Content Outline for the Certification in Infection Control Exam, revised 2010	Courses in I.C. Certificate Program			
	PHC 6251 Disease Surveillance & Monitoring	**PHC 6562 Microbiology for Healthcare Workers**	**PHC 6314 Infection Control Program Design**	**PHC 6517 Infectious Disease Prevention Strategies**
1. Identification of Infectious Disease Processes				
A. Differentiate among colonization, infection, and contamination	**X**			
B. Identify occurrences, reservoirs, incubation periods, periods of communicability, modes of transmission, signs and symptoms, and susceptibility associated with the disease process	**X**			**X**
C. Interpret results of diagnostic/laboratory reports		**X**		
D. Recognize limitations and advantages of types of tests used to diagnose infectious processes		**X**		
E. Recognize epidemiologically significant organisms for immediate review and investigation	**X**	**X**		**X**
F. Differentiate among prophylactic, empiric, and therapeutic uses of antimicrobials		X		**X**
G. Identify indications for environmental microbiologic monitoring	**X**			**X**
2. Surveillance and Epidemiologic Investigation				
A. Design of Surveillance Systems	**X**			
1. Develop a surveillance plan based on the population served, services provided, and regulatory or other requirements	**X**			
2. Evaluate periodically the effectiveness of the surveillance plan and modify as necessary	**X**			
3. Identify appropriate critical/significant lab results and implement a notification system	**X**	**X**		
4. Determine data needed to calculate specific rates	**X**			

5. Integrate surveillance activities within health care settings (e.g., ambulatory, home health, long term care, acute care)	**X**			
6. Establish mechanisms for identifying those with communicable diseases requiring follow-up and/or isolation	**X**	**X**		**X**
B. Collection and Compilation of Surveillance Data				
1. Use standardized definitions for the identification of outcomes and processes	**X**			
2. Use a systematic approach to record surveillance data	**X**			
3. Determine numerators, denominators, and constants for calculations of rates for outcomes and processes	**X**			
4. Organize and manage data in preparation for analysis	**X**			
5. Determine the incidence or prevalence of infections	**X**			
6. Calculate specific infection rates (e.g., provider-specific, unit specific, device-specific, procedure-specific)	**X**			
7. Calculate risk stratified rates	**X**			
8. Incorporate post-discharge surveillance findings into calculation of rates	**X**			
C. Interpretation of Surveillance Data				
1. Generate, analyze, and validate surveillance data	**X**			
2. Use basic statistical techniques to describe data (e.g., mean, standard deviation, rates, ratios, proportions)	**X**			
3. Recognize statistical significance of surveillance data	**X**			
4. Monitor and interpret antibiotic resistance patterns		**X**		
5. Recognize the need for an epidemiologic study to investigate a problem (e.g., case control, cohort studies)	**X**		**X**	
6. Compare surveillance results to published data or other benchmarks	**X**			
7. Prepare and report findings of surveillance or epidemiologic investigation to customers, using analyzed data, tables, graphs, or charts, as appropriate	**X**			
8. Develop and implement corrective action plans based on surveillance findings	**X**			

D. Outbreak Investigation				
1. Verify existence of outbreak	**X**			
2. Collaborate with appropriate persons to establish the case definition, period of investigation, and case-finding methods	**X**			
3. Define the problem using time, place, person, and risk factors	**X**			
4. Formulate hypothesis on source and mode of transmission	**X**			
5. Implement and evaluate control measures, including ongoing surveillance	**X**			
6. Prepare and disseminate reports	**X**			
3. Preventing/Controlling the Transmission of Infectious Agents				
A. Develop and review infection prevention and control policies and procedures			**X**	
B. Collaborate with public health agencies in planning community responses to biological agents (e.g., anthrax, influenza)	**X**		**X**	**X**
C. Identify and implement infection prevention and control strategies related to:				
1. Hand hygiene				**X**
2. Cleaning, disinfection, and sterilization				**X**
3. Specific direct and indirect care settings (e.g., patient care units, operating room, ambulatory care center, respiratory therapy)				**X**
4. Infection risks associated with therapeutic and diagnostic procedures and devices (e.g., dialysis, angiography, bronchoscopy, endoscopy, intravascular devices, urinary drainage catheter)				**X**
5. Recall of potentially contaminated equipment and supplies	**X**			**X**
6. Initiation and discontinuation of isolation/barrier precautions when indicated				**X**
7. Patient placement, transfer, and discharge	**X**			**X**
8. Environmental hazards				**X**
9. Use of patient care products and medical equipment	**X**		**X**	**X**
10. Immunization programs for patients	**X**			**X**

11. Construction and renovation in patient care settings	**X**			
12. The influx of patients with communicable diseases (e.g., bioterrorism, emerging infectious diseases)			**X**	**X**
4. Employee/Occupational Health				
A. Review and/or develop screening and immunization programs	**X**			**X**
B. Provide counseling, follow up, work restriction recommendations related to communicable diseases or following exposures	**X**			**X**
C. Assist with analysis and trending of occupational exposure incidents and information exchange between Occupational Health and Infection Prevention and Control departments	**X**			**X**
D. Assess risk of occupational exposure to infectious diseases (e.g., TB, bloodborne pathogens)	**X**			**X**
5. Management and Communication (Leadership)				
A. Planning				
1. Conduct an infection risk assessment of the organization	**X**			
2. Develop, evaluate, and revise a mission and vision statement, goals, measurable objectives, and action plans for the Infection Prevention and Control Program			**X**	
3. Recommend specific equipment, personnel, and resources for the Infection Prevention and Control Program			**X**	
4. Participate in cost benefit assessments, efficacy studies, and product evaluations			**X**	
5. Recommend changes in practice based on clinical outcomes and financial implications	**X**		**X**	
B. Communication and Feedback				
1. Provide infection prevention and control findings, recommendations, annual reports, and policies and procedures to appropriate individuals, committees, departments, and units			**X**	
2. Communicate with internal and external customers (e.g., related to Infection Prevention and Control issues of continuity of care, reporting communicable diseases)	**X**			

3. Collaborate with Risk Management/Quality Management in the identification and review of adverse and sentinel events			**X**	
4. Evaluate accreditation/regulatory issues and facilitate compliance			**X**	
C. Quality/Performance Improvement and Patient Safety				
1. Participate in quality/performance improvement and patient safety activities related to infection prevention and control			**X**	
2. Demonstrate quality/performance improvement projects through the use of graphic tools (e.g., "fishbone" diagram, Pareto charts, flow charts)	**X**			
6. Education and Research				
A. Education				
1. Assess needs, develop goals and measurable objectives, and prepare lesson plans for educational offerings			**X**	
2. Apply principles of adult learning to educational strategies and delivery of educational sessions			**X**	
3. Prepare, present, or coordinate educational workshops, lectures, discussion, or one-on-one instruction on a variety of Infection Prevention and Control topics			**X**	
4. Evaluate the effectiveness of education and learner outcomes (e.g., behavior modification, compliance rate)			**X**	**X**
5. Instruct patients, families, and other visitors about methods to prevent and control infections			**X**	
B. Research				
1. Apply critical reading skills to evaluate research findings			**X**	
2. Incorporate research findings into practice through education and consultation			**X**	