

# STUDY OUTLINE

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This study outline has been prepared by the Commission on Dietetic Registration to help you prepare for the Registration Examination for Dietetic Technicians. The study outline corresponds directly to the content outline (test specifications). Since the content outline uses the language of the 2005 Dietetics Practice Audit, a more “user-friendly” study outline was prepared for you. The content outline describes activities performed by dietetic technicians. This study outline illustrates the knowledge needed to perform those activities. It is not all-encompassing of dietetics practice. Each content domain has been outlined following a topical format that should help you identify the specific content areas included on the examination.

Accompanying this outline are two reference lists—one covering domains I, II, and III, and another for domains IV and V. The lists do not attempt to include all acceptable sources of dietetics information, and the questions on the Registration Examination for Dietetic Technicians are not necessarily based on this selection of references.

## **DOMAIN I - FOOD AND NUTRITION SCIENCES (8%)**

### **TOPIC A - Principles of Food Preparation**

1. Physical and chemical properties of food
  - a. Meat, poultry, and fish
  - b. Eggs
  - c. Milk and dairy
  - d. Vegetables and fruit
  - e. Flour
  - f. Fats and oils
  - g. Engineered foods
  - h. Functional foods
2. Food preparation
  - a. Functions of ingredients
  - b. Techniques and methods
  - c. Effects on food quality
  - d. Effects on nutrient retention
  - e. Food additives

### **TOPIC B - Nutrient Composition of Food**

1. Macronutrients sources
2. Micronutrients sources

### **TOPIC C - Principles of Normal Nutrition**

1. Nutrients/phytochemicals
  - a. Functions
  - b. Deficiencies and excesses

2. Basic human physiology
  - a. Ingestion
  - b. Digestion
  - c. Absorption
  - d. Metabolism/utilization
  - e. Excretion
  - f. Body systems (GI, cardiovascular, etc.)
3. Nutrient/calorie needs at various stages of the life span (DRIs/RDAs, macronutrients, vitamins, minerals)
  - a. Infancy
  - b. Childhood
  - c. Adolescence
  - d. Adulthood
  - e. Pregnancy/lactation
  - f. Geriatric

**DOMAIN II - NUTRITION CARE PROCESS AND MODEL –  
SIMPLE CONDITIONS (40%)**

**TOPIC A – Nutrition Screening and Assessment**

1. Nutrition screening
  - a. Purpose
  - b. Selection and use of risk factors
  - c. Values and limitations
  - d. Methodology
  - e. Documentation
2. Nutrition assessment of individuals
  - a. Anthropometric data: height, weight, body frame, standard weight for height, weight/height ratio (BMI), skinfolds, circumferences, growth charts
  - b. Biochemical/laboratory
    - (1) Lab abbreviations
    - (2) Lab values related to and indicative of nutritional status
  - c. Clinical
    - (1) Physical assessments, signs, symptoms
    - (2) Medical history
    - (3) Activity patterns/level of intensity, duration
    - (4) Drug/medications/nutrient interaction implications for potential nutritional problems
    - (5) Medical terminology
  - d. Dietary
    - (1) Dietary screening methodology
      - (a) 24-hour recall
      - (b) Food frequency questionnaire
      - (c) Diet history
      - (d) Interviews/verification
    - (2) Analysis of dietary information
    - (3) Oral dietary supplements (vitamins, herbs, and other complementary medicines)
  - e. Economic/social

- (1) Socioeconomic
  - (2) Cultural/religious food patterns
  - (3) Psychological/behavioral
  - (4) Lifestyles/preferences
  - (5) Food fads/cultism
  - (6) Level of education
  - (7) Nutrition knowledge, interest
3. Nutrition assessment of populations
    - a. Nutrition status indicators
      - (1) Age, sex, ethnic and cultural groups
      - (2) Specific needs populations
      - (3) Nutrition risk factors
    - b. Demographic data
    - c. Nutritional screening surveillance systems
      - (1) National surveys
      - (2) Reference data
    - d. Community health resources data
      - (1) Food programs
      - (2) Consumer education resources
      - (3) Health services
    - e. Public health programs and practices
      - (1) Public health principles
      - (2) Programs

## **TOPIC B - Nutrition Diagnosis**

1. Relationship between nutrition diagnoses and medical diagnoses
  - a. Identifying uncomplicated conditions of common medical diagnoses affecting nutrition care
  - b. Determining nutrition risk factors for current medical diagnoses
  - c. Distinguishing nutrition diagnoses vs. medical diagnoses
2. Data sources and tools for nutrition diagnosis of uncomplicated conditions of common conditions
  - a. Organizing assessment data
  - b. Using standardized language
3. Problem definition (Diagnostic labels) of uncomplicated conditions of common conditions
  - a. Using nutrition diagnostic labels
  - b. Determining nutrition problem domains
    - (1) Intake
    - (2) Clinical
    - (3) Behavioral - Environmental
4. Etiologies (Cause / contributing risk factors)
  - a. Identifying underlying causes and contributing risk factors for nutrition diagnoses of uncomplicated conditions of common conditions
  - b. Making cause and effect linkages for uncomplicated conditions of common conditions
5. Signs and symptoms (Defining characteristics)
  - a. Linking signs and symptoms to etiologies of uncomplicated conditions of common conditions
  - b. Using subjective (symptoms) and/or objective (signs) data
6. Documentation

- a. Developing nutrition diagnostic statements (PES statements) for uncomplicated conditions of common conditions
- b. Validating diagnoses with others

**TOPIC C – Nutrition Intervention (Planning & Intervention)**

- 1. Intervention for individuals
  - a. Nutrition care for health promotion and disease prevention
    - (1) Identify desired outcomes/actions
      - (a) Relationship of nutrition to maintenance of health and prevention of disease during major stages of the life span
      - (b) Propaganda
        - (i) Popular Diets
        - (ii) Health Fraud
        - (iii) Marketing Gimmicks
    - (2) Determine energy/nutrient needs specific to life span stage
    - (3) Menu planning for health promotion
      - (a) Nutritional adequacy
      - (b) Client acceptance, diet patterns, schedules
      - (c) Socio-cultural ethnic factors
      - (d) Substitutions and food preferences
      - (e) Cost factors
      - (f) Food labeling
      - (g) Recipe modification
  - b. Medical Nutrition Therapy
    - (1) Planning
      - (a) Identify desired outcomes and actions
      - (b) Treatment of major-related disorders or conditions
        - (i) Cardiovascular
          - (aa) Lipid Disorders
          - (bb) Hypertension
        - (ii) Critical care
          - (aa) Trauma
          - (bb) Surgery
          - (cc) Burns
        - (iii) Metabolic disorders
          - (aa) Diabetic
          - (bb) PKU
          - (cc) Other
        - (iv) Gastrointestinal
          - (aa) Hepatic
          - (bb) Pancreatic
        - (v) Malnutrition
          - (aa) Protein
          - (bb) Calorie
          - (cc) Vitamin
          - (dd) Mineral
        - (vi) Oncologic conditions
        - (vii) Renal disorders
        - (viii) Respiratory disorders
      - (c) Determination of energy/nutrient needs specific to condition

- (d) Determine specific feeding needs
        - (i) Composition/texture of foods
        - (ii) Sources and preparation standards
          - (aa) Modified diet products
          - (bb) Enteral feedings
          - (cc) Food supplements
        - (iii) Methods of nourishment
          - (aa) Routes (oral, enteral, parenteral)
          - (bb) Techniques/equipment
          - (cc) Values/limitations/complications
        - (iv) Diet patterns/schedules and/or specific meals for diagnostic tests (test meals)
    - (2) Implementing care plans
      - (a) Provision of individualized nutrition care for specific nutrition-related problems
      - (b) Communication regarding plans with:
        - (i) Other healthcare personnel
        - (ii) Patients/families
      - (c) Discharge planning for continuity of care
      - (d) Documenting implementation; appropriate charting techniques; confidentiality; protocol
2. Interventions for populations
  - a. Dietary guides and their use
    - (1) DRI/RDA
    - (2) Food Group Plans; (i.e., My Pyramid)
    - (3) Federal dietary guidelines and goals;
      - (a) *Dietary Guidelines for Americans*
      - (b) *Surgeon General's Report on Nutrition and Health*
    - (4). National groups
      - (a) National Heart, Lung & Blood Institute (NHLBI)
      - (b) American Cancer Society
      - (c) American Heart Association (AHA)
      - (d) National Cholesterol Education Program
      - (e) Other
  - b. Community nutrition programs services and implementation
    - (1) Federal resources and food assistance programs
      - (a) Food Stamp Program
      - (b) Title III Nutrition Services
      - (c) Child Nutrition Programs
        - (i) School Breakfast and Lunch Programs
        - (ii) Other
      - (d) Special Supplemental Nutrition Program for Women, Infants, and Children
      - (f) Expanded Food and Nutrition Education Program (EFNEP)
    - (2) Food banks and other community resources

## TOPIC D - Nutrition Monitoring and Evaluation

1. Monitoring progress and updating previous care for uncomplicated conditions of common conditions

- a. Monitoring responses to nutrition care
- b. Comparing outcomes to nutrition interventions
- 2. Measuring outcome indicators
  - a. Using ADA evidence based guides for practice
- 3. Evaluating outcomes for uncomplicated conditions of common conditions
  - a. Direct nutrition outcomes
  - b. Clinical and health status outcomes
  - c. Patient centered outcomes - improving customer satisfaction
  - d. Health care utilization outcomes
- 4. Communicating with Registered Dietitian
- 5. Determining continuation of care
  - a. Continuing and updating care
  - b. Discontinuing care
- 6. Documentation

### **DOMAIN III – COUNSELING, EDUCATION and TRAINING (7%)**

#### **TOPIC A - Assessment and Planning**

- 1. Components of the educational-plan
  - a. Targeted setting/clientele
    - (1) In-service education (students, health and rehabilitative service providers)
    - (2) Patient/client counseling
    - (3) Other (i.e., on-the-job training)
  - b. Goals and objectives
  - c. Needs assessment (external constraints, competing programs, illness)
  - d. Content: community resources, learning activities/methodology, references and handouts; audiovisual specifications
  - e. Evaluation criteria
  - f. Budget development
  - g. Program promotion
- 2. Educational readiness assessment
  - a. Motivational level
  - b. Educational level
  - c. Situational: environmental, economic
  - d. Target group/populations

#### **TOPIC B – Implementation and Evaluation**

- 1. Implementation
  - a. Communication
    - (1) Interpersonal
    - (2) Group process
  - b. Interviewing
  - c. Counseling
  - d. Methods of instruction
- 2. Evaluation of educational outcomes
  - a. Measurement of learning
    - (1) Formative
    - (2) Summative
  - b. Evaluation of effectiveness of educational plan

3. Documentation

## **DOMAIN IV - FOODSERVICE SYSTEMS (21%)**

### **TOPIC A - Menu Planning**

1. Types of menus
  - a. Nonselective, selective, restaurant, room service
  - b. Cycle
  - c. Regular
  - d. Catering
2. Menu development
  - a. Guidelines
  - b. Clients
  - c. Operational influences
  - d. External influences
  - e. Client/customer satisfaction measuring and documentation
3. Menu modifications – texture, nutrient, cultural, allergy, food sensitivities

### **TOPIC B - Procurement and Materials Management**

1. Develop specifications for purchase of food/supplies
  - a. Specifications (quantitative and qualitative)
  - b. Product selection
  - c. Vendor selection
  - d. Packaging selection – waste reduction, storage
2. Policies and procedures (purchase, receipt, storage and distribution of food and supplies)
  - a. Purchasing systems, methods and decisions
  - b. Inventory management
  - c. Ordering food and supplies

### **TOPIC C - Food Production, Distribution, Service and Facility Design**

1. Production
  - a. Procedures
    - (1) Recipes
    - (2) Cooking methods
    - (3) Ingredient control
    - (4) Portion control
    - (v) Yield analysis
    - (vi) Costing
    - (vii) Work simplification
    - (viii) Pricing
  - b. Forecasting food demand
  - c. Production systems
    - (1) Conventional
    - (2) Commissary
    - (3) Ready prepared
    - (4) Assembly serve
    - (5) Cook-Chill
    - (6) Display cooking

2. Distribution and Service
  - a. Form of food delivered
  - b. Type of service systems (centralized and decentralized)
  - c. Clients and customers served
  - d. Schedules of assembly and breakdown
3. Facility design
  - a. Layout design and planning considerations
  - b. Roles and responsibilities of planning team members
  - c. Equipment specification
  - d. Equipment selection

#### **TOPIC D - Sanitation and Safety**

1. Safety
  - a. Employee safety
  - b. Safety programs and practices
  - c. Customer safety
2. Sanitation and food safety
  - a. Principles
    - (1) Contamination and spoilage
    - (2) Factors affecting bacterial growth
    - (3) Signs and symptoms of food borne illness
  - b. Sanitation practices and infection control
    - (1) Personal hygiene
    - (2) Food and equipment temperature control
    - (3) Food handling techniques
    - (4) HACCP
  - c. Regulations
    - (1) Governmental
    - (2) Agencies
  - d. Food quality and safety
    - (1) Temperature
    - (2) Additives
    - (3) Documentation and record keeping
    - (4) Crisis management

#### **DOMAIN V - MANAGEMENT (24%)**

##### **TOPIC A - Human Resources**

1. Organizational relationships
  - a. Organizational charts
  - b. Job descriptions, specifications, and classifications
2. Staff recruitment, supervision and retention
  - a. Procedures for regulation compliance
    - (1) Labor laws
    - (2) Union contracts
  - b. Recruitment, selection, and orientation
  - c. Scheduling
  - d. Performance standards
  - e. Performance appraisals and documentation

- f. Personnel actions
- g. Retention
- h. Diversity

**TOPIC B - Finance and Materials**

1. Budget development
  - a. Financial objectives
  - b. Operational and capital
  - c. Components
    - (1) Revenue
    - (2) Direct costs
    - (3) Indirect costs
    - (4) Profit/loss
2. Financial analysis
  - a. Labor
  - b. Food
  - c. Capital
  - d. Other
3. Cost controls and materials management
4. Financial performance monitoring and evaluation

**TOPIC C - Marketing Products and Services**

1. Marketing purpose and planning
  - a. Techniques/methods (i.e., surveying audience needs/preferences)
  - b. Preparation and implementation
  - c. Evaluation (document findings, adjust and correct)
2. Marketing strategies
  - a. Product
  - b. Place
  - c. Promotion
  - d. Price

**TOPIC D - Principles and Processes**

1. Management principles
  - a. Approaches
    - (1) Classical/traditional
    - (2) Behavioral
    - (3) Integration
  - b. Skills
    - (1) Technical
    - (2) Human
    - (3) Conceptual
  - c. Traits
    - (1) Interpersonal communication
    - (2) Use of authority/influence/power
    - (3) Other
  - d. Roles
    - (1) Information giving

- (2) Conflict resolution
- (3) Problem solving
- (4) Decision making other
- 2. Planning process
  - a. Short and long range
  - b. Strategic and operational
  - c. Policies and procedures
  - d. Disaster preparedness
- 3. Organizing
  - a. Structure/design of department/unit
  - b. Establishing priorities
  - c. Tasks/activities and action plans
  - d. Resource allocation
- 4. Professional standards of practice and development
  - a. Roles/levels of dietetics personnel
  - b. Ethical practice (i.e., *Code of Ethics for the Profession of Dietetics*)
  - b. Legislative process

**TOPIC E - Quality Improvement and Research**

- 1. Purpose and integration into the system
- 2. Regulatory guidelines
  - a. Federal
  - b. JCAHO
  - c. Other
- 3. Process and Implementation
  - a. Plans
  - b. Standards/criteria (indicators)
  - c. Data collection and outcome documentation
  - d. Implement corrective action
  - e. Evaluate effectiveness
  - f. Report
- 4. Research
  - a. Identifying problems
  - b. Collecting information
  - c. Reporting