cognition)

Reading: Sussman RW, Rasmussen DT, Raven PH. (2013). Rethinking primate origins again. *American Journal of Primatology*, 75, 95-106.

May 13 – In-class lecture:

- **Topic #3:** Studying living primates: theories and Methods (with an emphasis on the mechanisms of primate cognition)

Reading: Aureli F, Fraser ON, Schaffner CM, Schino G. (2012). The regulation of social relationships. In: *The Evolution of Primate Societies* (Mitani JC, Call J, Kappeler PM, Palombit RA, Silk JB, eds), The University of Chicago Press, Chicago, pp. 531-551.

May 15 – In-class lecture:

- **Topic #4:** African and Asian prosimians (bushbabies, pottos, and lorises) and the special case of tarsiers

- **Topic #5:** Malagasy prosimians (lemurs and aye-ayes)

Reading: Tecot SR, Baden AL, Romine NK, Kamilar JM. (2012). Infant parking and nesting, not allomaternal care, influence Malagasy primate life histories. *Behavioral Ecology and Sociobiology*, 66, 1375-1386.

Reading: Erickson CJ, Nowicki S, Dollar L, Goehring N. (1998). Percussive foraging: Stimuli for prey location by aye-ayes (*Daubentonia madagascariensis*). *International Journal of Primatology*, 19, 111-122.

May 20 – In-class lecture:

- **Topic #6:** Small monkeys of the New World: the callitrichines

Reading: Goldizen AW. (1988). Tamarin and marmoset mating systems: Unusual flexibility. *Trends in Ecology and Evolution*, 3, 36-40.

Reading: Tardif SD, Bales K. (1997). Is infant-carrying a courtship strategy in callitrichid primates? *Animal Behaviour*, 53, 1001-1007.

- **Topic #7:** Other neotropical monkeys: the cebines, pitheciines, and atelines

Reading: Visalberghi E, Spagnoletti N, da Silva EDR, Andrade FRD, Ottoni E, Izar P, Fragaszy D. (2009). Distribution of potential suitable hammers and transport of hammer tools and nuts by wild capuchin monkeys. *Primates*, 50, 95-104.

May 22 – **Exam #1** (duration: 90 min) followed by videos illustrating the course

May 27 – In-class lecture:

- **Topic #8:** Arboreal and leaf-eating Old World monkeys: the colobines

Reading: Treves A, Chapman CA. (1996). Conspecific threat, predation avoidance, and resources defense: Implications for grouping in langurs. *Behavioral Ecology and Sociobiology*, 39, 43-53.

- **Topic #9:** Terrestrial and cheek-pouched Old World monkeys: the cercopithecines

- **Topic #10:** Savanna baboons and macaques: social negotiation, sexual politics, and behavioral traditions

Reading: Leca JB, Gunst N, Huffman MA. (2012). Thirty years of stone handling tradition in Arashiyama-Kyoto macaques: implications for cumulative culture and tool use in non-human primates. In: *The Monkeys of Stormy Mountain: 60 Years of Primatological Research on the Japanese Macaques of Arashiyama* (Leca JB, Huffman MA, Vasey PL, eds), Cambridge University Press, Cambridge, pp. 223-257.

May 29 – In-class lecture:

- **Topic #11:** Gibbons and siamangs, the lesser apes
- **Topic #12:** Orangutans, the red apes
- **Topic #13:** Gorillas, the largest primates of all

Reading: Gruber T, Singleton I, van Schaik C. (2012). Sumatran orangutans differ in their cultural knowledge but not in their cognitive abilities. *Current Biology*, 22, 2231-2235.

June 3 – In-class lecture:

- **Topic #14:** Our closest cousins, the chimpanzees and bonobos

Reading: Hare B, Wobber V, Wrangham R. (2012). The self-domestication hypothesis: Evolution of bonobo psychology is due to selection against aggression. *Animal Behaviour*, 83, 573-585.

June 5 – In-class lecture:

- **Topic #15:** The earliest hominins

Reading: Malone N, Fuentes A, White FJ. (2012). Variation in the social systems of extant hominoids: Comparative insights into the social behavior of early hominins. *International Journal of Primatology*, 33, 1251-1277.

June 10 – **Exam #2** (duration: 90 min) followed by videos illustrating the course

June 12 – In-class lecture:

- **Topic #16:** Hypotheses for the evolution of the brain and cognitive abilities in primates.

Reading: Roth G, Dicke U. (2012). Evolution of brain and intelligence in primates. *Progress in Brain Research*, 195, 413-430.

June 17 – In-class lecture:

- **Topic #17:** Primate physical cognition: Spatio-temporal cognition and technical intelligence.

Reading: Byrne RW. (2004). The manual skills and cognition that lie behind hominid tool use. In: *The Evolution of Thought: Evolutionary Origins of Great Ape Intelligence* (Russon AE, Begun DR, eds), Cambridge University Press, Cambridge, pp. 31-44.

June 19 – In-class lecture:

- **Topic #18:** Primate social cognition: Knowledge of social relationships, theory of mind, prosociality, social learning, and communication.

Reading: Call J, Tomasello M. (2008). Does the chimpanzee have a theory of mind? 30 years later. *Trends in Cognitive Sciences*, 12, 187-192.

June 24 – **Exam #3** (duration: 120 min)