



**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, 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 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 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

9. 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
10. 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. Cardio-Respiratory Function
9. Contraindications, precautions and safety issues
10. Observing and Reporting
11. Clerical Aspects

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

Kisner and Colby. (2002) Therapeutic Exercise. Foundations and Techniques (4<sup>th</sup> edition). F.A. Davis Company.

Lippert, L. Clinical Kinesiology for Physical Therapist Assistants (3<sup>rd</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.

**V. EVALUATION PROCESS/GRADING SYSTEM:**

1. A combination of tests and assignments will be used to evaluate student achievement of the course objectives. A description of the evaluation methods follows and will be discussed by the teacher within the first two weeks of class.
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.
6. A supplemental exam may be written by students who meet the following criteria. The student must achieve at least a grade of 45% in the course. The student must have attended at least 80% of the classes. The supplemental exam will then cover the entire course and will be worth 100% of the student's final mark.

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%	
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:** 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:

### Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs 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.

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 advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

**VIII. DIRECT CREDIT TRANSFERS:**

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.