Course title: Indian Agricultural Development: Contemporary Issues			
Course code: MPE 122	**No. of credits:** 4	**L-T-P:** 60-0-0	**Learning hours:** 60
Pre-requisite course code and title (if any): Macroeconomics			
Department: Department of Policy and Management Studies			
Course coordinator: Dr Shantanu De Roy	**Course instructor:** Dr Shantanu De Roy		
Contact details: shantanu.roy@terisas.ac.in			
Course type: Elective	**Course offered in:** Semesters 3		

Course description:

The course will discuss changes in the trajectory of agricultural development in India since Independence. Students will be exposed to impacts of policies on the growth processes in Indian agriculture. Further, it discusses changes in the relations among economic agents involved in the process of production and exchange that vary with the levels of capitalist development across agro-ecological zones in India. It also provides an exposure to the role of agricultural markets in facilitating the process of exchange.

Students will be acquainted with the impacts of some technological developments in Indian agriculture across social and economic groups, with a focus on the access, utilisation and sustainability of Green Revolution and BT cotton. Sustainability of farming practices will be discussed in this course, with specific illustrations from the literature on impacts of climate change and adaptation strategies of different sections of producers.

Liberalisation of economic regime that started in 1991 was followed by major structural changes resulting in modifications in the state provision of support to domestic agricultural sector—it had serious impacts on livelihood security of different sections of rural population, which the course covers as well.

Course objectives:

1. To critically examine the growth processes of Indian agriculture.
2. To make the students understand the nature of development of Indian agriculture, the role of agriculture in industrial development and land distribution in rural India.
3. To study inter-linkages across input and output markets in agriculture.
4. To provide the students an exposure to selected aspects of sustainability of agricultural development in India.
5. To gain knowledge on the impacts of climate change in Indian agriculture and adaptation strategies thereof.
6. To enable students, analyse the impacts of economic reforms on Indian agriculture.

Course content

S. No	Topic	L	T	P
1	**Module 1. Growth and Policies** Growth Process Selected Policy Level Interventions on the growth process In this module the performance of Indian agriculture and policy interventions at different phases since Independence will be discussed. This module will enable students to understand the development trajectory of Indian agriculture since Independence.	9		
2	**Module 2. Production Relations in Indian Agriculture** Mode of Production in Indian Agriculture Role of agriculture in industrial development Tenancy Relations and the Issue of Land in Rural India This module enables a student to understand the nature of and processes involved with capitalist development and identifying the beneficiaries (and non-beneficiaries) of such processes. It will showcase that farmers in India are not homogenous entities and they differ in terms of capital base, access to finance and terms and conditions under which they participate in the processes of production. Further, it enables the students to identify the different sections of farmers, economic relations between them in the process of production and to analyse the sections among the farmers that had benefited (and not benefited) from the growth process of Indian agriculture. Indian economy is primarily agrarian, and nature of agricultural development has a strong bearing on industrial development. In other words, constraints faced by the former in terms of growth rate and in terms of distributing the benefits of growth process to substantial sections of the rural population, will retard	11		

	industrial development in such an economy. These matters are discussed in this module. Land is an important component in the production process of agriculture. Land distribution in India has always been uneven. An important outcome of uneven distribution of land has been the existence of tenancy relationships, across agro-ecological zones in India, that are extremely skewed in favour of the big landholders. However, there have been attempts, in certain regions in India, for equitable distribution of land. Land reform, a programme intended to create private property rights over land, has been discussed in this module. Also, the overall impact of land reform on the rural areas, the limitations of such a programme has been discussed.			
3	**Module 3. Exchange Relations in Indian Agriculture** Contract Farming and Interlinkages Across Markets Role(s) of Agricultural Markets Exchange relations encompass relations between different sections of the producers in the sphere of exchange. The module exposes the students to the issue of interlinkages across input and output markets in an agrarian economy. This module provides exposure to the linkages between credit, labour and output markets and the terms and conditions under which different sections of the producers participate in the process of exchange. It also analyses that how unequal access to resources also leads to variations in the terms of exchange fordifferent sections of producers.	8		
4	**Module 4. Technology diffusion in Indian Agriculture: Issues of Ecological Sustainability** Green Revolution and Sustainable Agricultural Development Implementation of BT Cotton Technology and its Impacts Sustainability of Farming Practices in India This module intends to bring into discussion issues of sustainability of agricultural development due to technological changes at various points in time. More specifically, it discusses ecological sustainability of Green Revolution technology and impacts of technological development in Indian agriculture on natural resources like water and land. Sustainability of BT Cotton technology in India, a widely debated issue in Indian agriculture at the policy level, will be discussed in this module. It will also provide a critical take on one of the alternative farming practices, Zero Budget Natural Farming for promoting sustainability of Indian agricultural development.	13		
5	**Module 5. Climate Change and Indian Agriculture: Impacts and Adaptation Measures** This module intends to discuss impacts of climate change on Indian agriculture. It gives a detailed exposure to the students regarding the impact of climate change on yield and productivity of several major crops and on irrigation sources in India. It also aims to discuss the adaptation measures and determinants of adaptive capacity of the farming community in India to cope with the problems related to climate change.	9		
6	**Module 6. Economic Reforms and Indian Agriculture** Initiation of reforms in the nineteen nineties marked a new phase of development in the Indian economy. It had led by major changes in macroeconomic policies in India; trade liberalization in agriculture and accession into the WTO were integral parts of these changes. This module intends to discuss impacts of economic reforms in agriculture since the nineties. The issue of agrarian distress will also be discussed in this module.	10		

	Total	**60**		

Evaluation criteria:

1. **Test 1: Written test** [at the end of teaching of module 1] — 20% [learning outcome 1]
2. **Test 2: Submission of a term paper** [at the end of teaching of modules 2 and 3] – 25% [learning outcomes1 and 2]

   Students will be asked to write an essay (in 2000 words) on a given topic. They will be assessed based on (a) answering the question, (b) maintaining word limit, (c) in-depth understanding of the topic, (d) strength of argument, (e) clarity of argument and (f) proper referencing.
3. **Test 3**: **Presentation** [after the completion of module 5] – 25% [learning outcomes 2, 3 and 4]

   There will be individual presentation of students based on the topics covered in the course. Topic(s) will be selected by the students; it will be related to the modules covered in the course.

Test 4: **Written test** [at the end of the semester, entire syllabus] – 30% [learning outcomes 1 to 5]

Learning outcomes:

By the end of the course, students will:

1. Develop critical understanding regarding growth processes in Indian Agriculture.
2. Ability to critically exam the nature and beneficiaries of development, agriculture-industry development linkages and land distribution in rural India.
3. Gain knowledge regarding sustainable farming practices in Indian agriculture.
4. Assess the impacts of climate change on Indian agriculture.

Evaluate the impacts of economic reforms on Indian agriculture

Pedagogical approach

-Critically investigates policy level and climatic impacts on various socio-economic classes and social and religious groups in rural India.
-Class interactions and discussions.
-Class presentations.

CORE reading materials:

Module 1: Growth and Policies

Growth Process

Mohan Rao, J. and Storm, Servaas (1998), "Distribution and Growth in Indian Agriculture‖, in Byres, Terence J.(ed.), *The Indian Economy: Major Debates since Independence*, OUP.
De Roy, Shantanu (2018), ―Economic Reforms and Agricultural Growth in India‖, in *Quarter Century of Liberalization in India: Looking Back and Looking* Ahead, Oxford University Press, New Delhi. *[Through these readings, students will be able to understand the growth performances of Indian agriculture during the pre- and post-reform periods.]*

Policy Level Interventions

Bharadwaj, Krishna (1994), Agricultural Policies for Growth: The Emerging Contradictions, in Byres, T. J. (ed.), *The State, Development Planning and Liberalisation in India*, OUP. New Delhi.
Dev, Mahendra S and Rao, Chandrasekhara N (2010), "Agricultural Price Policy, Farm Profitability and Food Security", *Economic and Political Weekly*, June 26, 45(26/27)
[Discusses policy level impacts on the growth process during the pre- and the post-reformperiods.]

Module 2: Production Relations in Indian Agriculture

2.1 Mode of Production Debate in Indian Agriculture

Patnaik, Utsa (1991), *Agrarian Relations and Accumulation: The Mode of Production Debate in India* (Chapters 5,6 and 7), OUP, 1990.
[Captures debates on the modes of production in India.]

Role of Agriculture in Industrial Development

Patnaik, Utsa (1986), ―The Agrarian Question and Development of Capitalism in India‖, *Economic and Political Weekly*, May, 21(18).
Yadu, C. R. and Satheesha, B. (2016), ―Agrarian Questions in India: Indications from NSSO's 70th Round‖, *Economic and Political Weekly*, 51(16).
[Analyses the role of agriculture in the industrialisation process in India.]

Tenancy Relations and the Issue of Land in Rural India

Rawal, Vikas (2008), ―Ownership Holdings of Land in Rural India: Putting the Record Straight‖, *Economic and Political Weekly*, March, 43(10).
De Roy, Shantanu (2016), ―Changes in the Distribution of Cultivated Land and Occupational Pattern in Rural West Bengal‖, *Indian Journal of Agricultural Economics*, October-December 71(4).
Rawal, Vikas (2013) and Siddiqur, Osmani, ―Economic Policies, Tenancy Relations and Household Incomes: Insights from Three Selected Villages in India‖, ICSSR-ESRC Bilateral Collaboration Programme for Exchange of Scholars.
[Captures socio- political and economic issues related to land in the context of an agrarianeconomy like India.]

Module 3: Exchange Relations in Indian Agriculture

Contract Farming

Singh, Sukhpal (2002), ―Contracting Out Solutions: Political Economy of Contract Farming in the Indian Punjab‖, *World Development*, September, 30(9).
Mahendra Dev, S. and Chandrasekhara Rao, N. (2005), ―Food Processing and Contract Farming in Andhra Pradesh: A Small Farmer Perspective‖, *Economic and Political Weekly*, June-July, 40(26).
[Argues that unequal production relations are the basis of unequal relations of exchange.]

Agricultural Marketing in India

Ali, Muhamad Jan, and Barbara Harris White (2012), ―Three Views About Agricultural Commodity Markets‖, *Economic and Political Weekly*, December 47(52).
[Analyses interlocked nature of markets in the rural economies and the process of surplusrealization.]

Module 4: Technology Diffusion in Indian Agriculture: Issues of Ecological Sustainability

Green Revolution and Sustainability of Agricultural Development

Singh, R. B. (2000), ―Environmental Consequences of Agricultural Development: A Case Study from the Green Revolution State of Haryana, India‖, *Agriculture, Ecosystems and Environment*, December, 82(1-3).
Chand, Ramesh (1999), ―Emerging Crisis in Punjab Agriculture‖, *Economic and Political Weekly*, March-April, 34(13)
[These papers discuss impact of Green Revolution on natural resources like water, land and environment. These papers also bring into focus the issue of environmental sustainability of Green Revolution technology in India.]

Implementation of BT cotton Technology in India and its Impacts

Glover, Dominic (2010), ―Is BT Cotton a Pro-Poor Technology? A Review and Critique of the Empirical Record‖, *Journal of Agrarian Change*, 10(4).
Ramakumar, R, Raut, Karan and Kamble, Tushar (2017), ―Moving Out of Cotton: Notes from a Longitudinal Survey in Two Vidarbha Villages‖, *Review of Agrarian Studies*, January to June, 7(1).

Krishna, Vijesh V, and Qaim, Martin (2012), ―BT Cotton and Sustainability of Pesticide Reductions in India‖, *Agricultural Systems*, Vol. 107.
[Discusses merits and demerits of BT cotton technology in India and its impacts on differentsections of the producers.]

4.3 Sustainable Farming Practices in India

Khadse, Ashlesha et al (2017), ―Taking Agroecology to Scale: The Zero Budget Natural Farming Peasant Movement in Karnataka, India‖, *The Journal of Peasant Studiesi*, February,45(1).
Patil, Sheetal et al (2014), ―Comparing Conventional and Organic Agriculture in Karnataka , India: Where and When can Organic Farming be Sustainable?', *Land Use Policy*, Vol.37.
[These readings bring into discussion alternative farming practices, and conditions underwhich these practices can promote sustainable development.]

Module 5: **Climate Change and Indian Agriculture: Impacts and Adaptation Strategies**

Saravanakumar, V. (2015), ―*Impacts of Climate Change on Yield of Major Food Crops in Tamil Nadu, India*‖, SANDEE Working Paper No. 91-15.
Balasubramanian, R. (2015), ―*Climate Sensitivity of Groundwater Systems Critical for Agricultural Incomes in South India*‖, SANDEE Working Paper No. 96-15.
Banerjee, Rupsha R. (2015), ―Farmer's Perception of Climate Change, Impact and Adaptation Strategies: A Case Study of Four Villages in the Semi-Arid Regions in India‖, *Natural Hazards*, 75(3).
[Discusses impacts of climate change on Indian agriculture and adaptation strategies by thefarmers.]

Module 6: **Economic Reforms and Indian Agriculture**

Nayyar, Deepak and Sen, Abhijit (1994), ―International Trade and the Agricultural Sector in India‖, *Economic and Political Weekly*, May, 29(20).
Gulati, Ashok (2002), ―Indian Agriculture in a Globalising World‖, *American Journal of Agricultural Economics*, August, 84(3).
Patnaik, Utsa (2003), *Global Capitalism, Deflation and Agrarian Crisis in Developing Countries*, Working Paper no. 15, UNRISD.
Patnaik, Utsa (2004), ―The Republic of Hunger‖, *Social Scientist*, September-October, 32(9/10). *[Discusses the rationale for economic reforms on Indian agriculture and impacts of India'saccession in the WTO on the rural economy.]*

OTHER reading materials

Ramachandran, V. K. and Swaminathan, M. (eds.) (2002), *Agrarian Studies: Essays on Agrarian Relations in Less-Developed Countries*, Tulika Publishers.
Mohanty, B. B. (ed.) (2016), *Critical Perspectives on Agrarian Transition: India in the Global Debate*, Rouledge.
Campling, Liam et. al. (eds.) (2013), *Journal of Agrarian Change: Special Issue*, July, 13(3).

Additional information (if any): None

Student responsibilities: Attendance, feedback, discipline: as per university rules.

Course reviewers:

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