

STUDY OUTLINE

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 2010 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 (10%)

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 - Food Composition

1. Macronutrients sources
2. Micronutrients sources
3. Nutrient databases

TOPIC C - Principles of Basic and Normal Nutrition

1. Nutrients and 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 FOR INDIVIDUALS AND GROUPS – (34%)

TOPIC A – 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), skin folds, 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 intake
 - (1) Assessment method
 - (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 - Diagnosis

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

TOPIC C –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
 - (a) 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
 - (ix) Wound care
 - (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, and parenteral)
 - (bb) Techniques and 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 (e.g., team rounds, care conferences)
 - (ii) Patients/families
 - (c) Counseling
 - (d) Discharge planning for continuity of care
 - (e) 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., MyPlate)
 - (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) Breastfeeding initiatives
 - (f) Other
 - b. Community nutrition programs services and implementation
 - (1) Federal resources and food assistance programs
 - (a) SNAP (Supplemental Nutrition Assistance 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
 - (g) Expanded Food and Nutrition Education Program (EFNEP)
 - (2) Food banks and other community resources

TOPIC D - 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 common conditions
 - a. Direct nutrition outcomes
 - b. Clinical and health status outcomes
 - c. Patient-centered outcomes
 - 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
 - a. Electronic medical record
 - b. Privacy of medical information (HIPAA)
 - c. Data mining

DOMAIN III – PRINCIPLES OF 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, telemedicine, telehealth, e-learning)
 - 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. 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 (22%)

TOPIC A - Menu Planning

1. Types of menus
 - a. Nonselective, selective

- b. Cycle, static
- c. Retail, restaurant, room service
- 2. Menu development
 - a. Guidelines
 - b. Clients
 - c. Operational influences
 - d. External influences, contingencies (renovation, disaster, emergencies)
 - e. Client/customer satisfaction measuring and documentation
- 3. Menu modifications – texture, nutrient, cultural, allergy, food sensitivities

TOPIC B - Procurement and Supply Management

- 1. Develop specifications for purchase of food/supplies
 - a. Specifications (quantitative and qualitative)
 - b. Product and packaging selection
 - c. Vendor selection (bids and contracts)
- 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, and Service

- 1. Production
 - a. Procedures
 - (1) Recipes
 - (2) Cooking methods
 - (3) Ingredient control
 - (4) Portion control
 - (i) Yield analysis
 - (ii) Costing
 - (iii) 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
 - e. Room service

TOPIC D – Sanitation, Safety, Equipment, and Facilities

- 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
- 3. Equipment and facility planning
 - a. Layout design and planning considerations
 - b. Roles and responsibilities of planning team members
 - c. Equipment specification
 - d. Equipment selection

TOPIC E – Sustainability

- 1. Food and water
- 2. Non-food
 - a. Supplies
 - b. Equipment
- 3. Waste management
 - a. Storage
 - b. Reduction
 - c. Disposal

DOMAIN V – MANAGEMENT OF FOOD AND NUTRITION SERVICES (27%)

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. Productivity and work simplification
- e. Performance standards
- f. Performance appraisals and documentation
- g. Personnel actions
- h. Retention
- i. 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 – Management Principles and Functions

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 Processes and Research

- 1. Purpose and integration into the system
- 2. Regulatory guidelines
 - a. Federal
 - b. Accrediting agencies (e.g., The Joint Commission)
 - 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. Data collection
 - c. Reporting

* Please note that although nutrition-related conditions; e.g., diabetes, renal disease, and weight management, are not specified in Domain II, the nutrition care process questions assess the candidates knowledge and skills related to all examination nutrition-related conditions. This approach was taken to streamline the study outline with the introduction of the nutrition care process.