

ICTS SUMMER COURSE

EARTH'S CLIMATE PAST, PRESENT AND FUTURE

For understanding climate change, its causes and global warming, it is important to start from understanding weather and climate and why they exist on earth via the energy balance. The timescales of change vary from years to decades to centuries and millennia. Processes that drive climate change include tectonics, orbital change, ice ages, solar and volcanic forcings, and human activities. Carbon has always been a component of change at all timescales. Human influence is mostly through perturbations to the carbon cycle and the associated radiative forcing. Humans are now trying to navigate the future evolution of climate avoid the unmanageable and manage the unavoidable. This course provides a overview of all natural-human system issues related climate variability and change.

**1 – 19 JULY
2019 (MON–FRI)**

**EMMY NOETHER HALL,
ICTS, BENGALURU**

 www.icts.res.in/summercourse2019-climate

TEXT BOOK

Earth's Climate: Past and Future
William F Ruddiman
3rd Edition, MacMillan Publishing.

- 1 | **Introduction to Climate Science**
- 2 | **Climate Data and Archives**
- 3 | **Tectonic Timescale Climate Change**
- 4 | **Orbital Timescale Climate Change**
- 5 | **Glacial/Deglacial Timescale Climate Change**
- 6 | **Millennial Oscillations**
- 7 | **Historic Climate Change**
- 8 | **Modern Climate Change**
- 9 | **Future Climate Change**

REPORT

IPCC AR5
Other reports and papers to be provided by the Instructor.

REGISTRATION

For attending the course, please register online at
<https://bit.ly/summercourse-2019-climate>

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