

<b>Course title:</b> Food Security and Agriculture			
<b>Course code:</b> NRE 168	<b>No. of credits:</b> 3	<b>L-T-P:</b> 26-16-06	<b>Learning hours:</b> 45
<b>Pre-requisite course code and title (if any):</b>			
<b>Department:</b> Natural and Applied Sciences			
<b>Course coordinator:</b> Dr Amit Singh		<b>Course instructor:</b> Dr Amit Singh	
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<b>Course type:</b> Elective		<b>Course offered in:</b> Semester 3	
<p><b>Course Description</b></p> <p>Changing climate and management of environment and natural resources (e.g., water, soil nutrients, etc.) has become a major issue of concern at both regional and global level, influencing livelihood of people, especially the less advantaged people, in the developing countries. Both these factors have a major interplay with the arable agricultural systems especially in the developing countries and are key to livelihood of majority of the population and subsequently food security and sustainability in these regions. Achieving food security remains a major social, political and economic issue both globally as well as at regional level. It is more challenging in developing countries where effort to address the issue of food insecurity are hampered by environmental and climatic changes (e.g., pollution, rainfall pattern, global temperature, etc.) and depletion of natural resources (e.g., soil degradation, ground water depletion and contamination). In view of this, sound research, strategic decision-making and management for sustainable development of agriculture and food supply systems are the need of the hour.</p> <p>The main aim of the course is to provide students with the necessary knowledge, understanding and skills to contribute effectively to research, decision and policymaking, and management of climate, environmental and natural resources towards a food secure and sustainable future. Such knowledge and skills will be useful for employment in various interdisciplinary academic and professional fields related to climate change and natural resource management.</p> <p>Through this course, the students will first gain an understanding of the food security and its inter-relationship with the environment and climate through its linkages with arable agricultural systems. The students will then learn how global climate change, environmental pollution and natural resources management influences the key components of food security. They will also learn ways of adapting to the changing climate and environment and how this can aid in achieving food security and sustainability through science and technological advancements, policy economic and social intervention. These will be first studied at the global scale in general and later studied in more detail at a regional level (India) through various case studies related to what has been taught in the lectures.</p> <p><b>Skill set</b></p> <ol style="list-style-type: none"> <li>1. A good understanding of inter-relationship between climate change, environment, food security and sustainability at global and regional (India) level.</li> <li>2. To understand the concept of food security and issues in achieving it.</li> <li>3. Understand ways of adapting to climate change and managing the environment keeping in mind food security and sustainability.</li> </ol> <p><b>Course objectives</b></p> <ol style="list-style-type: none"> <li>1. A good understanding of inter-relationship between climate change, environment, food security and sustainability at global and regional (India) level.</li> <li>2. To understand the concept of food security and issues in achieving it.</li> <li>3. Understand ways of adapting to climate change and managing the environment keeping in mind food security and sustainability.</li> </ol>			