Prepared: Joanna MacDougall Approved: Bob Chapman

Course Code: Title	OPA104: HUMAN MOVEMENT
Program Number: Name	3022: OCCUP/PHYSIO/ASSIST
Department:	OTA/PTA ASSISTANT
Semester/Term:	17F
Course Description:	This course will provide the student with a foundation in the principles of normal functional human movement. Essential terminology and concepts related to normal human movement, the articular system, components of movement, biomechanics, motor development and skill acquisition will be introduced. In addition, students will develop an understanding of normal growth and motor development, posture, balance, and body mechanics.
Total Credits:	4
Hours/Week:	4
Total Hours:	60
Substitutes:	RSP102
This course is a pre-requisite for:	FIT150, FIT151, FIT155, FIT156, OPA106, OPA107, OPA108, OPA109, OPA110, OPA112, OPA113, OPA114, OPA115, OPA130, OPA131
Vocational Learning Outcomes (VLO's): **Please refer to program web page for a complete listing of program outcomes where applicable.**	#1. Communicate appropriately and effectively, through verbal, nonverbal, written and electronic means, with clients, their families, and significant others, occupational therapists, physiotherapists, other health care providers, and others within the role of the therapist assistant. #4. Ensure personal safety and contribute to the safety of others within the role of the therapist assistant. #6. Document and complete client records in a thorough, objective, accurate, and nonjudgmental manner within the role of the therapist assistant. #8. Perform effectively within the roles and responsibilities of the therapist assistant through the application of relevant knowledge of health sciences, psychosociological sciences, and health conditions. #9. Perform functions common to both physiotherapy and occupational therapy practices that contribute to the development, implementation and modification of intervention/treatment plans, under the supervision of and in collaboration with the occupational therapist and/or physiotherapist.

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Essential Employability Skills (EES):	#1. Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. #2. Respond to written, spoken, or visual messages in a manner that ensures effective communication. #7. Analyze, evaluate, and apply relevant information from a variety of sources. #10. Manage the use of time and other resources to complete projects. #11. Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 60%, C
Evaluation Process and Grading System:	<table><tr><th>Evaluation Type</th><th>Evaluation Weight</th></tr><tr><td>Final Exam – Written</td><td>20%</td></tr><tr><td>Lab Activities</td><td>20%</td></tr><tr><td>Lecture Participation</td><td>10%</td></tr><tr><td>Online Quizzes</td><td>20%</td></tr><tr><td>Tests(3 x10% each)</td><td>30%</td></tr></table>
Books and Required Resources:	Essentials of Human Anatomy and Physiology. (2012) by Marieb, Elaine Publisher: Benjamin Cummings/Addison Wesley Longman, Inc. Edition: 12th Clinical Kinesiology and Anatomy. (2011) by Lippert, Lynn Publisher: F.A. Davis Company. Edition: 5th Laboratory Manual for Clinical Kinesiology and Anatomy (2011) Laboratory Manual for Clinical Kinesiology and Anatomy (2011) by Lippert, Lynn Publisher: F.A. Davis Company. Edition: 3rd Functional Anatomy Flash Cards. Bones, Joints and Muscles (2010) by Cael, Christy Publisher: Lippincott Williams and Wilkins
Course Outcomes and Learning Objectives:	**Course Outcome 1.** Demonstrate an understanding of terminology and concepts related to normal movement of the human body. **Learning Objectives 1.**

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- Identify and describe anatomical terms including: planes of movement, body surfaces and directions of movement
- Describe the following aspects of normal functional movement and where appropriate, normal changes across the lifespan:

a)motor
b)sensory
c)cognitive
d)perceptual
e)psychosocial
f)environmental

- Explain the following biomechanical concepts and the implications of these on normal functional movement.

a)weight
b)gravity
c)force
d)leverage
e)momentum
f)inertia
g)equilibrium
h)base of support
i)center of mass

Course Outcome 2.

Describe the basic structure of connective tissue and muscle and function.

Learning Objectives 2.

- Define the following, endomysium, perimysium, epimysium, tendon, aponeurosis
- Describe the structure and function of synovial membrane, ligaments, tendons, cartilage, synovial membrane and the intervertebral disk

Course Outcome 3.

Demonstrate an understanding of the articular system and resulting movement.

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Learning Objectives 3.

- Identify and describe:

a)types of joints and associated movements including normal range of motion for each joint
b)directional terms (abduction, adduction, extension etc.)

- Identify the normal curvatures of the vertebral column and explain their normal development
- Identify and describe scoliosis, lordosis and kyphosis
- Identify normal age related changes of the articular system throughout the lifespan

Course Outcome 4.

Demonstrate an understanding of the role of muscles in the production of movement.

Learning Objectives 4.

- Define the following terms: origin, insertion, prime mover/agonist, antagonist, synergist, fixator
- Describe graded response, tetanus, muscle fatigue and muscle tone as they apply to skeletal muscle
- Identify and describe different types of muscle contractions:

a) isometric
b) isotonic – eccentric and concentric
c) isokinetic

- Describe and demonstrate the following types of movement: resistive, active, active assistive, passive
- Describe the length-tension relationship of muscle tissue (active and passive insufficiency)
- Demonstrate skill in manual muscle testing
- Identify normal age related changes of the muscular system throughout the lifespan

Course Outcome 5.

Demonstrate an understanding of normal motor development throughout the lifespan.

Learning Objectives 5.

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- Identify normal motor milestones in gross and fine motor development
- Identify and explain the role of infant reflexes in normal motor development

Course Outcome 6.

Demonstrate knowledge of normal posture and postural control throughout the lifespan

Learning Objectives 6.

- Explain how the sensory system (vestibular, vision, somatosensory systems) controls posture
- Describe balance strategies and their impact on postural control
- Identify and describe proper body alignment
- Identify normal age-related changes related to posture
- Describe how to maintain good posture and body alignment

Course Outcome 7.

Demonstrate knowledge and skill in the application of good body mechanics.

Learning Objectives 7.

- Identify, describe and demonstrate best practice of body mechanics required for work in health and human services
- Analyze and correct body mechanics of another

Course Outcome 8.

Demonstrate knowledge of terminology and concepts related to normal gait patterns.

Learning Objectives 8.

- Identify the normal functional sequence of gait throughout the lifespan
- Describe normal gait using correct terminology
- Identify factors affecting gait (vertical and horizontal displacement, width of base of support,

lateral pelvic tilt, step length, stride length)

Course Outcome 9.

Demonstrate knowledge of terminology and concepts related to the mechanics respiration.

Learning Objectives 9.

- Identify the gross anatomy of the respiratory system
- Explain the functions of the components of the respiratory system
- Describe the normal movement patterns of the chest wall during respiration throughout the lifespan
- Describe normal breathing patterns and rates of respiration throughout the lifespan
- Describe and demonstrate diaphragmatic breathing

Course Outcome 10.

Demonstrate knowledge of the process of motor learning.

Learning Objectives 10.

- Identify and describe the three stages of motor learning (cognitive, associative and autonomous)
- Recognize the characteristics of the learner during each stage of learning
- Identify appropriate instructional strategies for each stage of learning
- Describe intrinsic and extrinsic feedback and the timing of providing such feedback

Date:	Wednesday, August 30, 2017
	Please refer to the course outline addendum on the Learning Management System for further information.