

I. COURSE DESCRIPTION:

This course will provide the student with the knowledge and skills required to safely and effectively apply common therapeutic modalities used in physiotherapy and occupational therapy. Theory of less common therapeutic modalities will be introduced to the student. Within the scope of the OTA/PTA, the student will develop competency in the documentation of the application of therapeutic modalities.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

This course addresses Vocational Learning Outcomes (cross-referenced with the MTCU Program Standards) in: communication skills (1, 2, 6, 8P, 8O, 9P, 12P, 12O), safety (1, 2, 4, 8P, 9P, 12P, 12O), professional competence (1, 2, 4, 5, 6, 7, 8P, 9P, 12P, 12O), documentation skills (1, 4, 5, 6) and application skills (1, 2, 4, 6, 8P, 9P, 12P, 12O). It addresses all of the Generic Skills Learning Outcomes.

Upon successful completion of this course, the student will:

1. Demonstrate an understanding and application of cellular biology.
 - Potential Elements of the Performance:
Identify basic cell structure and function including membrane transport mechanisms, electrical properties and cellular metabolism
 - Identify the four categories of body tissues
 - Identify the events of cellular injury and adaptations
 - Identify the common causes of inflammation and factors which influence recovery (physical and psychological)
 - List and describe the three phases of healing: inflammatory phase, proliferation phase, maturation phase
2. Demonstrate an understanding of mechanisms and theories of pain.
 - Potential Elements of the Performance:
Recognize common attributes of acute and chronic pain
 - Recognize the gate control theory of pain versus opiate mediated control of pain
3. Demonstrate appropriate positioning and draping skills as well as accuracy related to locating relevant surface anatomy required to apply therapeutic agents.
 - Potential Elements of the Performance:
Identify with accuracy relevant bony and soft tissue landmarks on self and on another person
 - Demonstrate appropriate positioning and draping skills while identifying surface anatomy and applying therapeutic agents

4. Demonstrate an understanding of the roles/responsibilities of the OTA/PTA in the application of physical agents.
Potential Elements of the Performance:
 - Demonstrate professional behaviour expected of an OTA/PTA while carrying out components of a treatment plan that includes the delivery of physical agents
 - Perform the roles/responsibilities of the OTA/PTA in the application of physical agents
 - Observe and recognize significant departures from the expected patterns of patient response to the physical agents and report immediately to the Registered Physiotherapist

5. Demonstrate knowledge and skills related to body mechanics.
Potential Elements of the Performance:
 - Perform proper body mechanics during the set up and application of physical agents

6. Demonstrate an understanding of the effects, benefits and indications for a variety of physical agents.
Potential Elements of the Performance:
 - Identify the role of physical agents in the physiotherapy management of motion restrictions and muscle tone
 - Identify the effects, benefits and indications for a variety of physical agents, including but not limited to:
Thermal Agents – Ice Packs, Ice Massage, Hot Packs, Paraffin, Whirlpool
Ultrasound
Electrical Current – TENS, NMES, Interferential
Traction and Compression

7. Demonstrate knowledge of and describe the contraindications and precautions of various physical agents.
Potential Elements of the Performance:
 - Identify the contraindications and precautions of a variety of physical agents, including but not limited to those listed above
 - Identify and implement common precautions (positioning, interfaces, monitoring during procedures, aseptic procedures)
 - Recognize an adverse reaction and react appropriately

8. Demonstrate the skills required to competently apply various physical agents, as required by a supervising Physiotherapist or Occupational Therapist.
Potential Elements of the Performance:
 - Safely and accurately carry out tasks related to the application of specific physical agents under the supervision of a Registered Physiotherapist or Occupational Therapist
 - Recognize liability issues and reimbursement issues that may arise with the application of these modalities

9. Demonstrate competence in the care and maintenance of all equipment.
Potential Elements of the Performance:
- Correctly assemble and prepare for the application of each physical agent as directed by the Registered Physiotherapist/Occupational Therapist, and the necessary clean up
 - Explain and demonstrate an understanding of the care and maintenance of equipment, including physical agents (also include preventative maintenance plan and follow-up)
10. Demonstrate documentation skills required of the OTA/PTA related to the application of therapeutic modalities.
Potential Elements of the Performance:
- Accurately document the application of all physical agents, making note of any significant departures from the expected patterns of patient response, and any actions taken, and report immediately to the Registered Physiotherapist/Occupational Therapist
11. Demonstrate the ability to communicate to and reassure patients/clients the effects, benefits and indications/contraindications for various physical agents.
Potential Elements of the Performance:
- Describe in lay terms the effects and benefits of the physical agents listed above.
 - List and describe in lay terms the indications of the physical agents listed above
 - Appropriately inquire (in lay terms) regarding contraindications of the physical agents listed above
 - Reassure patients regarding any feelings of anxiety regarding the receipt of the physical agents listed above

III. TOPICS:

Landmarking Surface Anatomy
Cellular Biology and Cellular Injury
Tissues, Inflammation and Wound Healing
Pain Theories
Positioning and Draping
Roles/responsibilities of the OTA/PTA
Body Mechanics
Effects, Benefits and Indications of Physical Agents
Contraindications and Precautions
Safety and Liability
Care and maintenance of equipment
Documentation and Communication

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Marieb, Elaine. (2009). Essentials of Human Anatomy and Physiology. (9th ed.) Benjamin Cummings/Addison Wesley Longman, Inc. (from 1st semester)

Readings and Lab Manual (provided in class)

Students must purchase a 2 or 3 inch tensor bandage. (available in most pharmacies and dollar store)

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. Course Evaluation

Online Tests (5 x 2.5% each)	15%
Written Tests(3 x 15% each)	15%
OSCEs (3 x 10% each)	15%
Surface Anatomy Tests (3 x 5% each)	10%
Total	100%

OSCEs (including surface anatomy) are mandatory - a minimum 60% grade in each test is required to pass the course. Make-up tests are permitted **ONLY** for extenuating circumstances and are at the discretion of the professor.

All tests/exams are the property of Sault College.

- 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.
- Online tests must be completed during the availability period set on LMS. Students are expected to access these tests on their own out of class time and are responsible for knowing the availability period for each test, which are posted on LMS. Students are responsible for having access to appropriate computer technology to complete the online tests.
- 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.	

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.