

# REGISTRATION EXAMINATION FOR DIETETIC TECHNICIANS

## STUDY OUTLINE (2022-2026)

Effective January 1, 2022

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The Commission on Dietetic Registration developed this study outline 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 2020 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 domain I and another for domains II and III. 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 – NUTRITION SCIENCE AND CARE FOR INDIVIDUALS AND GROUPS – (41%)

#### TOPIC A – Principles of Basic and Normal Nutrition

1. Nutrients and Other Functional Substances
  - a. Functions
  - b. Deficiencies and excesses
  - c. Macronutrients sources
  - d. Micronutrients sources
  - e. Phytochemicals, fiber, and functional foods
2. Basic Human Anatomy/Physiology, Physical and Biological Sciences (e.g., microbiology and chemistry)
3. Nutrient and Calorie Needs at Various Stages of the Lifespan (e.g., Dietary Reference Intake/recommended dietary allowance (DRI/RDA), macronutrients, vitamins and minerals)
  - a. Pregnancy and lactation
  - b. Infancy
  - c. Childhood (toddler, preschooler and school age)
  - d. Adolescence

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- e. Adulthood
  - f. Older adults
4. Cultural Humility/Competence
- a. Religion
  - b. Ethnicity
  - c. Gender (LGBTQ)
  - d. Race
5. Nutrition Requirements in Wellness Promotion and Disease Prevention
- a. Identification of desired outcomes/action
    - (1) Evidence-based practice for nutrition intervention
    - (2) Evaluation of nutrition information
    - (3) Food fads/cultism
    - (4) Health/nutrition fraud and/or misinformation
    - (5) Health and wellness promotion and risk reduction
  - b. Nutrition recommendations to promote wellness
  - c. Health disparities

## **TOPIC B – Screening and Assessment**

1. Nutrition Screening
- a. Purpose
  - b. Selection, use of risk factors and validated tools
  - c. Values and limitations
  - d. Methodology
  - e. Documentation
2. Nutrition Assessment of Individuals
- a. Anthropometric data (e.g., height, weight, body frame, weight/height ratio (BMI), skinfolds, waist circumference, head circumference, growth charts, weight adjustment for amputation)
  - b. Biochemical/laboratory
    - (1) Lab abbreviations
    - (2) Normal lab values
    - (3) Lab values related to disease states
  - c. Clinical
    - (1) Medical history
    - (2) Physical assessments (e.g., blood pressure, signs and symptoms, nutrition-focused physical exam)
    - (3) Relationship of pathophysiology to treatment of nutrition-related disorders
    - (4) Activity/functional ability
    - (5) Drug/medications/nutrient interaction
    - (6) Medical terminology

- d. Nutrition intake
    - (1) Assessment method
      - a) 24-hour recall
      - b) Food frequency questionnaire
      - c) Diet history
      - d) Fluid status (I/Os)
      - e) Interviews/verification
    - (2) Analysis of Dietary Information
    - (3) Oral Dietary Supplements (e.g., vitamins, herbs, medical nutrition supplement and other integrative and functional medicines)
    - (4) Enteral/Parenteral Nutrition
  - e. Economic/Social
    - (1) Socioeconomic status
    - (2) Cultural/religious food requirements
    - (3) Lifestyles/preferences
    - (4) Food fads/cultism
    - (5) Level of education
    - (6) Nutrition knowledge and interest
    - (7) Needs assessment for services (e.g., internal and external constraints)
    - (8) Educational readiness assessment
      - a) Motivational level
      - b) Educational level
      - c) Situational (e.g., environmental and economic)
      - d) Target groups and populations
    - (9) Food security
3. Nutrition Assessment of Populations
- a. Needs assessment data collection and analysis (survey tools and analysis methods)
  - b. Nutrition status indicators
    - (1) Age, gender, ethnic and cultural groups
    - (2) Specific and special needs of community
    - (3) Nutrition risk factors
  - c. Nutritional screening surveillance systems
    - (1) National surveys
    - (2) Reference data
  - d. Community health resources
    - (1) Food programs
    - (2) Consumer education resources

(3) Public health programs

**TOPIC C – Planning and 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) Health/nutrition fraud and/or misinformation
  - i. Fad diets
  - ii. Misleading marketing strategies

(2) Determine energy/nutrient needs specific to life span stages

(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 (e.g., ingredients, allergens, additives)
- g) Recipe modification
- h) Culinary demonstrations
- i) Grocery store tours

b. Medical Nutrition Therapy

(1) Planning

- a) Identify desired outcomes and actions
- b) Treatment of major-related disorders or conditions (e.g., cardiovascular, metabolic, renal, oncology, etc.)
- c) Determination of energy/nutrient needs specific to condition
- d) Determine specific feeding needs
  - i. Composition/texture of foods
  - ii. Nutrition products and preparation standards
    - A. Modified diet products
    - B. Enteral feedings
    - C. Medical foods, oral nutrition supplements, and modular supplements
    - D. Infant formula/breastmilk fortifiers
  - iii. Methods of nourishment
    - A. Routes (e.g., oral enteral and parenteral)
    - B. Techniques/equipment
    - C. Values/limitations/complications
  - iv. Diet patterns/schedules and/or specific meals for diagnostic tests (e.g., test meals)
- e) Documentation of client care

- i. PES statements
    - ii. Other methodology and procedures
  - (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 and care conferences)
      - ii. Patients and families, including informed consent
    - c) Education
    - d) Discharge planning for continuity of care
    - e) Recommend clients receive physical, social, behavioral and psychological services
    - f) Documentation of intervention/implementation (e.g., appropriate charting techniques, confidentiality and protocol)
- 2. Interventions for Populations
  - a. Dietary guidelines and their use
    - (1) Dietary Reference Intake/recommended dietary allowance (DRI/RDA)
    - (2) Meal plans (e.g., MyPlate)
    - (3) Federal dietary guidelines and goals (e.g., *Dietary Guidelines for Americans, Healthy People*)
    - (4) National/international groups
      - a) National Heart, Lung & Blood Institute (NHLBI)
      - b) American Cancer Society
      - c) American Heart Association (AHA)
      - d) National Cholesterol Education Program
      - e) WHO/UNICEF/Centers for Disease Control and Prevention (CDC) breastfeeding guidelines
      - f) Other
  - b. Community nutrition programs services and implementation
    - (1) Federal resources and food assistance programs
      - a) Supplemental Nutrition Assistance Program (SNAP)
      - b) Title III Nutrition Services
      - c) Child nutrition programs (e.g., National School Breakfast Program and National School Lunch Program)
      - d) Special Supplemental Nutrition Program for Women, Infants, and Children
      - e) Expanded Food and Nutrition Education Program (EFNEP)
    - (2) Food banks and other community resources
- 3. Education and Training
  - a. Needs assessment/identification of targeted audiences (e.g., patient/client groups, employees, and students)
  - b. Budget development

- c. Goals and objectives
- d. Education venue (e.g., in-service, on-the-job training, e-learning, media, and telehealth)
- e. Content development (e.g., lesson plan, course outline, etc.)
- f. Application of learning tools and methodologies (e.g., community resources, activities, references, handouts and audiovisual aids)
- g. Program promotion
- h. Program implementation
- i. Program evaluation and documentation of effectiveness

#### **TOPIC D – Monitoring and Evaluation**

1. Monitoring Progress and Updating Previous Care for Uncomplicated Conditions
  - a. Monitoring responses to nutrition care
  - b. Comparing outcomes to nutrition interventions
  - c. Monitor medication and dietary supplement use
  
2. Monitoring Tolerance of Diet, Enteral Nutrition, and Medical Nutrition Supplements
  
3. Measuring Outcome Indicators (e.g., evidence-based guides for practice)
  
4. Evaluating Outcomes for Common Conditions
  - a. Direct nutrition outcomes
  - b. Clinical and health status outcomes
  - c. Patient-centered outcomes
  - d. Resource utilization outcomes
  - e. Evaluate learner knowledge and performance
  
5. Collaborate with Dietitian
  
6. Documentation
  - a. Privacy and security of medical information (e.g., Health Insurance Portability and Accountability Act (HIPAA))
  - b. Data collection and reporting
  
7. Healthcare Informatics and Technologies
  - a. Electronic medical record
  - b. Nutrient analysis and databases (e.g., on-line database and other)
  
8. Evaluation of Education Programs
  - a. Implementation
  - b. Communication
    - (1) Interpersonal
    - (2) Group process
  - c. Methods of instruction

9. Evaluation of Educational Outcomes and Effectiveness of Educational Plan
  - a. Formative
  - b. Summative

## **DOMAIN II – FOOD SCIENCE AND FOOD SERVICE (21%)**

### **TOPIC A – Menu Development**

1. Types of Menus
  - a. Nonselective, selective
  - b. Cycle, static
  - c. Retail, restaurant, room service
2. Menu Development
  - a. Guidelines
  - b. Clients
  - c. Internal and external influences (e.g., renovation, disaster and emergencies)
  - d. Client/customer satisfaction indicators and documentation
  - e. Sensory characteristics
3. Menu Modifications (e.g., texture, nutrient, cultural, allergy and food sensitivities)

### **TOPIC B – Procurement and Supply Management**

1. Food and Product Specifications
  - a. Product and packaging selection
  - b. Vendor selection (e.g., bids and contracts)
2. Policies and Procedures (e.g., purchase, receipt, storage and distribution of food and supplies)
  - a. Purchasing systems, methods and decisions
  - b. Inventory management
  - c. Forecasting food demand
  - d. Ordering food and supplies
  - e. Regulatory compliance (e.g., The Joint Commission, survey requirements, etc.)

### **TOPIC C – Food Production, Distribution, and Service**

1. Production
  - a. Procedures
    - (1) Recipe development/standardization and adjustment
    - (2) Cooking methods
    - (3) Ingredient control
    - (4) Portion control
      - a) Yield analysis
      - b) Costing

- c) Pricing
  - b. Production systems
    - (1) Conventional
    - (2) Commissary
    - (3) Ready-prepared, cook-chill, cook-freeze
    - (4) Assembly/serve
- 2. Distribution and Service
  - a. Form of food delivered
  - b. Type of service systems (e.g., centralized and decentralized)
  - c. Clients and customers served
  - d. Schedules of assembly and breakdown
  - e. Room service
  - f. Foodservice technology (e.g., food and nutrition software)
- 3. Physical and Chemical Properties of Food
  - a. Water
  - b. Vegetables and fruits
  - c. Sugars
  - d. Flours, grains, and cereals
  - e. Milk and dairy products
  - f. Eggs
  - g. Meats, fish, poultry, meat alternatives
  - h. Fats and oils
  - i. Beverages
  - j. Functional foods
  - k. Sensory evaluation of food
  - l. Food safety, processing, preservation, and packaging
  - m. Food biotechnology and genetic engineering
- 4. Food Preparation
  - a. Functions of ingredients
  - b. Techniques and methods
  - c. Effects on food quality
  - d. Effects on nutrient retention
  - e. Food additives
  - f. Considerations for special nutrition needs (e.g., formulas, supplements, human milk, etc.)

#### **TOPIC D – Sanitation, Safety, Facility and Equipment**

- 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) Personnel hygiene
      - (2) Food an equipment temperature control
      - (3) Food handling techniques
      - (4) Hazard Analysis Critical Control Point (HACCP)
    - c. Regulations
      - (1) Governmental (e.g., federal feeding programs, food and nutrition policies, congregate meals, etc.)
      - (2) Accrediting agencies (e.g., The Joint Commission, Center for Medicare & Medicaid Services (CMS), etc.)
    - d. Food quality and safety
      - (1) Temperature
      - (2) Additives
      - (3) Food allergies
      - (4) Documentation and recordkeeping
      - (5) Crisis management (e.g., emergency/disaster preparedness)
  3. Equipment and Facility Planning
    - a. Layout design and planning considerations
    - b. Equipment specification
    - c. Equipment selection
    - d. Sustainability
      - (1) Food and water
      - (2) Non-food (e.g., plastic, paper, equipment and energy efficiency, etc.)
      - (3) Waste management (e.g., storage, reduce, reuse, recycle, disposal, etc.)

### **DOMAIN III – MANAGEMENT OF FOOD AND NUTRITION SERVICES (38%)**

#### **TOPIC A – Human Resources**

1. Organizational Structures
  - a. Organizational charts
  - b. Job descriptions, specifications, and classifications
2. Employment Processes
  - a. Procedures for regulation compliance
    - (1) Labor laws

- (2) Union contracts
- b. Recruitment, selection, and orientation
- c. Schedule development (e.g., FTEs, overtime)
- d. Productivity and work simplification
- e. Performance standards and competencies
- f. Performance appraisals and documentation
- g. Personnel actions
- h. Retention (e.g., turnover)
- i. Diversity

## **TOPIC B – Finance and Materials**

1. Budget development
  - a. Financial objectives
  - b. Budget types
    - (1) Operations
    - (2) Capital
    - (3) Other
  - c. Components
    - (1) Expense types
    - (2) Revenue streams
    - (3) Profitability
2. Financial Analysis
  - a. Labor
  - b. Food and supplies
  - c. Capital
  - d. Other
3. Cost Controls and Materials Management
4. Financial Performance Monitoring and Evaluation

## **TOPIC C – Marketing Products and Services**

1. Marketing Principles
  - a. Techniques and methods (e.g., surveying audience needs and preferences)
  - b. Preparation and implementation (e.g., recruitment of participants)
  - c. Evaluation (e.g., document findings, adjust and correct plan)
2. Marketing Strategies/Market Mix Principles
  - a. Product
  - b. Place
  - c. Promotion

- d. Price

## **TOPIC D – Management Principles and Functions**

1. Management Principles
  - a. Approaches
    - (1) Classical/traditional
    - (2) Behavioral
  - b. Skills
    - (1) Technical
    - (2) Human
    - (3) Conceptual
  - c. Roles
    - (1) Leadership
    - (2) Conflict resolution
    - (3) Problem-solving
    - (4) Decision-making
    - (5) Communication
  
2. Management Functions
  - a. Planning
    - (1) Short and long range
    - (2) Strategic and operational
    - (3) Policies and procedures
    - (4) Emergency/disaster preparedness
  - b. Organizing
    - (1) Structure/design of department/unit
    - (2) Establishing priorities
    - (3) Tasks/activities and action plans
    - (4) Resource allocation
  - c. Directing
    - (1) Coordination
    - (2) Delegation
    - (3) Communication
    - (4) Motivation strategies
    - (5) Leadership theories
    - (6) Management theories
  - d. Controlling
    - (1) Establishing standards
    - (2) Monitoring established plans
    - (3) Developing corrective actions
  - e. Staffing
    - (1) Forecasting personnel needs
    - (2) Alignment of personnel

3. Scope of Practice (SOP) and Standards of Professional Performance (SOPP)
  - a. Roles and levels of dietetics personnel (e.g., qualifications)
  - b. Legislative process (e.g., funding and grants)
  - c. Ethics

#### **TOPIC E – Quality Management, Regulatory Compliance, and Research**

1. Regulatory Guidelines (e.g., federal, state, local and accreditation agencies)
2. Quality Process and Implementation
  - a. Planning
  - b. Standards/criteria/indicators
  - c. Documentation of data collection and outcomes
  - d. Corrective actions
  - e. Evaluate effectiveness
  - f. Reporting/reports
3. Research
  - a. Identifying problems
  - b. Data collection (e.g., clinical, management, community, and other)
  - c. Collaborative analysis
  - d. Evidence-based research findings
  - e. Reporting/reports