Climate Change Adaptation and Disaster Risk Reduction (Core)

Code	Credit Hours
DM-805	3 – 0

Course Description:

The course focuses on modern-era aspects of linkage between contemporary challenges associated with disasters and climate change. It aims to enlighten students on governance tools related to DRR as well as mainstreaming DRR into development and operational works mitigating the climate change impacts.

Course Content:

Topics	Learning Outcomes
Introduction	Introduction to climate vulnerability, impacts and adaptation – key concepts
Background concepts	Climate modelling, climate projections, climate scenarios, critical uncertainties
Climate Impact Assessment	Approaches to climate impacts assessments Vulnerability assessment
Climate Change Adaptation	Adaptation at different scales: challenges, approaches, limits to adaptation, monitoring and evaluation of adaptation
Adaptation in practice (including field trip)	
Mainstreaming DRR into Development (linkage with government approval process), Housing, Agriculture, Livelihood, Environment and Food Security	Mainstreaming DRR into Development, Structural Measures (Disaster shelters, Emergency housing, evacuation shelters, Retrofitting, etc.), Non-Structural Measures, Legislations and Reforms (Building Code etc.), Institutional Strengthening
DRR and Climate Change Adaptation (CCA) Integrating Water & Wetland Management for DRR	Integration of DRR measures into climate change adaptation, Integration of DRR measures into wetland and water resources management
Governance Tools for DRR, DRR and Gender Perspective, DRR and Education	Governance and Co-governance in DRR, Case studies of Myanmar and Indonesia, Integration of DRR into Education sector, Viewing DRR with the lens of gender perspective: a critical review
International Case Studies	Risks and Needs of the communities (prone to

on DRR, Building Safer and Resilient Communities,	natural disasters, post disaster communities)

Textbooks:

No textbook for this course. The course will be based on different reference books, reports, and conference and journal publications.

Reference Material:

1. Washington W.M., Parkinson, C.I. (2000): An Introduction to Three-Dimensional Climate Modelling, Oxford University Press, Oxford
2. Burroughs, W.J. (2007): Climate Change: A Multidisciplinary Approach, Cambridge University Press, Cambridge (second edition)
3. Smith et al. (2009): Assessing dangerous climate change through an update of the Intergovernmental Panel on Climate Change (IPCC) “reasons for concern,” Proc. National Academy of sciences of USA. Vol 106(1), p. 4133-4137.
4. Lenton et al. (2008): Tipping elements in the Earth’s climate system, Proc. National Academy of sciences of USA. Vol 105(6), p. 1786-1793.
5. Asian Disaster Reduction Center, Kobe, Japan, Total Disaster Risk Management (Good Practices), 2005.
6. Economic Commission for Latin America and the Caribbean (ECLAC), 2003.
7. Handbook for Estimating the Socio-economic and Environmental Effects of Disasters, Vol. 1 to 4, 2003.
8. Joseph Gustin, Disaster & Recovery Planning: A guide for facility managers, 4th Edition, Fairmont Press, 2002.
9. Donna R. Childs and Stefan Dietrich, Contingency planning and disaster recovery, john Wiley and Sons, Inc., 2002.

Pre-requisite: None

Assessment System

Quizzes	15%
Assignments	10%
Mid-Semester Exam	25%
Term Project/Paper	10%
End Semester Exam	40%