



**I. COURSE DESCRIPTION:**

The purpose of this course is to provide the student with basic skills performed by a PTA. The emphasis will be on therapeutic exercise, mobility and ambulation. The rationale for and use of therapeutic exercise will be studied in depth. The student will gain the necessary skills to implement therapeutic exercise as prescribed by and under the supervision of a Physiotherapist. Lab sessions will provide students with the opportunity to practice handling skills related to therapeutic exercise, joint motion, bed mobility, transfers and ambulation.

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

In general, this course addresses Vocational Learning Outcomes (cross-referenced with the MTCU Program Standards) in: communication skills (1, 2, 8P, 9P, 10P, 11P, 12P, safety (1, 2, 4, 8P, 9P, 10P, 11P, 12P), professional competence (1, 2, 4, 5, 7, 8P, 9P, 10P, 11P, 12P), and application skills (1, 2, 4, 8P, 9P, 10P, 11P 12P). It addresses all of the Generic Skills Learning Outcomes.

Upon successful completion of this course, the student will:

1. Demonstrate an understanding of the role of the PT and PTA in the development and implementation of the treatment plan.  
Potential Elements of the Performance:
  - Identify the role of the Registered Physiotherapist in the initial and ongoing assessment of a client's condition and the implementation and monitoring of a treatment plan
  - Identify the role of the Physiotherapist Assistant in assisting the Registered Physiotherapist to implement and monitor the treatment plan
  
2. Demonstrate knowledge of and apply the basic physiological effects of exercise.  
Potential Elements of the Performance:
  - Define "Therapeutic Exercise" and describe aspects of Physical Function (balance, cardiopulmonary fitness, coordination, flexibility, mobility, muscle performance, neuromuscular control, postural control and stability)
  - Identify common physical impairments managed with therapeutic exercise
  - Identify different types of therapeutic exercise interventions aerobic conditioning, muscle performance (strength, power, endurance), stretching, neuromuscular control, postural control, stabilization, balance, relaxation, breathing, task-specific functional training
  - Explain the benefits and purposes of the different types of therapeutic exercise interventions and the environments where these activities may take place
  - Define and demonstrate different types of exercise: passive, active, active assistive, resistive (isometric, isotonic, isokinetic, eccentric and concentric)

3. Demonstrate knowledge and skill in the implementation, maintenance and monitoring of therapeutic exercise programs prescribed by and under the supervision of the Physiotherapist.

Potential Elements of the Performance:

- Recognize progression in exercise routines and explain the risks of over-loading or under-loading the client's exercises
- Describe and demonstrate functional activities that may be used to increase strength
- Demonstrate skill in maintaining a Range of Motion program established by a Registered Physiotherapist
- Demonstrate skill in implementing and monitoring a general strengthening and range of motion program established by a Registered Physiotherapists
- Describe the use of springs and slings
- Describe how to reinforce the therapists instructions (practice alternate ways of teaching the same exercise)
- Describe and demonstrate competence in the operation, care and maintenance of equipment such as mobility aids, exercise equipment, assessment tools etc.

4. Demonstrate skill in observing and reporting any changes in clients' progress, to the Physiotherapist, required for the safe application of therapeutic exercise.

Potential Elements of the Performance:

- recognize changes in behaviour patterns: describe signs of distress and identify the actions to be taken (for example, changes in colour, breathing patterns, incontinence)
- Identify variances from expected patient performance in exercise completion and ambulation and report these accurately to the supervising Physiotherapists (respiratory distress, complaints of pain, non-compliance, difficult patients)
- Describe common data measurement methods used in gathering and reporting to the Physiotherapist and demonstrate how to record data correctly

5. Demonstrate knowledge of and describe contraindications, precautions, and safety issues in the application of therapeutic exercise.

Potential Elements of the Performance:

- Identify precautions/contraindications to therapeutic exercise

6. Demonstrate skill in the education/instruction of therapeutic exercise to individuals and groups.

Potential Elements of the Performance:

- Under the supervision of a Registered Physiotherapist, modify appropriately the acquired skills according to the needs of the individual, group or the setting
- Under the supervision of a Registered Physiotherapist, structure and lead a group exercise class

7. Demonstrate skill in the safe use of assistive devices, transfer techniques and bed mobility in clinical situations.

Potential Elements of the Performance:

- Explain the benefits and purpose of mobility
- Identify and demonstrate assistive devices and equipment used in exercise programs/facilitation techniques
- Identify and demonstrate levels of assistance and safety procedures that may be required for therapeutic activities and forms of mobility (shoes, surfaces, risks of falling, client's with IV's, ostomy bags, catheters etc.)
- Explain the difference between gait re-education, walking to increase endurance, and walking to maintain functional ability and identify the items to be observed in each of these instances
- Demonstrate skill in assisting with ambulation
- Identify care/consideration of safely portering a client: safe transfers; taking and giving verbal report; monitoring client responses;
- Identify ambulatory aids, levels of weight bearing and environmental and architectural risk factors to ambulation (decreased vision, balance and declining memory); Note modifications for disabling conditions;
- Explain and demonstrate appropriate selection, fit and adjustment of crutches, canes, walkers, braces, orthotics
- Explain and demonstrate preventative exercises (ie. For DVT)
- Explain and demonstrate how to teach crutch walking – various weightbearing status, including ascending and descending stairs
- Describe how to reinforce the therapists instructions (practice alternate ways of teaching the same thing)
- Demonstrate basic bed mobility handling skills
- Describe and demonstrate the safe use, including proper body mechanics, of various transfers and lifts (sliding boards, 1 person, 2 person, mechanical); their functional sequences and assistive devices for their safe completion
- Appropriately select and perform safe basic transfers
- Describe and safely demonstrate use of a mechanical lift
- Observe and recognize significant departures from the expected patterns in patient response to exercise and ambulation, and report them accurately to the Physiotherapist

8. Demonstrate and apply knowledge related to the assessment of joint movement.

Potential Elements of the Performance:

- Define and describe goniometry
- Explain the essential components of reliable, valid goniometry
- Identify normal range of movement for most synovial joints
- Describe and demonstrate measurement of joint range of motion of synovial joints

9. Demonstrate safe and appropriate handling skills for different disabling conditions.

Potential Elements of the Performance:

- Demonstrate skill in proper positioning and appropriate draping of patients
- Identify and describe types of muscle tone and the effects of improper handling techniques on their presence
- Under the direction of a Registered Physiotherapist, adapt the activity and the handling for clients with specific conditions, and for elderly and young clients

10. Demonstrate an understanding of cardio-respiratory conditions and the role of the PT and PTA in the physiotherapy management of these conditions.

Potential Elements of the Performance:

- Identify the impairments of common cardio-respiratory conditions and the goals of treatment in the Physiotherapy management of these
- Describe the application of therapeutic exercise and mobility as it relates to each condition and the Physiotherapy management of each condition
- Define and demonstrate: postural drainage, deep breathing and coughing, manual percussion, mechanical vibration, breathing exercises (diaphragmatic, pursed lip)
- Recognize signs of respiratory distress, when and to whom to report this to, and appropriate management by the PTA
- Recognize changes in sputum production and when to report this to the Registered Physiotherapist

11. Demonstrate an understanding of some of the clerical aspects of physiotherapy including, the layout of a physiotherapy record, common abbreviations used in physiotherapy and standard booking and billing practices in out-patient physiotherapy clinics.

Potential Elements of the Performance:

- Describe a physiotherapy record using the SOAP format and the components of a SOAP note
- Describe typical appointment booking practices in out-patient physiotherapy clinics.
- Describe a variety of billing practices in out-patient physiotherapy clinics.
- Demonstrate familiarity with common terminology and abbreviations used by Registered Physiotherapists.

### III. TOPICS:

1. Aspects of Physical Function
2. Therapeutic Exercise Interventions
  - Range of Motion
  - Muscle Performance (strength, power, resistance)
  - Aerobic Conditioning
  - Stretching
  - Neuromuscular Control
  - Postural Control and Stability

3. Types of Exercise: passive, active, active assistive resistive (isometric, isotonic – concentric, eccentric, isokinetic)
4. Positioning and Draping Techniques
5. Bed Mobility
6. Transfers and Lifts
7. Assistive Devices used in Ambulation
8. Assessment of Joint Movement
9. Cardio-Respiratory Function
10. Contraindications, precautions and safety issues
11. Observing and Reporting
12. Clerical Aspects

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

Kisner and Colby. (2007) Therapeutic Exercise. Foundations and Techniques (5<sup>th</sup> edition). F.A. Davis Company.

Lippert, L. (2011) Clinical Kinesiology for Physical Therapist Assistants (5<sup>th</sup> ed.). F. A. Davis Company

Norkin, C.C., (2003). Measurement of Joint Motion: A Guide to Goniometry. (3<sup>rd</sup> ed.). F. A. Davis Company.

Students must purchase a goniometer (available at the bookstore).

**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.

**Course Evaluation:**

<b>Term Assignment</b>	<b>10%</b>
<b>Quizzes (8 x 2.5% each)</b>	<b>20%</b>
<b>Midterm Exam - Written</b>	<b>25%</b>
<b>Midterm Exam - Practical</b>	<b>10%</b>
<b>Final Exam Written</b>	<b>25%</b>
<b><u>Final Exam – OSCE (assistive ambulation 5% and chest physio5%)</u></b>	<b><u>10%</u></b>
<b>Total</b>	<b>100%</b>

**OSCE: Objective Structured Clinical Examination - a practical demonstration of competence - this involves evaluation of each student’s performance of certain clinical skills; practical demonstrations will be assessed by the professor; the goal is to provide immediate feedback (verbal and/or written); the grade assigned for the skill will be reflected in the grade of the course as indicated above in the ‘course evaluation’; AND students must demonstrate minimum competence ( level 4) in each skills evaluated (see grading schema below); For students who do not achieve this level of competence, remediation activities and re-evaluation will be required in order to be eligible for Fieldwork Placement in Semester 3.**

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. 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.
5. 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.

The following semester grades will be assigned to students in postsecondary 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	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 arrivals 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.