



## COURSE OUTLINE: OPA109 - PHYSICAL AGENTS

Prepared: Joanna MacDougall

Approved: Bob Chapman, Dean, Health

<b>Course Code: Title</b>	OPA109: PHYSICAL AGENTS
<b>Program Number: Name</b>	3022: OCCUP/PHYSIO/ASSIST
<b>Department:</b>	OTA/PTA ASSISTANT
<b>Academic Year:</b>	2024-2025
<b>Course Description:</b>	The purpose of this course is to provide the student with the opportunity to develop the ability required to safely and effectively apply therapeutic modalities used in physiotherapy and occupational therapy. The student will be expected to demonstrate knowledge and accuracy regarding surface anatomy as it relates to the application of therapeutic modalities. They will be expected to demonstrate competence in the areas of safety, patient and equipment set up and implementation of specific therapeutic modalities. The importance of effective instruction, cuing and provision of feedback to the client will be emphasized and practiced. The student will demonstrate the ability to perform aspects of documentation of the application of therapeutic modalities within the scope of the OTA and/or PTA.
<b>Total Credits:</b>	3
<b>Hours/Week:</b>	3
<b>Total Hours:</b>	42
<b>Prerequisites:</b>	OPA101, OPA116, OPA117, OPA119, OPA120
<b>Corequisites:</b>	There are no co-requisites for this course.
<b>Vocational Learning Outcomes (VLO's) addressed in this course:</b>	<b>3022 - OCCUP/PHYSIO/ASSIST</b>
<b>Please refer to program web page for a complete listing of program outcomes where applicable.</b>	VLO 1 Communicate appropriately and effectively, through verbal, nonverbal, written and electronic means, with clients, their significant others, occupational therapists, physiotherapists, and members of the interdisciplinary health care team and others.
	VLO 2 Participate in the effective functioning of interdisciplinary health care teams to optimize client physical and occupational functions.
	VLO 3 Establish, develop, maintain, and conclude client-centred, therapeutic relationships.
	VLO 4 Promote a safe environment that prevents or minimizes potential physical or mental harm to the client, therapist assistant and others.
	VLO 5 Practice in a legal, ethical, and professional manner within the role of a therapist assistant.
	VLO 6 Document client records in a thorough, objective, accurate, and timely manner within the role of the therapist assistant.
	VLO 7 Engage in reflective practice and ongoing professional development activities to maintain and enhance competence.
	VLO 8 Perform the roles and responsibilities of the therapist assistant effectively through the application of relevant knowledge of health sciences, psychosocial sciences, health conditions, resource management, and clinical procedures.
	VLO 9 Contribute to the occupational therapist's or physiotherapist's assessment of the



	client and the development, implementation and modification of intervention/treatment plans.								
	VLO 11 Maximize the client's physical function by accurately and safely implementing the interventions, and related tasks under the direction and supervision of the physiotherapist.								
<b>Essential Employability Skills (EES) addressed in this course:</b>	<p>EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.</p> <p>EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication.</p> <p>EES 3 Execute mathematical operations accurately.</p> <p>EES 4 Apply a systematic approach to solve problems.</p> <p>EES 5 Use a variety of thinking skills to anticipate and solve problems.</p> <p>EES 6 Locate, select, organize, and document information using appropriate technology and information systems.</p> <p>EES 7 Analyze, evaluate, and apply relevant information from a variety of sources.</p> <p>EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others.</p> <p>EES 10 Manage the use of time and other resources to complete projects.</p> <p>EES 11 Take responsibility for ones own actions, decisions, and consequences.</p>								
<b>Course Evaluation:</b>	<p>Passing Grade: 60%, C</p> <p>A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.</p>								
<b>Other Course Evaluation &amp; Assessment Requirements:</b>	As partial fulfillment of the OTA & PTA diploma, Performance Based Evaluations require a minimum of 60% in each category of performance.								
<b>Books and Required Resources:</b>	OER provided by Professor								
<b>Course Outcomes and Learning Objectives:</b>	<table border="1"> <thead> <tr> <th>Course Outcome 1</th> <th>Learning Objectives for Course Outcome 1</th> </tr> </thead> <tbody> <tr> <td>1. Demonstrate an understanding and application of cellular biology.</td> <td>           1.1 Identify basic cell structure and function including membrane transport mechanisms, electrical properties and cellular metabolism.            1.2 Identify the four categories of body tissues.            1.3 Identify the events of cellular injury and adaptations.            1.4 Identify the common causes of inflammation and factors which influence recovery (physical and psychological).            1.5 List and describe the three phases of healing: inflammatory phase, proliferation phase, maturation phase.         </td> </tr> <tr> <th>Course Outcome 2</th> <th>Learning Objectives for Course Outcome 2</th> </tr> <tr> <td>2. Demonstrate an understanding of mechanisms and theories of pain.</td> <td>           2.1 Recognize common attributes of acute and chronic pain.            2.2 Recognize the gate control theory of pain versus opiate mediated control of pain.         </td> </tr> </tbody> </table>	Course Outcome 1	Learning Objectives for Course Outcome 1	1. Demonstrate an understanding and application of cellular biology.	1.1 Identify basic cell structure and function including membrane transport mechanisms, electrical properties and cellular metabolism. 1.2 Identify the four categories of body tissues. 1.3 Identify the events of cellular injury and adaptations. 1.4 Identify the common causes of inflammation and factors which influence recovery (physical and psychological). 1.5 List and describe the three phases of healing: inflammatory phase, proliferation phase, maturation phase.	Course Outcome 2	Learning Objectives for Course Outcome 2	2. Demonstrate an understanding of mechanisms and theories of pain.	2.1 Recognize common attributes of acute and chronic pain. 2.2 Recognize the gate control theory of pain versus opiate mediated control of pain.
Course Outcome 1	Learning Objectives for Course Outcome 1								
1. Demonstrate an understanding and application of cellular biology.	1.1 Identify basic cell structure and function including membrane transport mechanisms, electrical properties and cellular metabolism. 1.2 Identify the four categories of body tissues. 1.3 Identify the events of cellular injury and adaptations. 1.4 Identify the common causes of inflammation and factors which influence recovery (physical and psychological). 1.5 List and describe the three phases of healing: inflammatory phase, proliferation phase, maturation phase.								
Course Outcome 2	Learning Objectives for Course Outcome 2								
2. Demonstrate an understanding of mechanisms and theories of pain.	2.1 Recognize common attributes of acute and chronic pain. 2.2 Recognize the gate control theory of pain versus opiate mediated control of pain.								

<b>Course Outcome 3</b>	<b>Learning Objectives for Course Outcome 3</b>
3. Demonstrate effective, professional patient preparation for the application of physical agents.	3.1 Identify with accuracy relevant bony and soft tissue landmarks on self and on another person. 3.2 Demonstrate appropriate positioning and draping skills while identifying surface anatomy and applying therapeutic agents required to apply therapeutic agents. 3.3 Demonstrate the ability to verbally prepare a patient for a planned intervention that involves physical agents by explaining the purpose of the physical agent and gaining verbal consent.
<b>Course Outcome 4</b>	<b>Learning Objectives for Course Outcome 4</b>
4. Demonstrate an understanding of the roles/responsibilities of the OTA/PTA in the application of physical agents.	4.1 Demonstrate professional behaviour expected of an OTA/PTA while carrying out components of a treatment plan that includes the delivery of physical agents. 4.2 Perform the roles/responsibilities of the OTA/PTA in the application of physical agents. 4.3 Observe and recognize significant departures from the expected patterns of patient response to the physical agents and report immediately to the Registered Physiotherapist.
<b>Course Outcome 5</b>	<b>Learning Objectives for Course Outcome 5</b>
5. Demonstrate knowledge and skills related to body mechanics.	5.1 Perform proper body mechanics during the set up and application of physical agents.
<b>Course Outcome 6</b>	<b>Learning Objectives for Course Outcome 6</b>
6. Demonstrate an understanding of the effects, benefits and indications for a variety of physical agents.	6.1 Identify the role of physical agents in the physiotherapy management of motion restrictions and muscle tone. 6.2 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, Contrast Baths, Ultrasound, Electrical Current: TENS, NMES, Interferential, Shock wave, Traction and Compression Bandaging.
<b>Course Outcome 7</b>	<b>Learning Objectives for Course Outcome 7</b>
7. Demonstrate knowledge of and describe the contraindications and precautions of various physical agents.	7.1 Identify the contraindications and precautions of a variety of physical agents, including but not limited to those listed above. 7.2 Identify and implement common precautions (positioning, interfaces, monitoring during procedures, aseptic procedures). 7.3 Recognize an adverse reaction and react appropriately.
<b>Course Outcome 8</b>	<b>Learning Objectives for Course Outcome 8</b>
8. Demonstrate the skills required to competently apply various physical agents, as required by a supervising Physiotherapist or Occupational Therapist.	8.1 Safely and accurately carry out tasks related to the application of specific physical agents under the supervision of a Registered Physiotherapist or Occupational Therapist. 8.2 Recognize liability issues and reimbursement issues that may arise with the application of these modalities.
<b>Course Outcome 9</b>	<b>Learning Objectives for Course Outcome 9</b>
9. Demonstrate competence	9.1 Correctly assemble/set up, prepare equipment, put away

	in the setup, care and maintenance of equipment.	and clean for of each physical agent. 9.2 Explain and demonstrate an understanding of the care and maintenance of equipment, including physical agents (also include preventative maintenance plan and follow-up).
	<b>Course Outcome 10</b>	<b>Learning Objectives for Course Outcome 10</b>
	10. Demonstrate documentation skills required of the OTA/PTA related to the application of therapeutic modalities.	10.1 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.
	<b>Course Outcome 11</b>	<b>Learning Objectives for Course Outcome 11</b>
	11. Demonstrate the ability to communicate to and reassure patients/clients the effects, benefits and indications/contraindications for various physical agents.	11.1 Describe in lay terms the effects and benefits of the physical agents listed above. 11.2 List and describe in lay terms the indications of the physical agents listed above. 11.3 Appropriately inquire (in lay terms) regarding contraindications of the physical agents listed above. 11.4 Reassure patients regarding any feelings of anxiety regarding the receipt of the physical agents listed above.

**Evaluation Process and Grading System:**

Evaluation Type	Evaluation Weight
1. Lab Activity	10%
2. Tests/Quizzes	45%
3. Performance Based Evaluations	45%

**Date:**

November 26, 2024

**Addendum:**

Please refer to the course outline addendum on the Learning Management System for further information.