DB202 Aug 2:0

General Biology

Instructor

Renee M. Borges
Email: renee@iisc.ac.in

Teaching Assistant

Nikita Zachariah
Email: nikitaz@iisc.ac.in

Department: Centre for Ecological Sciences

Course Time: Mon, 9:00 - 11:00 am

Lecture venue: CES Class Room

Detailed Course Page: http://ces.iisc.ac.in/new/?q=courses#C2

Announcements

First Meeting: Monday 7th August, 2017 at 9 am, CES Classroom, Third Floor, Biological Sciences Building

Brief description of the course

Biology and the natural sciences; Growth of biological thought; Matter and life; Origin of life; History of life on earth; Bacteria and Protists; Fungi and other primitive plants; Seed bearing plants; Animals without back-bones; Insects, Vertebrates, Phylogeny and Systematics; Mechanisms of Evolution; Chemical basis of life; Cellular basis of life; Selected topics in plant and animal physiology; Selected topics in plant and animal ecology; Selected topics in sensory biology and neurobiology; Behavioral ecology and sociobiology; Biological diversity on earth; Complexity; Molecular versus Organismal approaches to solving problems in Science.

Prerequisites

None

Syllabus

Biology and the natural sciences; Growth of biological thought; Matter and life; Origin of life; History of life on earth; Bacteria and Protists; Fungi and other primitive plants; Seed bearing plants; Animals without back-bones; Insects, Vertebrates, Phylogeny and Systematics; Mechanisms of Evolution; Chemical basis of

life; Cellular basis of life; Selected topics in plant and animal physiology; Selected topics in plant and animal ecology; Selected topics in sensory biology and neurobiology; Behavioral ecology and sociobiology; Biological diversity on earth; Complexity; Molecular versus Organismal approaches to solving problems in Science.

Course outcomes

"Students are exposed to the state-of-the-art in concepts, methodologies, and controversies in the subject matter of the course. They will learn how to think critically about the subject and to critique published material as well as online material available on the internet."

Grading policy

50% assignments

50% final examination

Assignments

Concept based

Resources

Maynard Smith, J. The Theory of Evolution, Penguin Books (1993 edition),1958.

Bonner, J. T. Why Size Matters: From Bacteria to Blue Whales, Princeton University Press, 2007.

Sigmund, K. Games of Life, Penguin Books, 1993.

Medawar, P. Pluto's Republic (incorporating The Art of The Soluble and Induction and Intuition in Scientific Thought). Oxford University Press, 1982.