

REGISTRATION EXAMINATION FOR DIETETIC TECHNICIANS
STUDY OUTLINE
Effective January 1, 2017

DOMAIN I - NUTRITION SCIENCE AND CARE FOR INDIVIDUALS AND GROUPS – (44%)

TOPIC A - Principles of Basic and Normal Nutrition

1. Nutrients and phytochemicals
 - a. Functions
 - b. Deficiencies and excesses
 - c. Macronutrients sources
 - d. Micronutrients sources
2. Basic human physiology, physical and biological sciences (e.g., microbiology and chemistry)
3. Nutrient and calorie needs at various stages of the life span (e.g., DRIs/RDAs, macronutrients, vitamins and minerals)
 - a. Infancy
 - b. Childhood
 - c. Adolescence
 - d. Adulthood
 - e. Pregnancy and lactation
 - f. Geriatric
4. Cultural awareness
 - a. Religion
 - b. Ethnicity
 - c. Gender sensitivity
 - d. Race
5. Nutrition requirements in health promotion and disease prevention
 - a. Infancy
 - b. Childhood
 - c. Adolescence
 - d. Adulthood
 - e. Pregnancy and lactation
 - f. Geriatric

TOPIC B – Screening and Assessment

1. Nutrition screening
 - a. Purpose
 - b. Selection and use of risk factors
 - b. Values and limitations
 - c. Methodology
 - d. Documentation
2. Nutrition assessment of individuals
 - a. Anthropometric data (e.g., height, weight, body frame, standard weight for height, weight/height ratio (BMI), skinfolds, circumferences and growth charts)
 - b. Biochemical/laboratory
 - (1) Lab abbreviations
 - (2) Lab values related to and indicative of nutritional status

- c. Clinical
 - (1) Physical assessments (e.g., blood pressure, signs and 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. 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, and other integrative and functional medicines)
 - (4) Enteral/Parenteral nutrition
 - 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 and interest
 - (8) Needs assessment (e.g., external constraints, competing programs and illness)
 - (9) Educational readiness assessment
 - (a) Motivational level
 - (b) Educational level
 - (c) Situational (e.g., environmental and economic)
 - (d) Target groups and populations
3. Nutrition assessment of populations
- a. Nutrition status indicators
 - (1) Age, sex, ethnic and cultural groups
 - (2) Specific and special 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 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 (e.g., ingredients and 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
 - (i) Cardiovascular
 - (aa) Lipid Disorders
 - (bb) Hypertension
 - (ii) Critical care
 - (aa) Trauma
 - (bb) Surgery
 - (cc) Burns
 - (iii) Metabolic disorders
 - (aa) Diabetic
 - (bb) Inborn errors of metabolism (e.g., PKU)
 - (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 (e.g., oral, enteral and parenteral)
 - (bb) Techniques/equipment
 - (cc) Values/limitations/complications
 - (iv) Diet patterns/schedules and/or specific meals for diagnostic tests (e.g., test meals)
 - (v) Documentation of client care
 - (aa) PES statements
 - (bb) 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) Educate
 - (d) Discharge planning for continuity of care
 - (e) Recommend clients receive physical, social, behavioral and psychological services
 - (f) Documenting implementation (e.g., appropriate charting techniques, confidentiality and protocol)
2. Interventions for populations
 - a. Dietary guides and their use
 - (1) DRI/RDA
 - (2) Food group plans (e.g., 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 (e.g., School Breakfast and 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) Lead education or support groups for client populations
 - (4) Distribute nutrition information through the media
3. Education and training

- a. Targeted audiences (e.g., patient, client, employee and students)
- b. Goals and objectives
- c. Education venue (e.g., in-service, on-the-job training, e-learning, telemedicine and telehealth)
- d. Content specifications (e.g., community resources, learning activities and methodologies, references, handouts and audiovisual aids)
- e. Evaluation criteria
- f. Budget development
- g. Program promotion

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, tube feeding and medical nutrition supplements
3. Measuring outcome indicators (e.g., using AND 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. Health care utilization outcomes
 - e. Evaluate learner knowledge and performance
5. Communicating with dietitian
6. Documentation
 - a. Privacy of medical information (e.g., HIPAA)
 - b. Data mining
7. Healthcare informatics and technologies
 - a. Electronic medical record
 - b. Nutrient analysis and databases (e.g., on-line database and other)
 - e. Regulations for nutrition labels)
8. Evaluation of education programs
 - a. Implementation
 - b. Communication
 - (1) Interpersonal
 - (2) Group process
 - c. Methods of instruction
9. Evaluation of educational outcomes
 - a. Formative
 - b. Summative
 - c. Evaluation of effectiveness of educational plan

DOMAIN II – FOOD SCIENCE AND FOOD SERVICE (24%)

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 measuring and documentation
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

TOPIC C - Food Production, Distribution, and Service

1. Production
 - a. Procedures
 - (1) Recipe development and adjustment
 - (2) Cooking methods
 - (3) Ingredient control
 - (4) Portion control
 - (i) Yield analysis
 - (ii) Costing
 - (iii) Pricing
 - b. 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 (e.g., centralized and decentralized)
 - c. Clients and customers served
 - d. Schedules of assembly and breakdown
 - e. Room service

3. 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
4. Food preparation
 - a. Functions of ingredients
 - b. Techniques and methods
 - c. Effects on food quality
 - d. Effects on nutrient retention
 - e. Food additives

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) Personal hygiene
 - (2) Food and equipment temperature control
 - (3) Food handling techniques
 - (4) HACCP
 - c. Regulations
 - (1) Governmental
 - (2) Accrediting 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. Equipment specification
 - c. Equipment selection
 - d. Sustainability
 - (1) Food and water
 - (2) Non-food
 - (3) Waste management

DOMAIN III – MANAGEMENT OF FOOD AND NUTRITION SERVICES (32%)

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. Scheduling
 - d. Productivity and work simplification
 - e. Performance standards and competencies
 - f. Performance appraisals and documentation
 - g. Personnel actions
 - h. Retention
 - i. Diversity

TOPIC B - Finance and Materials

1. Budget development
 - a. Financial objectives
 - b. Budget types
 - (1) Operations
 - (2) Capital
 - (3) Other
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 principles
 - a. Techniques and methods (e.g., surveying audience needs and preferences)
 - b. Preparation and implementation
 - c. Evaluation (e.g., document findings and adjust and correct plan)
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
 - b. Skills
 - (1) Technical
 - (2) Human
 - (3) Conceptual
 - c. Roles
 - (1) Information giving
 - (2) Conflict resolution
 - (3) Problem solving
 - (4) Decision making
 - (5) Communication
2. Planning
 - 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 and levels of dietetics personnel
 - b. Legislative process

TOPIC E - Quality Process and Research

1. Regulatory guidelines (e.g., federal, state, local and accreditation agencies)
2. Quality process and implementation
 - a. Plans
 - b. Standards/criteria/indicators
 - c. Documentation of data collection and outcomes
 - d. Corrective actions
 - e. Evaluate effectiveness
 - f. Report
3. Research
 - a. Identifying problems
 - b. Data collection
 - c. Reporting