

# SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



## COURSE OUTLINE

**COURSE TITLE:** Clinical Pathology I

**CODE NO. :** OPA130 **SEMESTER:** 2

**PROGRAM:** Occupational Therapist Assistant/Physiotherapist Assistant

**AUTHOR:** Joanna MacDougall

**DATE:** Jan 2015 **PREVIOUS OUTLINE DATED:** Jan 2014

**APPROVED:** *“Marilyn King”* *Nov. 2014*

	<b>CHAIR OF HEALTH PROGRAMS</b>	<b>DATE</b>
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**TOTAL CREDITS:** 3

**PREREQUISITE(S):** OPA103, OPA104, OPA 118,

**HOURS/WEEK:** 3

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*For additional information, please contact the Chair, Health Programs*  
*School of Health, Wellness and Continuing Education*  
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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***

<b>Check All That Apply</b>	<b>The graduate has reliably demonstrated the ability to:</b>
	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
X	participate in the effective functioning of inter-professional 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.
X	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, psycho-sociological sciences, and health conditions.
X	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:***

<b>Check All That Apply</b>	<b>The graduate has reliably demonstrated the ability to:</b>
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.
X	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.
X	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:**

The purpose of this course is to introduce the student to the clinical presentation of common disabling conditions which are managed by Occupational Therapy and Physiotherapy. The conditions emphasized will be mainly neurological, cardiorespiratory and/or endocrine in nature. Relevant anatomy/physiology will be reviewed and/or taught prior to the student gaining familiarity with the clinical presentation of the conditions, the associated relevant pathology, and the general goals of intervention of Physiotherapy and/or Occupational Therapy.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

1. Demonstrate general knowledge of relevant anatomy, physiology and neurodevelopment.

Potential Elements of the Performance:

- Identify and state normal function of the major parts of the Central Nervous System, Peripheral Nervous System, Immunologic System, Endocrine System, Cardiac System and Respiratory System
- Identify the stages of normal development of the central nervous system.

2. Demonstrate an understanding of the etiology, pathophysiology, and clinical presentation of disease, injury and disability.

Potential Elements of the Performance:

- Describe the general principles of disease and injury (alterations in normal cell function, structure, growth and differentiation; inflammation, wound healing and neoplasia) related to pathophysiology
- Describe the following conditions including the etiology, pathophysiology and clinical presentation:

***Neurological Conditions:***Alterations in the Peripheral Nervous System

- trigeminal neuralgia*
- peripheral neuritis*
- nerve entrapment syndromes:*  
*carpal tunnel syndrome, tarsal tunnel syndrome, deQuarvain's sciatica, median, ulnar and radial nerve lesions, Bell's Palsy,*
- Plexus injuries (Erb's etc.)*

Traumatic and Vascular Injuries

- upper and lower motor neuron lesions*
- head injury – epidural and subdural hematoma, cerebral concussion and contusion, skull fractures, coma, hypoxia*
- vascular disorders – cerebrovascular accident, transient ischemic attack, aneurysms*
- spinal cord injuries*

- seizure disorders, epilepsy*
- brain tumors*
- infections – encephalitis, meningitis, poliomyelitis and postpolio syndrome, Guillain-Barre syndrome*
- Reye's syndrome*

#### Congenital or Developmental Disorders

- spina bifida – meningocele, myelomeningocele, hydrocephalus
- cerebral palsy
- muscular dystrophy, spinal muscular atrophy
- Down's Syndrome
- Pervasive Development Disorders, Autism

#### Disorders of Progressive Weakness or Paralysis

- myasthenia gravis
- multiple sclerosis
- amyotrophic lateral sclerosis
- parkinson's disease
- huntington's chorea

#### Cognitive Disorders

- Learning Disorders – developmental delay, developmental coordination disorder, attention deficit disorder
- Tic Disorders – Tourette's
- Dementia – Alzheimer's disease, vascular dementia, dementia due to head trauma
- Depression/Bipolar Disorder
- Anxiety disorders
- Schizophrenia

#### ***Diseases of the Cardio-Respiratory System:***

##### Respiratory

- Pneumonia
- Chronic Obstructive Pulmonary Disease – bronchitis, asthma, emphysema
- Cystic Fibrosis
- Pulmonary Embolism, Hemoptysis, Atelectasis
- Pleurisy
- Pneumothorax, Hemothorax
- Flail Chest
- Pulmonary Tuberculosis
- Infectious Mononucleosis -Epstein-Barr Virus
- Adult Respiratory Distress Syndrome
- Lung Cancer, Hodgkin's Disease

##### Cardiac and Circulatory

- Coronary Artery Disease – angina pectoris, myocardial infarction
- Cardiac Arrest
- Hypertensive Heart Disease
- Congestive Heart Failure
- Cor Pulmonale

- Pulmonary Edema
- Valvular Heart Disease
- Emboli
- Arteriosclerosis
  - Atherosclerosis – aneurysms, phlebitis, thrombophlebitis, varicose veins, Raynaud's Disease
- Leukemias
- Lymphatic Diseases
- Hemophilia

3. Describe the general role of the endocrine system.

Potential Elements of the Performance:

- Define the following: hormone, target organ/tissue, endocrine gland, exocrine gland
- Explain how endocrine glands are regulated
- Identify specified endocrine glands on a diagram, chart or model
- Explain the function of key hormones as they relate to the musculoskeletal system

***Diseases of the Endocrine System:***

- Cystic Fibrosis
- Pituitary Gland Diseases – hyperpituitarism, hypopituitarism, dwarfism, Diabetes Insipidus
- Thyroid Gland Diseases – goiter, hyperthyroidism, hypothyroidism, cancer of the thyroid
- Adrenal Gland Diseases – Cushing's Syndrome, Addison's Disease
- Endocrine Dysfunction of the Pancreas – Diabetes Mellitus

4. Demonstrate knowledge of the clinical implications of common disabling conditions managed in Occupational Therapy and Physiotherapy.

Potential Elements of the Performance:

- Explain the effect of specific conditions on normal growth and development and/or the aging process
- Identify the impact of specific conditions on the physical, psychosocial and environmental aspects of an individual's function.

5. Demonstrate knowledge of assessment, diagnosis, intervention and prognosis of specific common disabling conditions.

Potential Elements of the Performance:

- Recognize and list appropriate assessment processes and diagnostic tests.
- List and describe appropriate treatment interventions, outcomes and prognosis.
- Explore and describe the role of the OTA and PTA in the interdisciplinary management of different conditions.

**III. TOPICS:**

1. Basic concepts of disease and injury
2. Anatomy and Physiology of the Nervous System
3. Pathophysiology of Neurological Conditions:
  - Alterations in the Peripheral Nervous System*
  - Traumatic and Vascular Injuries*
  - Congenital or Developmental Disorders*
  - Disorders of Progressive Weakness or Paralysis*
  - Cognitive Disorders*
 Pathophysiology of Cardiorespiratory System:
  - Respiratory*
  - Cardiac and Circulatory*
 Pathophysiology of Endocrine Disorders:
4. Clinical implications of the condition
5. Management of conditions (Assessment, diagnosis, treatment and prognosis)

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

Frazier, M and Drzymkowski, J. (2008). Essentials of Human Diseases and Conditions (5<sup>th</sup> H ed.), W.B. Saunders Company

Marieb, Elaine. (2006). Essentials of Human Anatomy and Physiology. (9<sup>th</sup> ed.) Benjamin Cummings/Addison Wesley Longman, Inc. (from 1<sup>st</sup> semester)

**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.**

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

<b>Module 1</b>	
Quizzes	20%
Group Presentation	10%
Unit Test	20%
	<hr/> 50%
<b>Module 2</b>	
Quizzes	20%
Group Presentation	10%
Unit Test	20%
	<hr/> 50%

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

3. Students missing any of the tests or exams (written or practical), must notify the professor **BEFORE** the test or exam. The professor reserves the right to request documents to support the student's request and to determine whether the student is eligible to write the test or exam at another time. Those STUDENTS WHO DO NOT NOTIFY the professor of their absence prior to the test or exam will receive a zero for that test or exam.
4. Supplemental Exams/Assignments are generally not provided in the OTA/PTA program. In the event of a failing grade in the course, however, there may be exceptional circumstances where a supplemental exam/assignment may be considered. In all circumstances, this decision remains at the discretion of the professor and/or coordinator.
5. 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 per day for every school day late with the permission of an extension. For example if a written extension was requested, and an extension for 5 school days (1 week) was granted, 5 percentage points will be deducted from the final grade.

The following semester grades will be assigned to students:

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
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.	

**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.*

Substitute course: information is available in the Registrar's office.

**VII. COURSE OUTLINE ADDENDUM:**

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