



**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 conditions, the associated pathology, the course of the condition and the intervention provided by a Physiotherapist and/or Occupational Therapist. The student will be able to recognize the clinical presentation of the specific conditions covered in the class.

**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

***Immunologic Diseases and Conditions:***Immunodeficiency Diseases

- Acquired Immunodeficiency Syndrome

Autoimmune Diseases

- Collagen Diseases – Systemic Lupus Erythematosus, Scleroderma, Sjogren's Syndrome, Rheumatoid Arthritis, Juvenile Rheumatoid Arthritis
- Vasculitis

***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 Immunologic Diseases and Conditions:
  - Immunodeficiency Diseases*
  - Autoimmune Diseases*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. (2004). Essentials of Human Diseases and Conditions (4<sup>th</sup> H ed.), W.B. Saunders Company

Garrison, S. (2003). Handbook of Physical Medicine and Rehabilitation Basics. (2<sup>nd</sup> ed.). Lippincott.

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%) 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.
  - Quizzes (12 x 5% each) =60%
  - Assignment #1 (Research) = 15%
  - Assignment #2 (Presentation) = 10%
  - Assignment #3 (Interview/Case Study) 15%
2. All tests/exams are the property of Sault College.
3. 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.
4. 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.
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. This means that if you requested an extension for 5 school days (1 week), 5 percentage points will be deducted from the final grade.

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

<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.	

**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:

### Disability Services:

If you are a student with a disability (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Disability Services office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

### Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Communication:

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in the *Student Code of Conduct*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course outline amendments:

The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

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

**VII. PRIOR LEARNING ASSESSMENT:**

Students who wish to apply for advance credit transfer (advanced standing) should obtain an Application for Advance Credit from the program coordinator (or the course coordinator regarding a general education transfer request) or academic assistant. Students will be required to provide an unofficial transcript and course outline related to the course in question.

Credit for prior learning will also be given upon successful completion of a challenge exam or portfolio.