

Course Code : ENCM 42632
Title : Global Climate Change
Pre-requisite : ENCM 21533
Co-requisite : None
Status : Compulsory, Theory

Learning outcomes:

After completion of the course unit, student will be able to;

- explain factors influencing climate change,
- explain key indicators and impacts of climatic change,
- application of different tools to quantify climate change, and
- discuss mitigation and adaptation instruments and their responses to climate change.

Course content:

Life Energy and Climate, Climate Regulators, Natural and anthropogenic activities influencing regional and global climatic change of the earth, Direct Observations of Recent Climate Change, Paleoclimatic Perspectives on Climate Change, Past Climates - Natural Drivers, Panels, Protocols and a Common Misconception about Ozone, Impacts of climate change, Probabilities, Uncertainties and Units Used to Quantify Climate Change, Models as tools, Feedback Loops, Emission Scenarios, Projections of Future Changes in Climate, Global Projections for Regional Climate Change, Climate Change Impacts, Instruments for Mitigation and Adaptation, Mitigation and Adaptation Responses, Climate change impacts and responses – Case studies.

Method of teaching and learning:

A combination of lectures, computer assisted learning, assignments and discussions.

Assessment:

In-course assessment and end of course examination.

Recommended reading:

1. CapNet, 2009. IWRM as a Tool for Adaptation to Climate Change Training Manual and Facilitator's Guide, CapNet. <http://www.cap-net.org/documents/2014/06/iwrm-cc-training-manual.pdf>
2. Dallas, N. (2008). Climate Change Basics. Mc Grow Hill.
3. Tomkiewicz, M. (2011). Climate Change, Mc Grow Hill.
4. IPCC, 2007. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, M.L. Parry, O. F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E.Hanson, Eds., Cambridge University Press.