



**COWLEY COLLEGE
& Area Vocational Technical School**

COURSE PROCEDURE FOR

**PRINCIPLES OF NUTRITION
HER5220 3 Credit Hours**

Student Level:

This course is open to students on the college level in either the freshman or sophomore year and to area high school students.

Catalog Description:

HER5220 - PRINCIPLES OF NUTRITION (3 hrs)

[KRSN HSC1010]

A study of the health of the individual as related to food and its assimilation in the human body. Principles of normal nutrition, food values, and adequate nutrient allowances for growth and maintenance will be examined.

Prerequisite:

None.

Controlling Purpose:

This course is designed to help students increase their knowledge concerning their personal state of nutrition using self studies and computer analysis. Upon completion of this course the student will be able to evaluate a person's state of nutrition considering the impact of social, scientific, psychological, political, and environmental influences upon eating patterns and habits.

Units Outcomes and Criterion Based Evaluation Key for Core Content:

The following defines the minimum core content not including the final examination period. Instructors may add other content as time allows.

Evaluation Key:

- A = All major and minor goals have been achieved and the achievement level is considerably above the minimum required for doing more advanced work in the same field.
- B = All major goals have been achieved, but the student has failed to achieve some of the less important goals. However, the student has progressed to the point where the goals of work at the next level can be easily achieved.
- C = All major goals have been achieved, but many of the minor goals have not been achieved. In this grade range, the minimum level of proficiency represents a person who has achieved the major goals to the minimum amount of preparation necessary for taking more advanced work in the same field, but without any major handicap of

- inadequacy in his background.
- D = A few of the major goals have been achieved, but the student's achievement is so limited that he is not well prepared to work at a more advanced level in the same field.
- F = Failing, will be computed in GPA and hours attempted.
- N = No instruction or training in this area.

Nutritional Problem Solving

Outcomes: The student will gain an appreciation of how to identify and solve nutritional problems.

A	B	C	D	F	N	Specific Competencies The student will demonstrate the ability to:
						1. Set the goals or standards for health maintenance by nutritional standards.
						2. Determine specific activities to accomplish a task and order of procedures to accomplish the task.
						3. Explain how supply and demand of food impacts optimal health.
						4. Explain how life-styles influence eating habits/trends.
						NUTRITION DECISION MAKING/PROBLEM SOLVING 5. Recognize or identify the existence of a nutritional problem given a specific set of facts.
						6. Ask appropriate questions to identify or verify the existence of a problem.
						7. Enumerate the possible causes of a problem.
						8. Identify methods for eliminating the causes of a problem.
						9. Identify important information needed to solve a problem and generate alternative solutions to a problem.
						10. Select a solution that represents the best course of action to pursue.
						11. Assess and evaluate the effectiveness of the chosen solution.

							NUTRITIONAL
							12. Research of problem/conflict conditions; identify interests of parties involved; clarify the problem conflict; resolve the problem/conflict by a mutually agreeable solution; evaluate the solution.

UNIT: I (Introduction)

Outcomes: The student will gain an understanding of the basic principles of nutrition.

A	B	C	D	F	N	Specific Competencies The student will demonstrate the ability to:
						1. Understand personal needs for nutrients and the combination of foods to meet the needs.
						2. Identify combinations of foods to meet individual needs.
						3. Set goals for meeting RDA of nutrients.
						4. Differentiate between fallacies, facts, and myths.
						5. Demonstrate food safety procedures.
						6. Plan and analyze 24 hour menu for specific age and gender.
						7. Identify differences in eating habits.
						8. Describe different views regarding influence diet exerts on health and disease.
						9. Identify and evaluate personal nutrition standards and guidelines
						10. Describe the process by which scientists uncover nutrition facts.
						11. List the six classes of nutrition including which are organic and which are energy-producing.
						12. Differentiate between those diseases that are strongly influenced by diet and those not responsive to nutrition.
						13. Distinguish valid nutrition information from misinformation.

						14. Compare and contrast various nutrition guidelines established by the Daily Food Guide, the Food Guide Pyramid and the Vegetarian Pyramid.
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UNIT II: Remarkable Body

Outcomes: The student an overview of the human body with an emphasis placed on cellular function.

A	B	C	D	F	N	Specific Competencies The student will demonstrate the ability to:
						1. Identify and describe three factors necessary to ensure efficient circulation of fluids to all body cells
						2. Differentiate between functions of glands and hormones.
						3. Differentiate between mechanical and chemical aspects of digestion.
						4. Identify the basic needs of cells and describe how cells are organized into tissues, organs, and systems.
						5. Describe the major functions of the cardiovascular, hormonal, nervous, digestive and excretory systems.
						6. Discuss the mechanical/chemical digestive processes and the absorption, transportation, and storage of nutrients.

UNIT III: NUTRIENTS: CARBOHYDRATES

Outcomes: The student will gain an understanding of carbohydrates and the role they play in nutrition.

A	B	C	D	F	N	Specific Competencies The student will demonstrate the ability to:
						1. Identify carbohydrate categories. (Plan two 24 hour menus and analyze the carbohydrates.)
						2. Estimate nutrients in foods.

						3. Compute nutrients in foods.
						4. Compare and contrast nutrient needs for different age groups.
						5. Identify carbohydrate fallacies and facts
						6. Analyze food labels for carbohydrate content.
						7. Distinguish valid nutrition information from misinformation.
						8. Identify and list characteristics of diabetes, hypoglycemia and lactose intolerance and their relationship to carbohydrate intake.

UNIT IV: LIPIDS

Outcomes: The student will gain an understanding of lipids and the role they play in nutrition and health.

A	B	C	D	F	N	Specific Competencies The student will demonstrate the ability to:
						1. Identify categories of lipids. Identify personal needs for lipids.
						2. Differentiate between lipids and cholesterol.
						3. Identify foods that provide essential fatty acids.
						4. Analyze food labels for lipid content.
						5. Explain the way lipids are useful, both in foods and in the body.
						6. Explain why manufacturers frequently hydrogenate fats and the possible health implications of consuming the trans-fatty acids formed during hydrogenation.
						7. List the arguments for and against the use of fat replacers.

UNIT V: PROTEINS

Outcomes: The student will gain an understanding of proteins and the role they play in nutrition.

A	B	C	D	F	N	Specific Competencies The student will demonstrate the ability to:
						1. Classify amino acids in essential and nonessential categories.
						2. Analyze food labels for protein content.
						3. Identify RDA for protein for age and gender
						4. Explain the rolls of proteins in the body.
						5. Describe the consequences of both protein deficiency and protein excess.
						6. Compare the positive health aspects of a vegetarian diet with those of a diet that includes meat and describe ways each diet can include adequate nutrients.

UNIT VI: ENERGY BALANCE/WEIGHT CONTROL/ PHYSICAL ACTIVITY

Outcomes: The student will understand the variables that affect nutritional needs based on energy requirements and how these affect the human body.

A	B	C	D	F	N	Specific Competencies The student will demonstrate the ability to:
						1. Calculate individual's body mass index (BMI).
						2. Calculate adequate energy needs.
						3. Record three 24 hour recalls of food ingested and physical activity expended.
						4. Compute nutrients received.
						5. Compute physical activities expended.
						6. Recommend action to bring nutrients and activities into balance.
						7. List and define the three components of the body's energy budget.
						8. Summarize the recommended strategies to promote weight control and understand the role surgery and pills play in this

UNIT VI: ENERGY BALANCE/WEIGHT CONTROL/ PHYSICAL ACTIVITY

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A	B	C	D	F	N	Specific Competencies The student will demonstrate the ability to:
						attempt.
						9. Identify personal guidelines for regular physical activity for the body.
						10. Define and describe eating disorders and explain the physical harm that occurs as a result of these behaviors.

UNIT VII: DISEASE PREVENTION

Outcomes: The student will understand how nutrition affects health and disease prevention.

A	B	C	D	F	N	Specific Competencies The student will demonstrate the ability to:
						1. Determine nutritional (RDA) needs to maximize disease prevention
						2. Identify foods to provide nutrients for disease prevention.
						3. Discuss the strategies that can be used to reduce the risks of cardiovascular disease and hypertension.
						4. Describe the process by which cancer develops and explain known effects of food constituents on cancer development.

UNIT VIII: VITAMIN/ MINERAL/ WATER

Outcomes: The student will study vitamin, mineral and water requirements for different age and gender groups.

A	B	C	D	F	N	Specific Competencies The student will demonstrate the ability to:
						1. Analyze RDA for age and gender.

UNIT VIII: VITAMIN/ MINERAL/ WATER

Outcomes: The student will study vitamin, mineral and water requirements for different age and gender groups.

A	B	C	D	F	N	Specific Competencies
						The student will demonstrate the ability to:
						2. Plan three day menu utilizing vitamins and minerals.
						3. Identify safe water sources available in students' areas.
						4. List the major roles and important deficiency and toxicity symptoms for each major and trace minerals.
						5. Evaluate claims made for calcium in preventing osteoporosis.

UNIT IX: APPLICATION OF NUTRITION PRINCIPLES

Outcomes: The student will apply nutritional knowledge to critically examine issues in nutrition.

A	B	C	D	F	N	Specific Competencies
						The student will demonstrate the ability to:
						1. Examine published menus.
						2. Compute nutrient surplus and deficiencies.
						3. Identify and analyze nutritional states for a specific population.
						4. Recommend proper action to be taken in receiving RDAs (age and gender specific, mother and infant, children, teen, and older adult).
						5. Develop an activity (game, check sheet to demonstrate application of nutrition principles.
						6. Research examples of some common nutrient-drug interactions.
						7. Describe special nutritional needs of older adults and the suspected connections between diet and disease.

Unit X: FOOD TECHNOLOGY & SAFETY

Outcomes: The student will gain an academic and practical understanding of food technology and safety.

A	B	C	D	F	N	Specific Competencies
						The student will demonstrate the ability to:
						1. Identify errors in food preparation.
						2. Demonstrate proper safety measures.
						3. Analyze the role of chemicals/additives in the food supply.
						4. Describe how microbial food poisoning can be prevented and indicate which foods are particularly troublesome.
						5. List major food processing techniques and explain the effect they have on the nutrients content of foods.
						6. List the arguments for and against the use of new food technologies.

UNIT XI: GLOBAL NUTRITION

Outcomes: The student will gain an understanding of US foodways and be able to discuss global nutrition.

A	B	C	D	F	N	Specific Competencies
						Demonstrate the ability to:
						1. Examine U.S. Foodways.
						2. Evaluate global nutrition.

Projects Required:

None.

Textbook:

Contact Bookstore for current textbook.

Materials/Equipment Required:

None.

Attendance Policy:

Students should adhere to the attendance policy outlined by the instructor in the course syllabus.

Grading Policy:

The grading policy will be outlined by the instructor in the course syllabus.

Maximum class size:

Based on classroom occupancy

Course Timeframe:

The U.S. Department of Education, Higher Learning Commission and the Kansas Board of Regents define credit hour and have specific regulations that the college must follow when developing, teaching and assessing the educational aspects of the college. A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for approximately fifteen weeks for one semester hour of credit or an equivalent amount of work over a different amount of time. The number of semester hours of credit allowed for each distance education or blended hybrid courses shall be assigned by the college based on the amount of time needed to achieve the same course outcomes in a purely face-to-face format.

Refer to the following policies:

[402.00 Academic Code of Conduct](#)

[263.00 Student Appeal of Course Grades](#)

[403.00 Student Code of Conduct](#)

Disability Services Program:

Cowley College, in recognition of state and federal laws, will accommodate a student with a documented disability. If a student has a disability which may impact work in this class and which requires accommodations, contact the Disability Services Coordinator.