

BIOL 427 (Fall)
Herpetology
Course Plan for 2020

Instructor: Prof. D. M. Green, Redpath Museum, david.m.green@mcgill.ca

This course considers the evolution and diversity of amphibians and reptiles, emphasizing detailed discussions of aspects that illustrate general principles of organismal and evolutionary biology. As such, the course explores the evolution and diversity of amphibians and reptiles (origins and phylogeny; diversity and systematics of extinct and modern forms), reproduction (development, metamorphosis, neoteny; phenotypic plasticity), communication and social behaviour (vocalizations, acoustic communication, sensory systems, reproductive behaviour, social behaviour and parental care), physiology (hibernation and cold tolerance; venoms and toxicology, defensive strategies), biomechanics (jaw mechanics; locomotion, limblessness, arboreality, fossorial life, swimming), genetics (sex determination; parthenogenesis and hybridization) and ecology (predator/prey relations, population ecology, conservation and endangered species). The laboratories emphasize structure and identification of representative forms, especially local and North American species.

There will be two on-line lectures per week delivered via Zoom, plus on-line laboratory sessions and instruction. All on-line lectures and lab tutorials will be recorded and available on myCourses.

Students will be evaluated on their grasp and understanding of the lectures based on one final at-home examination and weekly quizzes (in lieu of a midterm exam). There will also be one final at-home laboratory examination. Finally, students will write an essay on a subject of their choice in herpetology, and will present as either in the form of an on-line seminar or a submitted poster (which one is to be determined).