

SYLLABUS: <https://teach.lanecce.edu/powellt>

Table of Contents: NUTRITION STUDY GUIDE, Tamberly Powell

Table of Contents with Objectives on back ----- 1

DIET ANALYSIS- Food Record Forms & Wilbur’s Sample Printouts ----- 3

CHAPTERS 1 & 2 & 3

 Lecture Outline, Ch. 1: Food Choices ----- 9

 STUDY QUESTIONS, Orientation & Ch. 1: Food Choices ----- 15

 Lecture Outline, Ch. 2: Nutrition Standards & Guidelines ----- 23

 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 ----- 52

MISCELLANEOUS INFORMATION

 Plants and Macronutrients ----- 58

 Selected Food Crops: Growing & Processing ----- 59

 Food Sources Carbohydrates, Lipids, Proteins ----- 64

 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 ----- 82

 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 ----- 121

 Lecture Outline, Ch. 10: Nutrients, Physical Activity & Body’s Response ----- 125

 STUDY QUESTIONS, Ch. 10: Nutrients, Phys. Activity ----- 127

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.

Day 3 (if you choose; not required)

BREAKFAST (time ____) <u>Amount and Food</u> _____ _____ _____ _____ _____ _____ _____	DINNER (time ____) _____ _____ _____ _____ _____ _____ _____ _____
SNACK (time ____) _____ _____	_____
LUNCH (time ____) _____ _____ _____ _____ _____ _____	SNACK (time ____) _____ _____ _____
SNACK (time ____) _____ _____	What was enjoyable about eating this day of food? _____ _____

WILBUR'S SAMPLE PRINTOUTS

FIGURE 1: 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

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

BREAKFAST

Breakfast burrito
Orange juice

LUNCH

Tuna and Egg Salad w/ lettuce and tomato on white bread
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
<u>Food Energy/Total Calories (kcal)</u>	2178	<u>2641</u>
<u>Protein (gm)</u>	90	56
<u>Carbohydrate (gm)</u>	207	130
<u>Total Fiber (gm)</u>	13	38
<u>Total Fat (gm)</u>	103	48.4 - 84.7
<u>Saturated Fat (gm)</u>	42.6	< 24.2
<u>Monounsaturated Fat (gm)</u>	32	**
<u>Polyunsaturated Fat (gm)</u>	21	**
<u>Linoleic (omega 6) (gm)</u>	18.2	17
<u>Alpha Linolenic (omega 3) (gm)</u>	2.3	1.6
<u>Cholesterol (mg)</u>	518	< 300
<u>Vitamin A (mcg RAE)</u>	644.9	900
<u>Vitamin C (mg)</u>	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
Recommendation](#)

[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%