

UNR1601 Climate Change and Water Management**COURSE INFORMATION**

Prerequisites	Academic Year & Level		Teaching Methods			Credit Hrs.
	Year	Semester	Lecture	Tutorial	Laboratory	
None	1	1	2	0	0	2

COURSE AIM

The objectives of the course is to contribute to reducing the vulnerabilities of people and societies to shifts in hydro-meteorological trends, increased variability and extreme events. This training course will focus on managing risk and dealing with uncertainty on climate change on water resources through various measures, including monitoring known hazards and risks, reducing the unknown risks through system research, and determining the range and type of relevant uncertainties. The course will also focus on the identification of adaptation measures with particular emphasis on droughts. It will also cover the important need to protect and restore ecosystems that provide critical land and water resources and services. The course will further discuss the need to close the gap between water supply and demand and to resolve water resources conflicts.

COURSE WEEKLY CONTENTS

- 1 Importance of Water for Economic Development
- 2 Climate Change, Its Drivers and impacts
- 3 Climate Change Mitigation and Adaptation
- 4 Climate Change Vulnerabilities and Risk Assessment
- 5 Water and Climate Change - Current Challenges
- 6 Introduction to Water resource Management and International Frameworks for IWRM
- 7 Water Supply and Distribution
- 8 Sources of Water and Minimizing Water Loss
- 9 Water Scarcity - Predictions and Preparedness
- 10 Safe Wastewater Reuse, Treatment and Recycling
- 11 Projections of future climate change impacts on the water cycle
- 12 Strategy Development and Planning for Adaptation
- 13 Technologies for addressing adaptation challenges
- 14 Climate Change Impacts on Agriculture and Drought Risk Management
- 15 Conflict issues in water resources management and water rights

STUDENT GRADING & ASSESSMENT

Weeks	Exams	Assign.	Quizzes	Reports	Present.	Lab.	Total
1 to 7	←		30	MARKS		→	30
8 to 12	←		20	MARKS		→	20
1 to 15	←		10	MARKS		→	10
16 or 17	40	Final					40

REFERENCES

Textbook • Climate Change and the Sustainable Use of Water Resources, Walter Leal Filho, Springer