SYLLABUS: https://teach.lanecc.edu/powellt	
Table of Contents: NUTRITION STUDY GUIDE, Tamberly Pov	
Table of Contents with Objectives on back	
DIET ANALYSIS- Food Record Forms & Wilbur's Sample Printouts	3
CHAPTERS 1 & 2 & 3	
Lecture Outline, Ch. 1: Food Choices	
STUDY QUESTIONS, Orientation & Ch. 1: Food Choices	15
Lecture Outline, Ch. 2: Nutrition Standards & Guidelines	
STUDY QUESTIONS, Ch. 2 and Ch 3	26
Lecture Outline, Ch. 3: The Remarkable Body	32
Digestion: What's the Point?	34
Our Ancestor's Diet	35
CHAPTER 4	
Lecture Outline, Ch. 4 (Part 1): Covalent Bonds plus Wilbur & Solar Power -	36
Wilbur Drawing	39
Your Notes about the Wilbur Drawing	40
STUDY QUESTIONS, Ch. 4 (Part 1): Carbohydrate & Wilbur	41
Review Exam 2	44
Lecture Outline, Ch. 4 (Part 2): The Carbohydrates	45
Cellular Respiration: Energy Metabolism	51
STUDY QUESTIONS, Ch. 4 (Part 2): The Carbohydrates	
MISCELLANEOUS INFORMATION	
Plants and Macronutrients	58
Selected Food Crops: Growing & Processing	59
Food Sources Carbohydrates, Lipids, Proteins	
Making Health about DVs on Food Labels	65
Foods & Digestion	66
Labels	67
CHAPTER 5 & 6	
Lecture Outline, Ch. 5: The Lipids	73
STUDY QUESTIONS, Ch. 5: The Lipids	78
Review Exam 3	
Lecture Outline, Ch. 6:The Proteins	83
STUDY QUESTIONS, Ch. 6: The Proteins	88
CHAPTER 7 & 8	
Effect of Food Preparation on Nutrients & Phytochemicals	92
Lecture Outline, Ch. 7 & 8: Vitamins & Minerals	93
The NUTRI-CHARTS	95
DSHEA (Dietary Supplement Health and Education Act of 1994)	100
Food Sources of Vitamins and Minerals	101
STUDY QUESTIONS, Ch. 7	102
STUDY QUESTIONS, Ch. 8	108
CHAPTER 9 & 10	
REVIEW FOR FINAL EXAM	113
Lecture Outline, Ch. 9: Energy Balance & Weight Control	115
SURVEY & STUDY QUESTIONS, Ch. 9: NRG Bal. & Weight	
Lecture Outline, Ch. 10: Nutrients, Physical Activity & Body's Response	
STUDY QUESTIONS, Ch. 10: Nutrients, Phys. Activity	

Main Objectives: **CHAPTER 1**

- 1. List macronutrients, micronutrients, organic nutrients and inorganic nutrients.
- 2. Define calories and explain why we need to get calories from food.
- 3. Evaluate trustworthiness of research (even when funded by pharmaceutical, supplement or food industries) and make appropriate conclusions.
- 4. Assess the credibility of nutrition info from health professionals or publications, from the internet or from other mass media.

CHAPTER 2

- 1. Use the RDA to evaluate two different food intakes, the DV to evaluate a food based on its label and the Food Pyramid to evaluate a meal.
- 2. Describe the usefulness of phytochemicals for plants as well as for humans and state the best way to get them.

CHAPTER 3

- 1. Summarize the main points of digestion.
- 2. Explain some food treatments for a few digestive problems.
- 3. Explain the relationship between agriculture and human existence on earth.
- 4. Explain the effect of agriculture on nutrient and phytochemical intake.

CHAPTER 4

- 1. List types of carbohydrates and describe usefulness of carbohydrates for plants and humans.
- 2. Identify which carbohydrates are good to have in our diet (ALL of them).
- 3. Explain what our body does to change carbohydrates in food into building blocks for cells.
- 4. Choose a variety of nutrient dense foods with carbohydrate.
- 5. Choose foods that will not promote cavities.

CHAPTER 5

- 1. List types of fats and describe usefulness of fats for plants and humans.
- 2. Identify which ones are good to have in our diet (MUFAs, omega 3s and enough total fat for satiety).
- 3. Explain what our body does to change fats in food into building blocks for cells.
- 4. Choose a variety of nutrient dense foods w/ fat.

CHAPTER 6

- 1. List types of proteins and describe usefulness of proteins for plants and humans.
- 2. List the food groups that have protein.
- 3. Explain what our body does to change proteins in food into building blocks for cells.
- 4. Explain why some find high protein, high fat and low carbohydrate diets to be an effective short-term way to lose weight.
- 5. Explain long term effects of high protein diets on the body and on the environment.
- 6. Choose a variety of nutrient dense foods with protein.

CHAPTER 7

- 1. Explain what vitamins do for plants and for animals
- 2. Explain the effect of cooking on vitamins.
- 3. List the vitamins commonly low in students' diets.
- 4. Choose the most nutrient dense foods with vitamins.
- 5. Choose appropriate & safe vitamin supplements.

CHAPTER 8

- 1. Explain what minerals do for plants and for animals.
- 2. Explain the effect of cooking on minerals.
- 3. List the minerals commonly low in students' diets.
- 4. Choose the most nutrient dense foods with minerals.
- 5. Choose appropriate & safe mineral supplements.

CHAPTER 9

- 1. Define calories and explain why we need to get calories from food.
- 2. Describe an appropriate way to measure body fatness.
- 3. List possible causes and "dos" for obesity and eating disorders.

CHAPTER 10

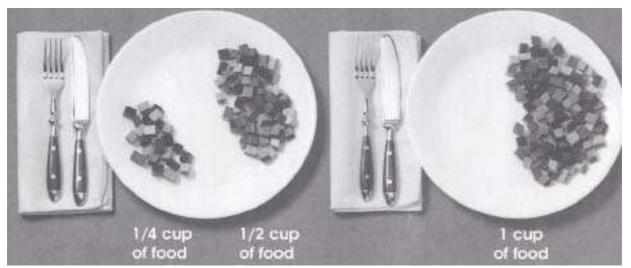
- 1. Explain the benefits of exercise and components of fitness.
- 2. Choose types of training, beverages and food before and during activity.

Date	NAME	_
FOOD RECORD for Date		

- 1. Keep a careful and accurate record of all FOOD and beverages (including coffee, water, gum, etc.) consumed during 1 day. Do NOT include supplements as this assignment is intended for you to see how you're doing from food. Evidence is very incomplete and inconclusive about how well supplements are used by the body.
- 2. Use the food record form provided below. Try to write down the food as you consume it. Do not rely on your memory. Choose a day that is typical of your eating habits.
- 3. Estimate the quantities in terms of household measures (like 1 cup, or 8 oz. milk, 3 oz. fish, 1 teaspoon butter). 1 pat of butter is about 1 teaspoon. (See sample picture on next page.)
- 4. 8 ounces = 1 cup ONLY when the item is FLUID. Do not use ounces unless the food is liquid (8 oz. milk) or you know what it weighs (3 oz. chicken). 8 oz. Cheerios does NOT equal 1 cup. 8 ounces Cheerios is half the box.
- 5. 1 ounce cheese = 1 slice cheese = 1/4 cup shredded cheese. 1 ounce chips = about 1 indiv. package
- 6. 1 pkt. salt = 1/8 tsp. 1 pkg. chips = 1 oz. 1 tablespoon = 3 tsp. 1 tsp. = 1 pat butter
- 7. Note the food's preparation method (baked, fried, etc.).
- 8. Be specific about the type of milk (whole, 2%, 1%, nonfat).
- 9. Don't forget the spreads on bread, water, salad dressings, gravies, cream and sugar in coffee, etc.
- 10. For mixed dishes, like casseroles, estimate and record the amounts of the major ingredients. The data base DOES have standard mixed dishes like macaroni and cheese, lasagne, chili, burritos, etc.
- 11. For fast food restaurants, record the name of the restaurant.
- 12. Once you have your Food Record for a day, look above Week 1 in our Moodle class for "Instructions for Diet Analysis Using the Internet".

Day 1

Ba	1 9 1
BREAKFAST (time)	DINNER (time)
Amount and Food	
SNACK (time	
LUNCH (time)	
	SNACK (time)
	What was enjoyable about eating this
SNACK (time	day of food?



Day 2 (if you choose; not required)

BREAKFAST (time)	DINNER (time)
Amount and Food	
SNACK (time	
LUNCH (time)	
·	
	SNACK (time)
	~ · · · · · · · · · · · · · · · · · ·
	What was enjoyable about eating this
ON A OK (time-	day of food?
SNACK (time	

Day 3 (if you choose; not required)

BREAKFAST (time) Amount and Food	DINNER (time)
SNACK (time	
LUNCH (time)	_
	SNACK (time)
SNACK (time	What was enjoyable about eating this day of food?

WILBUR'S SAMPLE PRINTOUTS

<u>FIGURE 1</u>: Here is the food displayed for Wilbur on 5/30/2007. Notice that the *portions* (Number of servings) he ate were different from the standard USDA *serving size*.

Foods Consumed	Select Serving Size	Number of Servings (Enter a number (e.g. 1.5))
BEER, LITE	1 can or bottle (12 fl oz)	1
BREAKFAST BURRITO	1 medium burrito	1
ENDIVE, CHICORY, ESCAROLE OR ROMAINE LETTUCE, RAW	1 leaf romaine	1
ICE CREAM BAR/STICK, CHOCOLATE COVERED	1 3 Musketeer bar (2 fl oz)	1
MILK, 2%	1 cup	1
ORANGE JUICE	1 cup	1.54
PIZZA W/ MEAT & VEGETABLES	1 piece (1/8 of 12 dia)	3
POPCORN, AIR-POPPED, BUTTERED	1 cup, popped	3
TOMATOES (TOMATO), RAW	1 medium slice (1/4 thick)	1
TUNA SALAD W/ EGG	1 cup	1
WHITE BREAD	1 regular slice	2
Save & Analyze Enter Fo	ods Return to Login Reset Valu	ues

Foods are listed above in alphabetical order. His meals were;

BREAKFAST Breakfast burrito

Orange juice

LUNCH

Tuna and Egg Salad $\ensuremath{w/}$ lettuce and to mato on white bread $\ensuremath{\text{Milk}}$

DINNER

Pizza and Beer Ice Cream Bar

SNACK

Popcorn

Wilbur's SAMPLE PRINTOUTS

FIGURE 2: Wilbur's Nutrient Intakes From Foods

Nutrient Intakes For wilbur2000 on 8/4/2007

A nutrient recommendation is a target or goal for intake of a nutrient. Your requirement for a particular nutrient is unique to you, but it is likely to be lower than the recommended number. If your intake is at or above this number, then it is probably adequate. If your intake is below this number, that does not necessarily mean an inadequate intake. If today's intake is typically what you eat, and your intake for a nutrient is at or above the recommendation, it is likely that your intake of that nutrient is adequate. To better assess your usual nutrient intake, you should report foods eaten for two or more days and review your nutrient intake over time. Click here if you want to see your nutrient profile with technical assessment information.

Nutrient	Your Intake	Recommendation or Acceptable Range
Food Energy/Total Calories (kcals)	2178	2641
Protein (gm)	90	56
Carbohydrate (gm)	207	130
Total Fiber (gm)	13	38
Total Fat (gm)	103	48.4 - 84.7
Saturated Fat (gm)	42.6	< 24.2
Monounsaturated Fat (gm)	32	**
Polyunsaturated Fat (gm)	21	**
Linoleic (omega 6) (gm)	18.2	17
Alpha Linolenic (omega 3) (gm)	2.3	1.6
Cholesterol (mg)	518	< 300
Vitamin A (mcg RAE)	644.9	900
Vitamin C (mg)	185.5	90

Continued on next page

Vitamin E (mg a-TE)	6.6	15
Thiamin (mg)	1.6	1.2
Riboflavin (mg)	2.2	1.3
Niacin (mg)	25.6	16
Folate (mcg, DFE)	456.5	400
Vitamin B6 (mg)	1.6	1.3
Vitamin B12 (mcg)	6.2	2.4
Calcium (mg)	1179.7	1000
Phosphorus (mg)	1408.7	700
Magnesium (mg)	249.9	400
Iron (mg)	12.7	8
Zinc (mg)	8.9	11
Selenium (mcg)	167.9	55
Potassium (mg)	2581	4700
Sodium (mg)	3372	1500 - 2300

^{**} Nutrient has no established recommendation.

Back MyPyramid HEI Score Calculate Nutrient History

FIGURE 3: Wilbur's Pyramid Stats

Pyramid Categories	Percent Recommendation
Milk	93%
Meat and Beans	86%
Vegetables	49%
Fruits	75%
Grains	82%