

Exercise Science: Health Fitness Instructor Concentration

Program Student Learning Outcomes								
Course Abbreviation	Course Level Learning Competencies 	Demonstrate knowledge of major concepts and principles in exercise science.	Collect, analyze, interpret and present qualitative and quantitative data.	Research, evaluate, and synthesize information from a variety of sources.	Demonstrate knowledge of standard risk management practices	Plan, execute and evaluate health & fitness programs		
	PED135	Conduct and interpret a fitness evaluation	I	I		I	I	
Create exercise technique checklists		I			I			
Analyze a movement to determine the agonist and antagonist muscle groups		I						
Explain the fundamental techniques in resistance and flexibility training		I			I			
Describe a variety of exercises using anatomical terminology.		I						
Describe, model, instruct and critique exercises from a variety of modalities								
PED147	Explain the many aspects of programming exercise for oneself or a group.	I				I		
	Assess and evaluate one's physical condition and risk factors, by charting one's own fitness level and health status.		I		I			
	Based on the major causes of cardiovascular training injuries, be able to program for both injury prevention and treatment	I						
	Describe how to fuel the body correctly for activity and body fat reduction	I				I		
	Evaluate the components of a successful cardiovascular training class	I				R		
PED167	Describe the different disciplines, subdisciplines, and specialty areas of exercise science	I		I		I		
	Evaluate information critically, choosing relevant, timely and authoritative sources	I	I		I			
	Describe the structure and function of the systems within the body including the muscular, skeletal, nervous, cardiovascular and respiratory systems	I						
	Explain the recent developments in career preparation programs					I		
PED168	Integrate the components of health into both individual and group exercise class design.					R		
	Describe basic safety issues in association with various fitness activities				R			
	Program appropriate exercise for specific needs of special populations (i.e. seniors, pre-natal, rehabilitation)	R				R		
	Design an individual or group exercise program based on specific health-related elements (i.e. cardiovascular, strength, flexibility).					E		
	Demonstrate exercises with proper form and alignment along with the proper exercise progression and muscle group modifications				R	E		
	Describe important muscle balance principles, and how they relate to a properly designed exercise program.	R				E		
	Describe physiological and anatomical aspects of human anatomy and/or movement	E						
	Be able to explain functional anatomy as it relates to corrective exercise training	E				E		
	Rationalize the need for corrective exercise	E				E		

Information Literacy	
Quantitative Reasoning	
Public Presentation	
Global Awareness	
Written Communication	

- I Introduce
- R Reinforce
- E Emphasize
- X

PED200	Explain and assess proper posture and how it relates to movement	E					
	Through the use of movement assessments be able to distinguish potential muscle imbalances and movement dysfunctions	E	R		R		
	Analyze a movement to determine a muscle's concentric, eccentric, isometric actions, origins and attachments	E					
	Using self-myofascial release and lengthening techniques, create a program to improve range of motion and flexibility in tight structures.					E	
PED201	Evaluate the safety and effectiveness of exercise in people of different ages.	E			E		
	Using knowledge of the energy systems and muscles used during exercise, determine appropriate techniques to achieve desired outcomes.	E					
	Administer and evaluate fitness tests		E				
	Design a technically, functionally and physiologically sound strength & conditioning program based on the principles of Periodization	E				E	
	Analyze a movement to categorize an exercise based on strength, power, agility, speed and balance	E					
	Evaluate information critically, choosing relevant, authoritative sources and use that information to produce research projects				E		
PED212	Assess the need for medical clearance and medical supervision during exercise training.	E	E		E	E	
	Discuss the scope of practice of the exercise professional working with special populations.	E					
	Discuss the pathology and pathophysiology of numerous conditions and disorders	E					
	Create SMART goals					E	
	Explain the effects of different exercise modalities on individuals with various diseases and conditions	E				E	
	Validate appropriate exercise programming, precautions, and contraindications for individuals with various diseases and conditions					E	

