

I. COURSE DESCRIPTION:

The purpose of this course is to introduce the student to common disabling conditions which are managed by Occupational Therapists and Physiotherapists. The conditions emphasized will be neurological, cardiorespiratory and/or endocrine in nature. Relevant anatomy/physiology will be reviewed and/or taught prior to the student gaining familiarity with the etiology, pathophysiology, and the clinical presentation. The student will develop knowledge of the general goals of treatment as outlined by the OT/PT as they relate to each condition, as well as the specific role of the OTA/PTA in carrying out the treatment plan established by the OT/PT in each condition.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

In general, this course addresses Vocational Learning Outcomes (cross-referenced with the Program Standards) in: communication skills (1, 8P, 8O), safety (1, 8P, 8O), professional competence (1, 8P, 8O), and application skills (1, 8P, 8O). It addresses all of the Generic Skills Learning Outcomes.

Upon successful completion of this course, the student will:

1. Demonstrate a general knowledge of the basic concepts of relevant anatomy and physiology, pathophysiology and the general principles of disease and injury.

Potential Elements of the Performance:

- Describe the general principles of disease and injury (alterations in cell function, structure, growth and differentiation; inflammation, wound healing and neoplasia) sufficient to understand the pathophysiology of the conditions covered
- Identify and state the function of the major parts of the Central Nervous System, Peripheral Nervous System, Immunologic System, Endocrine System, Cardio-Respiratory System sufficient to understand the pathophysiology of the conditions covered

2. Demonstrate an understanding of common conditions, including the etiology, pathophysiology, and clinical presentation.

Potential Elements of the Performance:

- 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

meralgia paresthetica

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
 - anencephaly
 - muscular dystrophy, spinal muscular atrophy
 - Down's Syndrome
- Disorders of Progressive Weakness or Paralysis
 - myasthenia gravis
 - multiple sclerosis
 - amyotrophic lateral sclerosis
 - Parkinson's Disease
 - Huntington's Chorea
- Cognitive Disorders
 - Pervasive Development Disorders, Autism
 - 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

Endocrine Disorders:

- 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

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
- Cardiovascular Diseases
- 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. Demonstrate knowledge of the clinical implications of these conditions.
Potential Elements of the Performance:
 - For each of the conditions listed above, where appropriate, explain the effect of the condition on normal growth and development and/or the aging process
 - For each of the conditions listed above, where appropriate, assess and interpret the effect of the condition on the physical, psychosocial and environmental aspects of an individual's life
 - Integrate knowledge of each condition with the impact of the condition on the client's normal function and his/her environment
4. Demonstrate knowledge of the general goals of treatment as outlined by the OT/PT as they relate to each condition.
Potential Elements of the Performance:
 - Describe treatment for each of the conditions listed above
 - Describe the general goals of treatment by an OT/PT for each of the conditions listed above
5. Demonstrate an understanding of the specific role of the OTA/PTA in carrying out the treatment plan established by the OT/PT in each condition.
Potential Elements of the Performance:
 - Describe the role of the OTA/PTA in the OT/PT management of each of the conditions listed above

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 Endocrine Disorders:
Pathophysiology of Cardiorespiratory System:
 - Respiratory*
 - Cardiac and Circulatory*
4. Clinical implications of the condition
5. Treatment goals of the condition
6. Role of the OT/PT and OTA/PTA in each condition

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Frazier, M and Drzymkowski, J. (2008). Essentials of Human Diseases and Conditions (4th H ed.), W.B. Saunders Company

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

V. EVALUATION PROCESS/GRADING SYSTEM:

Students in the OTA/PTA program must successfully complete this course with a minimum C grade (60%) 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.

Module 1 (Respiratory, Cardiac, Lymphatic)

Quiz 5%

Group Presentation 15%

Test 30%

Module 2 (Endocrine, Neurological)

Quiz 5%

Individual Assignment 15%

Test 30%

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%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	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:

Mid Term grades are provided in theory classes and clinical/field placement experiences. Students are notified that the midterm grade is an interim grade and is subject to change.

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 form part of this course outline.