

**PALOMAR COLLEGE**  
**COURSE OUTLINE OF RECORD FOR**  
**DEGREE CREDIT COURSE**

X Transfer Course X A.A. Degree applicable course  
(check all that apply)

**COURSE NUMBER AND TITLE:** FCS 185 Science of Human Nutrition  
BIOL 185 Science of Human Nutrition

**UNIT VALUE:** 3.0

**MINIMUM NUMBER OF SEMESTER HOURS:** 48

**BASIC SKILLS REQUIREMENTS:**  
Appropriate language and computational skills

**ENTRANCE REQUIREMENTS**

**PREREQUISITE:** None

**COREQUISITE:** None

**RECOMMENDED PREPARATION:** None

**SCOPE OF COURSE:**  
Science of food, nutrients and other substances therein; processes by which the organism ingests, digests, absorbs, transports, utilizes, and excretes food substances. Emphasis on biological, chemical, and physiological implications to human nutrition.

- SPECIFIC COURSE OBJECTIVES:**  
Successful students will:
1. Identify the relationship between nutrition and disease.
  2. Apply basic knowledge of biology, chemistry, and physiology to the study of body functions.
  3. Compare and contrast nutrition studies from various scientific journals.
  4. Identify nutrients and explain the processes of digestion, absorption, and assimilation.
  5. Apply concepts of energy balance to weight control.

**CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:**

- I. Basic Science Concepts
  - A. Scientific method
  - B. Chemistry
  - C. Biology

## II. Nutrients

- A. Carbohydrates
- B. Lipids
- C. Proteins
- D. Vitamins
- E. Minerals
- F. Water

## III. Digestion, Absorption, and Transport

- A. Anatomy of the digestive tract
- B. Processes of digestion
- C. Anatomy of the absorptive tract
- D. Processes of absorption
- E. Body systems

## IV. Metabolism

- A. The cell
- B. Nutrient transformation
  - 1. Catabolism
  - 2. Anabolism

## V. Energy Balance

- A. Basal metabolism
- B. Eating disorders
- C. Body adaptations
- D. Sports nutrition

## VI. Life Cycle Nutrition

- A. Pregnancy and lactation
- B. Infant, childhood, and adolescents
- C. Adult and elderly

## VII. Food Safety

- A. Food-borne illness
- B. Food-borne pathogens
- C. Food additives

## VIII. Nutrition and Disease

- A. Prevention
- B. Choice and risk
- C. Cancer
- D. Heart disease and stroke
- E. Diabetes and hypoglycemia
- D. Drug/nutrient interactions

### **REQUIRED READING:**

Wardlaw, Gordon M. and Margaret Kessel. Perspectives in Nutrition. 5<sup>th</sup> Edition. New York: McGraw Hill Publishers, 2002.

**SUGGESTED READING:**

Current scientific journals as listed in student materials.

**REQUIRED WRITING:**

Four journal article reviews approximately 500 words in length that include both an abstract and a discussion of the article. All articles must be from a journal no older than two years. The topic will require research and analytical decision-making skills. Examinations include 3-5 essay questions of at least one paragraph in length.

**OUTSIDE ASSIGNMENTS:**

**Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short-term classes.**

Students will read the assigned text and journal articles and prepare for class discussions and exams. Students will also complete a three-day diet analysis utilizing computer software.

**INSTRUCTIONAL METHODOLOGY:**

**Check all that apply:**

- lecture
- laboratory
- lecture-laboratory combination
- directed study

**DISTANCE LEARNING:**

**This course may be offered as a distance learning course and meets Title 5 regulations 55370, 55372, 55374, 55376, 55378, and 55380.**

Yes  No

**If yes, check all that apply:**

- Television Course (Video one-way, e.g. ITV, video cassette, etc.)
- Online Course (Text one-way, e.g. newspaper, correspondence, electronic file, etc.)
- Two-Way Video Conferencing (Two-way interactive video and audio)
- One-Way Video Conferencing (One-way interactive video and two-way interactive audio)
- Computer Assisted Instruction (A specialized form of mediated instruction relying primarily on student access to information and prepared lessons or teaching materials through a computer terminal, but not under immediate supervision of a qualified instructor.)

**GRADING POLICY AND STANDARDS** (include methods of determining whether the stated objectives have been met by students):

Four examinations will be given during the semester each containing 100 points.

The Journal Articles will be worth a total of 100 points.

The Diet Analysis Assignment will be worth 100 points.

Participation will be worth 50 points.

90	-	100%	=	A
80	-	89%	=	B
70	-	79%	=	C
60	-	69%	=	D
59%		and below	=	F

**IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE?**

Yes \_\_\_\_ No X Number of times course may be taken for credit: 1

If yes, identify specific provision of Title 5 Division 2 section(s), 55761-55763 and 58161 which qualifies course as repeatable:

**CONTACT PERSON:** Nancy Galli, ext: 2352

**SIGNATURE ON FILE**