SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

SAULT
COLLEGE

COURSE OUTLINE

COURSE TITLE:	Human Anatomy		
CODE NO. :	OPA103	**SEMESTER:**	1
PROGRAM:	Occupational Therapist Assistant and Physiotherapist Assistant Program		
AUTHOR:	Allan Kary, Joanna MacDougall		
DATE:	Sept 2014	**PREVIOUS OUTLINE DATED:**	Sept 2013
APPROVED:	*"Marilyn King"*		*Aug. 22, 2014*
	CHAIR OF HEALTH PROGRAMS		**DATE**
TOTAL CREDITS:	5		
PREREQUISITE(S):	None		
HOURS/WEEK:	3 hour lecture, 2 hour lab		

This course addresses the following Vocational Learning Outcomes, Essential Employability Skills and General Education Requirements in the approved program standard (2008) for Occupational Therapist Assistant and Physiotherapist Assistant program of instruction leading to an Ontario College Diploma delivered by the Ontario Colleges of Applied Arts and Technology. (MTCU code 51502)

Vocational Learning Outcomes

Check All That Apply	The graduate has reliably demonstrated the ability to:
X	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
	participate in the effective functioning of interprofessional health care teams within the role of the therapist assistant.
	establish, develop, maintain, and bring closure to client-centred, therapeutic relationships within the role of the therapist assistant.
	ensure personal safety and contribute to the safety of others within the role of the therapist assistant.
	practice competently in a legal, ethical, and professional manner within the role of the therapist assistant.
	document and complete client records in a thorough, objective, accurate, and nonjudgmental manner within the role of the therapist assistant.
	develop and implement strategies to maintain, improve, and promote professional competence within the role of the therapist assistant.
X	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.
	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.
	enable the client's occupational performance* by contributing to the development, implementation, and modification of intervention/treatment plans, under the supervision of and in collaboration with the occupational therapist.
	enable the client's optimal physical function by contributing to the development, implementation, and modification of intervention/treatment plans, under the supervision of and in collaboration with the physiotherapist.

Essential Employability Skills:

Check All That Apply	The graduate has reliably demonstrated the ability to:
X	***communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.***
X	***respond to written, spoken, or visual messages in a manner that ensures effective communication.***
	execute mathematical operations accurately.
X	***apply a systematic approach to solve problems.***
	use a variety of thinking skills to anticipate and solve problems.
X	***locate, select, organize, and document information using appropriate technology and information systems.***
X	***analyze, evaluate, and apply relevant information from a variety of sources.***
	show respect for the diverse opinions, values, belief systems, and contributions of others.
X	***interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.***
X	***manage the use of time and other resources to complete projects.***
X	***take responsibility for one's own actions, decisions, and consequences.***

I. COURSE DESCRIPTION:

This course will provide the student with a knowledge base of anatomy and physiology of the human body with special attention to the neurological and musculoskeletal systems, as required for the needs of the Occupational Therapist Assistant and Physiotherapist Assistant. Other systems explored include the cardiovascular system, respiratory system, digestive system, urinary system and reproductive system as well as the special senses of the eye and ear. Labs focus on developing competence in the palpation of musculoskeletal surface anatomy.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will:

1. Demonstrate an understanding of the basic structure and function of the human body and specified tissues, and their integral role in maintaining homeostasis.

   Potential Elements of the Performance:
   - Define anatomy and physiology
   - Explain the levels of structural organization of the human body
   - Name the systems of the body and briefly state the major functions of each system
   - List the functions for humans to maintain life
   - List the survival needs of humans
   - Explain homeostasis and give at least three examples
   - State the four types of cells
   - State the function of the major organelles in cells
   - State the four types of tissues and their major subclassifications
   - Explain the major structural and functional importance of connective and muscle tissue
   - Describe anatomical position and explain why it is important to know
   - Use anatomical terminology to describe body directions, surfaces and planes of movement
   - Locate major body cavities and state the major organs in each one

2. Demonstrate knowledge of and describe major muscle groups, bones, and joints.
   Potential Elements of the Performance:
   Bones:
   - Identify the subdivisions of the skeleton
   - List the functions of the skeletal system
   - List and describe the four major kinds of bones based on structure (long, flat, irregular etc.) and their function
   - Identify and name the bones of the skeleton

   Joints:
   - Name and identify articulations/joints of the body
   - Name and identify key ligaments of the body
   - Describe the structure and function of the intervertebral disc, cartilage and ligaments

Muscles:

- Describe the structure of skeletal muscle, the sarcomere as well as the role of actin and myosin.
- Describe and identify different types of connective tissue attachments of skeletal muscles (tendons, aponeurosis etc.)
- Explain the functions of the muscular system
- Identify accurately the different types of body movement exhibited for specified muscles
- Name and locate the major muscles of the human body (with origin and insertion points of specified muscles) on a chart, diagram, and state the action of each
- State the importance of a nerve supply and exercise in keeping muscles healthy

3. Demonstrate an understanding of basic anatomy and physiology of the nervous system sufficiently to comprehend its role in controlling voluntary movement.

   Potential Elements of the Performance:

   - State the general functions of the nervous system
   - Explain the structural and functional classification of the nervous system
   - State the function of neurons and neuroglia
   - State the types and functions of general sensory receptors
   - Explain the conduction of a nerve impulse
   - Explain a reflex arc
   - Identify the parts of the Central Nervous System and briefly state their functions
   - Describe the general structure of a peripheral nerve
   - State and identify the major parts of the Peripheral Nervous System
   - State the functions of specified nerves, plexuses and divisions of the PNS

4. Identify relevant surface landmarks and develop adequate palpation skills to accurately demonstrate their location.

   Potential Elements of the Performance:

   - Identify and palpate bones and significant bony landmarks on self and on another person
   - Identify and palpate key ligaments of the body on self and on another person
   - Identify and palpate major muscles, including origin and insertion of the human body on self and on another person

5. Demonstrate an understanding of the basic structure and function of specified organs and systems.

   Potential Elements of the Performance:

   Special Senses:

   - Identify and state the function of the structures of the eye

- Define the following terms: accommodation, astigmatism, blind spot, cataract, emmetropia, glaucoma, hyperopia, myopia, presbyopia, refraction
- Identify and state the function and structures of the ear

- Briefly describe the location and function of the olfactory and taste receptors

  Other Systems:
- Describe the basic anatomy and physiological function of the following systems: cardiovascular system, respiratory system, digestive system, urinary system and reproductive system

III. TOPICS:

1. Structural Organization
2. Overview of Body Systems
3. Homeostasis
4. Important Terms
5. Cells and Tissue (Connective and Muscle Tissue Emphasized)
6. Integumentary System (Skin)
7. Skeletal System
8. Joints, Ligaments
9. Muscles
10. Palpation of Musculoskeletal Surface Anatomy
11. Nervous System
12. Special Senses
13. Other Systems (Cardiovascular, Respiratory, Digestive, Urinary, Reproductive)

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Lippert, Lynn. (2011). *Clinical Kinesiology and Anatomy.* (5th. ed.) F.A. Davis Company.

Lippert, Lynn. (2011). *Laboratory Manual for Clinical Kinesiology and Anatomy* (3rd. ed.) F.A. Davis Company.

Cael, Christy. (2010). *Functional Anatomy Flash Cards. Bones, Joints and Muscles*. Lippincott Williams and Wilkins.

Marieb, Elaine. (2012). *Essentials of human anatomy and physiology*. (10th ed.) Benjamin Cummings/Addison Wesley Longman, Inc.

V. EVALUATION PROCESS/GRADING SYSTEM:

Students in the OTA/PTA program must successfully complete this course with a minimum C grade (60%), for subsequent courses in the OTA/PTA program which this course is a pre-requisite, and also as partial fulfillment of the OTA/PTA diploma.

A combination of tests and assignments will be used to evaluate student achievement of the course objectives.

4 Tests	
(3 Quizzes x 12.5% each and Final Exam x 12.5%)	50%
Lab Skill Evaluations (Surface Anatomy)	50%
Total	100%

Lab Skill Evaluations: Demonstration of competence with palpation of musculoskeletal anatomy will occur in the labs with three key due date which will be explained by the professor in class (approximately mid-term, three-quarter term and end of term). For each due date/module, the first attempt will be the grade assigned. If the student achieves a grade between 60%-80%, mandatory remediation with the Lab Assistant will be assigned where the student will receive additional guided practice of the necessary items identified by the professor. If the student receives less than 60% the student will be assigned mandatory remediation with the Lab Assistant as well as a mandatory Re-test where a minimum of 60% will be required in order to pass the course. In the event of any Re-test situation, the grade for the first attempt will still hold.

1. All tests/exams are the property of Sault College.

2. Students missing any of the tests or exams because of illness or other serious reason must notify the professor **BEFORE** the test or exam. The professor reserves the right to request documents to support the student's request.

3. Those students who have notified the professor of their absence that day will be eligible to arrange an opportunity as soon as possible to write the test or exam at another time. Those students who **DO NOT NOTIFY** the professor will receive a zero for that test or exam.

4. For assignments to be handed in, the policies of the program will be followed. For assignments not handed in by the due date, the mark received will be zero. Extensions will be granted if requested in writing at least 24 hours before the due date. There will be a deduction of one percent (of final grade) per day for every school day late with the permission of an extension. This means that an extension for 5 school days (1 week), will result in 5 percentage points deducted from the final grade.

The following semester grades will be assigned to students in post-secondary courses:

Grade	Definition	Grade Point Equivalent
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F	49% and below	0.00

CR (Credit)	Credit for diploma requirements has been awarded.
S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

Note: For such reasons as program certification or program articulation, certain courses require minimums of greater than 50% and/or have mandatory components to achieve a passing grade.

It is also important to note, that the minimum overall GPA required in order to graduate from a Sault College program remains 2.0.

VI. SPECIAL NOTES:

Attendance:
Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session. *It is the departmental policy that once the classroom door has been closed, the learning process has begun. Late arrivers will not be guaranteed admission to the room.*

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.