

Course Profile

Course Code:

Course Title: Climate change impact assessment

Credit Hour:

Student Level:

Rationale: To reduce the vulnerability of agriculture to future climate change it is important to understand how students can assess the potential impacts of climate change on agriculture.

Objectives: At the end of this course, the students will gain considerable-

- (i) Knowledge of the potential impact of climate change on crop production, livestock, farming systems, and the agricultural sector of Bangladesh.
- (ii) Knowledge on how to perform a climate change impact assessment.
- (iii) Knowledge and the main sources of uncertainty in future climate change impacts.

Learning Outcomes	Course Content	Teaching-Learning Strategy	Assessment Strategy
-Understand how CO ₂ , Temperature and precipitation change affect crop production -Understand which methods can be used to study impact on crop production - analyse climate change impacts on plant growth	Climate change impacts on crop production: - Explanation of the how elevated CO ₂ , higher temperatures affect	Lecture Reading assignment QA	-Short Answer -Essay
-Understand how climate change affects livestock. -Understand which methods can be used to study climate change impact on crop production -	Climate Change Impacts on Livestock: Concept of management, administration, extension administration, principles of extension administration; elements of management function: planning, organizing, staffing, directing, leading, controlling, coordinating, reporting, budgeting; Management problem in organization; Supervision, Increasing efficiency in extension administration.	Lecture Reading assignment QA	-Short Answer -Essay -Completion
-U	Climate change data and models for Impact assessment: Explain which	Lecture	-Short Answer

<p>-Describe the main data sets available for climate change impacts assessment</p> <ul style="list-style-type: none"> - perform a simple bias correction -assess the uncertainty of future climate change impacts 	<p>data are available and needed for climate change impact assessment</p> <ul style="list-style-type: none"> - assignments on trend analyses of historical weather data - assignment on simple bias correction - assignment on analyzing and presenting uncertainty in future projections of temperature and rainfall. 	<p>Computer practical Discussion</p>	<p>-True-False -Matching term</p>
<p>-design a climate change impacts assessment on farming systems</p> <ul style="list-style-type: none"> - analyse and presents the main climate change impacts of a farming system - describe the main uncertainties of future climate change impacts on farming systems. 	<p>Perform a climate change impact assessment on a simple farming system</p> <p>Group assignment were every group makes a simple assessment of climate change impacts of a particular farming system</p>	<p>Group assignment Presentation Report</p>	<p>-Short Answer -Completion -Practical exam -Peer rating</p>

Recommended Books and Periodicals

Bhuiyan, M.H. 1999. *Extension Organization and Management* Dhaka: Gulshan Publication.

Bhuiyan, M.H. and Miah, M.A.M. 1998. *Samprasaran Monobiggan (Extension Psychology)*. Kishi Lekak Forum, Dhaka: Colourline Printers.

Bhuyan, M. H., Miah, M. A. M., Akanda, M. G. R and Bashar, M. A. 2014. *Agricultural Extension Education*. g-Science Implementation and Publication, Dhaka.

- DAE. 1999. *Agricultural Extension Manual*. Department of Agricultural Extension > Ministry of Agriculture . Govt. of the Peoples Republic of Bangladesh, Dhaka.
- Dahama, O.P. and Bhatnagar, O. P. 1980. *Education and Communication for Development* . 2nd edn. New Delhi: Oxford and IBH Publishing Co.Pvt.Ltd.
- Hasanullah, M. 1995. *Managing Extension Services*. Dhaka: University Press Limited.
- Kashem, M.A. 2004. *Fundamentals of Extension Education*. Mymensingh: Lima Printing Press.
- Kelsey, L.D. and Hearne, C.C. 1963. *Cooperative Extension Work*. 3rd ed. Comstock Publishing Associates, New York: Ithaca
- Rao, P.L. 2008. *Enriching Human Capital through Training and Development*. New Delhi: Excel Books.
- Ray, G.L. 2008. *Extension Communication and Management*. 7th edn. Kalyani Publishers, New Delhi.
- Robins, S. P. 1999. *Organizational Behavior*. 8th ed. New Delhi: Prentice-Hall Pvt. Ltd.
- Sahu, R.K. 2006. *Training for Development*. New Delhi: Excel Books.