

AG409 Minor Irrigation and Command area Development

Course Description & Objectives:

To expose the student with the fundamental knowledge of minor irrigation, its types operation, maintenance and people participation. It will also expose the student about the command area development, on farm structures, policy operation and maintenance

Course Outcomes:

At the completion of the course the student will:

1. have the knowledge and skills on Planning, design, operation and management of reservoir system.
2. gain knowledge on different methods of irrigation including canal irrigation.
3. be exposed to techniques of remote sensing
4. be able to make participation of farmers in command area development activities.

Unit 1 Introduction to Irrigation Projects:

Major, medium and minor irrigation projects – their comparative performance; development and utilization of water resources through different minor irrigation schemes.

Unit II: Introduction to Command area:

Basic concepts of command area – definition, need, scope, and development approaches: historical perspective, command area development authorities;

Unit III Farm Development Activities:

Interaction/collaboration of irrigation water use efficiency and agricultural production. Planning and execution of on farm development activities within the scope of command area development;

Unit IV Remote Sensing Techniques:

Use of remote sensing techniques for command area development; case studies of some selected commands

Unit V Farmer's Participation:

Farmer's participation in command area development. Case studies in related areas.

TEXT BOOKS:

1. Michael, A. M. (1990). *Irrigation Theory and Practice*. Vani Educational Books
2. Modi, P. N. (1995). *Irrigation Water Resources and Water Power Engineering*. Std Book House, New Delhi.

REFERENCES:

1. Murthy, C.S. (1990). *Design of Minor irrigation and canal structures*. Wileyeastern Limited, New Delhi.
2. Murthy, V.V.N. (1998). *Land and Water Management*. Kalyani Publishing, New Delhi.
3. Proc. of seminar on water Management. (1992). *Vol 1 & II*. Water Management Forum, Gandhinagar.
4. Punmia, B.C and Pande, B.B. (1999). *Irrigation and Water Power Engg*. Standard Publishers and Distributors, New Delhi.
5. Hoffman, G.J., Howell, T.A and Soloman, K.N. (1990). *Management of Farm Irrigation System*. ASAE.
6. http://ecourses.iasri.res.in/e-Leaarningdownload3_new.aspx?Degree_Id=04