



Course Name:

Climate Change and Global Warming

Course Number: 20-031	Credit: 3
Program: Graduate	Course Type: Technical optional
Prerequisite: -	Corequisite: -

Course Description (Objectives):

This lesson explores the mechanisms, factors, and causes of climate change, examining various climatic periods from the past to projections for the future. The impacts of climate change on hydrometeorological processes and atmosphere-land-ocean circulation are analyzed in detail. Additionally, climate models and scenarios are discussed, including their applications across different sectors.

Course Content (outline):

- Chapter 1: Hydrometeorological Processes
- Chapter 2: Planetary Temperature of the Earth
- Chapter 3: Climate System
- Chapter 4: Climate modeling in different sectors
- Chapter 5: Results of Climate Change

References:

- Ruddiman, W.F. (2013). "Earth's Climate: Past and Future", (3rd ed ed.). Freeman/Worth
- Kump, L.R., J.F. Kasting, R.G. Crane. (2011). "The Earth System", Pearson College Div