

Understanding Human Evolution

Human evolution is a fascinating and dynamic subject, with new information leading to constant revisions and re-evaluations of our understanding. Today, many disciplines inform the field - embryology, comparative anatomy, geology, climate history, human and primate paleontology (fossils), and more recently, genetics, which provides insight into the very mechanics of how evolution occurs – information of which Darwin himself was unaware.

The course will delve deeply into the basics of evolution and genetics and their importance to humanity. Direct physical evidence for the human lineage will be reviewed (bones, teeth and even footprints), as well as reconstructions of several types of “hominins” (species on the road to present-day humans) that have existed over the course of nearly 7 million years of evolution. Changes in past climates and other environmental pressures will be discussed. Migration patterns are explored and their role in both preserving and dispersing the human species. DNA analyses now provide direct links between diverse populations of humans.

And if human origins are not interesting enough, there will be a brief look forward to where humanity is going and some of its immediate challenges: climate change, overpopulation and social organization. At the end of the course participants will be able to answer the questions, why are humans the only hominins left standing today, and what is the secret of their dominance?

Text for the course:

- *EVOLUTION: The Human Story*, by Dr. Alice Roberts (2018). This is the main text for the course and will be frequently referenced. It provides an excellent pictorial overview. Make sure to get the Second Edition, 2018. It is available from Amazon for about \$22.

An outline of the course – and a recommended bibliography – will be given out in the first session. Numerous internet links/videos will be shared online, as well as selected readings from texts and articles. The format of the class will encourage interactions, questions and participant input.

Leader: Dr Peter M. Smith has had a career in chemistry and IT and has long studied humanity's origins.

Mondays: 1:30 p.m. to 3:30 p.m., 8 weeks: February 24 to April 13

Location: Presbyterian Church of Lawrenceville