

REGISTRATION EXAMINATION FOR DIETETIC TECHNICIANS
STUDY OUTLINE – 2011
Effective January 1, 2012

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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/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), 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 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 integrative & functional 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
 - (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
 - (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, 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 (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., My Plate)
 - (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