Advanced Practitioner Certification in Clinical Nutrition

Test Specifications

<table>
<thead>
<tr>
<th>Section</th>
<th>Percent of Exam</th>
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<tbody>
<tr>
<td>Section A - Nutrition Assessment</td>
<td>31%</td>
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<tr>
<td>Section B - Nutrition Diagnosis</td>
<td>10%</td>
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<tr>
<td>Section C - Nutrition Intervention</td>
<td>17%</td>
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<td>Section D - Nutrition Monitoring and Evaluation</td>
<td>10%</td>
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<tr>
<td>Section E - Management of Systems of Nutrition Care</td>
<td>20%</td>
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<tr>
<td>Section F - Design/Development of Systems of Nutrition Care</td>
<td>5%</td>
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<tr>
<td>Section G - Research</td>
<td>7%</td>
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## Advanced Practitioner Certification in Clinical Nutrition Credential for Dietitians in Clinical Practice

### Test Specifications – Detailed Outline

<table>
<thead>
<tr>
<th>Section A - Nutrition Assessment</th>
<th>Percent of Exam</th>
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<tbody>
<tr>
<td>1. Interpret nutrition-related laboratory data in context with complex clinical findings</td>
<td>31%</td>
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<tr>
<td>2. Identify barriers to nutrient delivery</td>
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<td>3. Determine micronutrient requirements of patients/clients</td>
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<td>4. Identify and interpret the laboratory data that is most relevant for nutrition assessment of patients/clients</td>
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<td>5. Use components of a diet history that are most critical for the development of a nutrition diagnosis</td>
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<td>6. Select nutrition screening and assessment tools that are most appropriate for specific patient/client populations</td>
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<td>7. Interpret anthropometric and body composition measurements for specific patient/client conditions</td>
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<td>8. Select the most appropriate predictive method for estimating calorie and protein needs</td>
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<td>9. Conduct a detailed health and social history of a patient/client</td>
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<td>10. Identify the diagnostic tests and procedures that are most relevant for the nutrition assessment of a patient/client</td>
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<tr>
<td>11. Evaluate a patient/client's medications to assess their potential impact on a nutrition diagnosis and nutrition outcomes</td>
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<td>12. Evaluate a patient/client's social environment and lifestyle to determine the resources and support mechanisms that are available</td>
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<td>13. Evaluate the interactions among medications, botanicals, and nutrients, and their potential impact on a patient/client's nutrition status and condition</td>
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<tr>
<td>14. Conduct in-depth nutrition-focused physical examinations (NFPEs), using tools and equipment that provide the most appropriate diagnostic information</td>
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<tr>
<td>15. Interpret in-depth nutrition-focused physical examination (NFPE) findings to develop nutrition diagnoses and nutrition interventions</td>
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<tr>
<td>16. Evaluate a patient/client's psychosocial condition and other sources of stress that may impact nutrition status</td>
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<tr>
<td>17. Adapt communication/interview style to optimize the effectiveness of interactions with a patient/client</td>
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Evaluate a patient/client's feeding skills and abilities to determine the need for adaptive equipment
Assess a patient/client's compliance with a prescribed regimen

Section B - Nutrition Diagnosis 10%
1. Utilize the most appropriate resources to collect the information required to diagnose patients/clients who have limited ability to communicate
2. Diagnose nutrition problems based on signs and symptoms in the patient/client history and nutrition-focused physical examination (NFPE)
3. Prioritize nutrition diagnoses to optimize the nutrition intervention
4. Develop nutrition diagnosis based on comprehensive assessment of a patient/client's condition
5. Revise/adapt nutrition diagnosis to reflect changes in a patient/client's condition and/or response to nutrition interventions
6. Identify the etiologies of patient/client nutrition diagnosis populations

Section C - Nutrition Intervention 17%
1. Distinguish between the effects of the nutrition intervention and the effects of the disease process or the medical intervention
2. Recommend or refer for adaptive equipment based on a patient/client's feeding skills
3. Use customized, patient-centered education/counseling/coaching models
   - Guide patients/clients and their families in healthcare decision making and goal setting using patient-centered, evidence-based approach
4. Adapt nutritional intervention to reflect patient/client attitude, knowledge, and beliefs about food and nutrition practices
5. Align nutrition care with medical goals to impact the patient/client outcomes
   - Lead discussions regarding goals of care (including end-of-life nutrition-related decisions) with patient/client or surrogate decision maker
6. Arrange referrals to facilitate continuity of care (such as referrals to home care agencies or for community resources) as dictated by the patient/client's needs
4. Refer patient/client to appropriate nutrition/dietetics specialists
5. Refer patient/client to appropriate healthcare team members
6. Evaluate efficacy, safety, and effectiveness of unconventional approaches to nutrition care

Section D - Nutrition Monitoring and Evaluation 10%
1. Evaluate the nutrition implications of a patient/client's treatment plan and adjust as needed
2. Verify continuity of care (such as coordinating care with previous or future facilities and services)
   - Evaluate deviations from an expected outcome or established guideline/indicator for a given nutrition intervention for a patient/client
   - Identify measurable outcome indicators and clinically indicated time frames for a nutrition intervention using an evidence-based approach
3. Assess an intervention's effectiveness and/or adverse effects
4. Monitor patient/client acceptance of nutrition intervention and adjust plan of care accordingly

### Section E - Management of Systems of Nutrition Care

| 1 | Lead an interprofessional team in designing nutrition-related services, programs, or protocols |
| 2 | Develop standards for nutrition care, such as protocols, guidelines, and practice tools |
| 3 | Direct continuous quality improvement programs |
| 4 | Evaluate the effectiveness of continuous quality improvement programs |
| 5 | Evaluate policies and procedures for patient/client care for cost, effectiveness, and value |
| 6 | Develop cost-effective methods, tools, and techniques for nutrition care |
| 7 | Analyze the safety aspects of practices and procedures in delivering nutrition services and products |
| 8 | Evaluate existing and innovative tools, technologies, and techniques for nutrition care and stakeholder acceptance |
| 9 | Ensure compliance with local, state, and national rules and regulations |
| 10 | Promote a culture of proactive, patient-centered care |
| 11 | Advocate for new (or modifications to) local, state, and national rules and regulations to improve nutrition care |
| 12 | Support the growth, development, and advancement of colleagues |

### Section F - Design/Development of Systems of Nutrition Care

| 1 | Develop programs or systems of care, such as support groups and educational programs, that address the needs of target populations |
| 2 | Develop and implement new tools, techniques, and programs for nutrition care |
| 3 | Create or grow programs to expand services, add value, and/or generate revenue |
| 4 | Design and develop continuous quality improvement programs |

### Section G - Research

| 1 | Assess the validity, rigor, and bias of research studies |
| 2 | Analyze data from nutrition care research |
3 Communicate research findings
   Evaluate published research using an evidence-based approach to determine applicability to a clinical nutrition practice setting
4 Utilize systematic methods to obtain published evidence to answer clinical nutrition questions and inform decisions
KSAs
Knowledge of drug-drug, drug-nutrient, drug-food interactions and depletions
Knowledge of interrelationship of laboratory data
Knowledge of interviewing techniques and theories
Knowledge of nutrigenomics (how genetic information affects the client/patient nutritional state
Knowledge of pathophysiology
Knowledge of pharmacology
Knowledge of research study design
Knowledge of sources of applicable rules and regulations
Knowledge of strategic planning concepts and processes
Knowledge of the concepts of patient/client-centered nutrition care
Knowledge of the expected timeframe and limitations of an intervention to affect change
Knowledge of the language/tasks of non-clinical professionals (such as information technology professionals, management professionals and insurance professionals)
Knowledge of when to perform an in-depth NFPE
Skill in discussing sensitive issues (such as end-of-life) with patient/clients with empathy
Ability to advocate for patient-centered care
Ability to anticipate and measure the outcome of a nutrition intervention
Ability to apply anthropometric and body composition results to develop the nutrition interventions
Ability to apply appropriate predictive equations
Ability to assess enteral and parenteral nutrition formulary during shortages and/or adverse events
Ability to assess external resources that may be lacking in a community/system
Ability to assess financial allocations and resources
Ability to assess information about medications, botanicals and supplements
Ability to assess institutional/community level research including protocols, guidelines, practice tools, etc.
Ability to assess laboratory data in the context of the disease process/treatment
Ability to assess laboratory data in the context of the patient's functional/psychosocial/economic status
Ability to assess medication availability, efficacy and quality during shortages and/or adverse events
Ability to assess the most practical, safe and effective alternative for a given patient situation
Ability to assess the patient/client's functional ability in relation to food acquisition and feeding
Ability to assess the strengths and limitations of technologies and equipment
Ability to assess the validity of a test for a given client/patient condition
Ability to assess the validity of laboratory results (including the process used to collect and analyze the specimen)
Ability to assimilate evidence-based research into practice
Ability to assimilate knowledge of food composition, human physiology and metabolism, and nutrient metabolism in relation to health and disease
Ability to autonomously implement appropriate tests, referrals and consults
Ability to benchmark current practice with best practices
Ability to communicate complex health care issues to non-health care professionals
Ability to conduct systematic literature searches
Ability to create specific, measurable, attainable, realistic, timed goals
Ability to critically appraise research studies for validity, strengths and gaps
Ability to determine appropriate micronutrient supplementation, repletion and duration of therapy
Ability to determine the best source of information to assess the diet history
Ability to determine the most important actionable nutrition intervention
Ability to determine whether research is evidence-based
Ability to determine whether there is additional information needed to assess the social environment and the availability of resources
Ability to differentiate normal from abnormal findings in a NFPE
Ability to direct continuity of nutrition care
Ability to discern data required to efficiently and accurately determine the most appropriate nutrition diagnoses
Ability to disseminate results of research to other professionals
Ability to effectively use patient/client interviewing and counseling techniques
Ability to efficiently and accurately assess the appropriateness of potential nutritional interventions
Ability to efficiently and accurately determine data/trends that require nutrition intervention for a given patient condition
Ability to evaluate lab values over time
Ability to evaluate outcomes and identify opportunities for improvements
Ability to evaluate the effectiveness of patient care monitoring plans/programs by comparing audit outcomes to evidence based goals/guidelines
Ability to identify and address the goals of care with patient/client or surrogate decision maker
Ability to identify and assess clinical patterns with minimal information
Ability to identify and define data required to measure clinical outcomes associated with patient/client goals
Ability to identify and differentiate causes of nutrition problems
Ability to identify micronutrient deficiencies and toxicities
Ability to incorporate nutrition programs in local, national or global health care initiatives
Ability to interpret and apply rules and regulations and/or policies and procedures
Ability to interpret statistical data from research
Ability to organize and lead interprofessional teams
Ability to perform a cost-benefit analysis
Ability to perform a needs assessment/environmental scan
Ability to perform an in-depth nutrition-focused physical examination (NFPE) efficiently
Ability to recognize and overcome barriers to successful outcomes
Ability to recognize non-apparent patient/client centric facts, history or beliefs that may impede outcomes
Ability to recognize when lab values may be abnormal due to pathophysiological reasons, medications or other factors
Ability to reevaluate nutrition interventions based on new information
Ability to use a standardized evidence analysis process to evaluate published research
Ability to use clinical information systems (databases) for the collection of data to support initiatives to improve patient care
Ability to use efficient, tailored patient-centered counseling skills to set nutrition-related goals and outcomes
Ability to write proposals for funding