**Course Articulation for Unit 5 Agriculture**

## Unit V. Agriculture, Food Production, and Rural Land Use

### A. The development of agriculture led to widespread alteration of the natural environment.

### Identify major centers of domestication of plants and animals and patterns of diffusion in the first (Neolithic) agricultural revolution.

### Early hearths of domestication of plants and animals include Southwest Asia (e.g., the Fertile Crescent), Southeast Asia, and the Americas.

### Patterns of diffusion (e.g., Columbian Exchange) resulted in the globalization of various plants and animals.

### Explain the connection between physical geography and agricultural practices.

### Agricultural regions are influenced by the natural environment (e.g., climate, soils, landforms).

### Populations alter the landscape (e.g., terraces, irrigation, deforestation, draining wetlands) to increase food production.

### Explain the advances and impacts of the second agricultural revolution

### New technology and increased food production led to better diet, longer life, and more people available for work in factories.

### Analyze the consequences of the Green Revolution on food supply and the environment.

### The Green Revolution began with the development of high-yield seeds (e.g., rice, wheat, maize), resulting in the increased use of chemical and mechanized farming.

### Positive consequences of the Green Revolution include increased food production and a relative reduction in hunger at the global scale.

### Negative consequences of the Green Revolution include environmental damage resulting from irrigation and chemical use (e.g., pesticides, herbicides, fertilizers) and the cost of technology and seeds.

### B. Major agricultural regions reflect physical geography and economic forces.

### Identify agricultural production regions associated with major bioclimatic zones.

### Plant and animal production is dependent on climatic conditions, including spatial variations in temperature and rainfall.

### Some agricultural regions are associated with particular bioclimatic zones (e.g., Mediterranean, shifting agriculture, pastoral nomadism).

### Analyze the economic forces that influence agricultural practices.

### Agricultural production regions are defined by the extent to which they reflect subsistence or commercial practices, or intensive or extensive use of land.

### Intensive farming practices include market gardening, plantation agriculture, mixed crop/livestock systems, etc.

### Extensive farming practices include shifting cultivation, nomadic herding, ranching, etc

### Explain the spatial organization of large- scale commercial agriculture and agribusiness.

### Large-scale commercial agricultural operations are replacing small family farms.

### The transformation of agriculture into large-scale agribusiness has resulted in complex commodity chains linking production and consumption of agricultural products

### Technological improvements have changed the economies of scale in the agricultural sector.

### Explain the interdependence among regions of food production and consumption.

### Food is part of a global supply chain; products from less developed low-latitude regions (e.g., coffee, bananas) are often consumed globally.

### Patterns of global food distribution are affected by political systems, infrastructure, and patterns of world trade.

### C. Settlement patterns and rural land use are reflected in the cultural landscape.

### Identify rural settlement patterns.

### Rural settlement patterns are classified as clustered, dispersed, or linear

### Compare and contrast the land use zones of von Thünen’s model.

### Von Thünen’s model helps to explain rural land use by emphasizing the importance of transportation costs associated with distance from the market.

### Analyze the application of von Thünen’s land use model to agricultural production in the real world.

### Von Thünen’s model helps explain the contemporary distribution of agricultural regions (e.g., dairy, horticulture, wheat).

### Regions of specialty farming (e.g., South Florida, California’s Central Valley) do not always conform to von Thünen’s concentric rings.

### Evaluate the environmental consequences of agricultural practices.

### Environmental systems are affected by land use/land cover change (e.g., irrigation, desertification, deforestation, wetland destruction, conservation efforts).

### D. Changes in food production and consumption present challenges and opportunities.

### Explain issues related to the changing nature of contemporary agriculture.

### Agricultural innovations (e.g., biotechnology, genetically modified organisms, organic farming, aquaculture) have resulted in ongoing debates over environmental, cultural, and health impacts.

### Environmental issues related to agriculture include sustainability, soil degradation, reduction in biodiversity, overgrazing, river and aquifer depletion, animal wastes, and extensive fertilizer and pesticide use.

### Patterns of food production and consumption are influenced by food-choice issues (e.g., organic farming, value-added specialty crops, fair trade, local-food movements).

### Explain issues related to the location of food- production facilities.

### Factors affecting the location of food-processing facilities include markets, economies of scale, transportation, government policies, etc.

### Explain the changing role of women in food production and consumption.

### The role of women in food production has changed (e.g., food gathering, farming, managing agribusiness).

### The role of women has changed the types of food a family consumes and the way food is prepared.