

## CCSC 202: Food For Thought

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### Brief Course Description:

“The basic problem is a simple one – plants and animals did not evolve to feed human beings. Therefore, why should we expect them to meet our dietary needs.” [Dick Flavelle, the Coalition for Environmentally Responsible Economies (CERES)].

In this course we will examine man’s quest to meet his basic nutritional and dietary needs and the issues facing mankind as it tries to meet the nutritional and dietary needs of an expanding world population. Integrating literary, scientific and socio-economic writings, we will pursue four major themes: the human diet and what limits the acquisition of nutrients and other compounds in our food supply that are necessary for growth and development; historical and contemporary views of how society deals with providing stable sources of food and nutrition to individuals and populations; how scientists are trying to improve nutrition and human health through genetic engineering; and the socio-economic and political factors that affect food production and distribution on a local, regional, and global basis.

We are a health conscious society. Because of this, we should have a basic understanding of the requirements for good diet and nutrition, where we obtain our food, and what can and is being done to improve the quality of our diet. It is equally important that we know how scientists are working to improve human health through nutrition, the current trends in food bioengineering and the role genetic engineering is playing in modifying food quality and availability. Moreover, despite the great strides forward in agricultural productivity, many people world-wide are malnourished and millions go hungry each day. Why are food production and distribution not matched equitably with need on a world-wide basis and how will we as individuals and as a society deal with hunger and food security?

The course has no prerequisites.

### Preliminary Syllabus

January	Thurs	20	<b>Introduction</b>
			<b>Introduction to Nutrition: Reg Garrett (Biology)</b>
	Tues	25	Choices; diet planning: What we need to eat

	Thurs	27	Digestion & absorption of nutrients
February	Tues	1	What are carbohydrates? Carbohydrates as nutrients
	Thurs	3	What are fats? Fats as nutrients
	Tues	8	What are proteins? Protein is an essential nutrient
	Thurs	10	Metabolism: Energy from carbohydrates, fats & proteins
	Tues	15	Energy balance, weight management, regulation of eating behavior
	Thurs	17	Vitamins, minerals & water
	Tues	22	<b>Anthropological Perspective, Agriculture &amp; Food Production – (Fred Damon, Anthropology)</b>
	Thurs	24	<b>Guest Lecture 1 Hour Exam I (during recitation sections)</b>
			<b>Biological perspectives: Michael Timko (Biology)</b>
March	Tues	1	Development of Agriculture
	Thurs	3	Plant Breeding & Genetics – Crop Domestication
	Tues	8	<b>No Class - Spring Break</b>
	Thurs	10	<b>No Class - Spring Break</b>
	Tues	15	Basic Genetic Manipulation of Plants-Trends in Crop Bioengineering
	Thurs	17	Bioengineering for Food & Nutritional Enhancement
	Tues	22	Bioengineering for Food & Nutritional Enhancement
	Thurs	24	GMOs – Issues and Alternatives
	Tues	29	Literary perspectives-population growth/food security –
		Thurs	31
			<b>Economic Issues: John McLaren (Economics)</b>
April	Tues	5	Food and trade: Is self-sufficiency desirable?
	Thurs	7	Poison grapes and GMO's: Trade policy and food.
	Tues	12	Multinationals and yeoman farmers: The world food system.

Thurs 14 Farm subsidies and world poverty (I).  
Tues 19 Farm subsidies and world poverty (II).  
Thurs 21 The Green revolution and Third-World poverty.  
Tues 26 Dealing with volatility and price risk.  
Thurs 28 The economics of famine.

May

Tues 3 **Guest Lecture 3**

**Hour Exam 3 – during Finals week**