

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



**SAULT
COLLEGE**

COURSE OUTLINE

COURSE TITLE: Physical Agents

CODE NO. : OPA109 **SEMESTER:** 2

PROGRAM: Occupational Therapist Assistant/Physiotherapist Assistant

AUTHOR: Joanna MacDougall

DATE: Jan 2017 **PREVIOUS OUTLINE DATED:** Jan2016

APPROVED: *“Marilyn King”* *Nov. 2016*

| | FOR CHAIR, HEALTH PROGRAMS | DATE |
|-------------------------|--|-------------|
| TOTAL CREDITS: | 3 | |
| PREREQUISITE(S): | OPA101, OPA103, OPA104, OPA116, OPA 117, OPA 118 | |
| HOURS/WEEK: | 3 | |

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For additional information, please contact the Chair, Health Programs

School of Health and Community Services.

(705) 759-2554, Ext. 2689

This course addresses the following Vocational Learning Outcomes, Essential Employability Skills and General Education Requirements in the approved program standard (2008) for Occupational Therapist Assistant and Physiotherapist Assistant program of instruction leading to an Ontario College Diploma delivered by the Ontario Colleges of Applied Arts and Technology. (MTCU code 51502)

Vocational Learning Outcomes

| Check All That Apply | The graduate has reliably demonstrated the ability to: |
|-----------------------------|--|
| X | communicate appropriately and effectively, through verbal, nonverbal, written and electronic means, with clients, their families and significant others, occupational therapists, physiotherapists, other health care providers and others within the role of the therapist assistant |
| X | participate in the effective functioning of interprofessional health care teams within the role of the therapist assistant. |
| X | establish, develop, maintain, and bring closure to client-centred, therapeutic relationships within the role of the therapist assistant. |
| X | ensure personal safety and contribute to the safety of others within the role of the therapist assistant. |
| X | practice competently in a legal, ethical, and professional manner within the role of the therapist assistant. |
| X | document and complete client records in a thorough, objective, accurate, and nonjudgmental manner within the role of the therapist assistant. |
| X | develop and implement strategies to maintain, improve, and promote professional competence within the role of the therapist assistant. |
| X | perform effectively within the roles and responsibilities of the therapist assistant through the application of relevant knowledge of health sciences, psychosociological sciences, and health conditions. |
| X | perform functions common to both physiotherapy and occupational therapy practices that contribute to the development, implementation and modification of intervention/treatment plans, under the supervision of and in collaboration with the occupational therapist and/or physiotherapist. enable the client's occupational performance* by contributing to the development, implementation, and modification of intervention/treatment plans, under the supervision of and in collaboration with the occupational therapist. |
| X | enable the client's optimal physical function by contributing to the development, implementation, and modification of intervention/treatment plans, under the supervision of and in collaboration with the physiotherapist. |

Essential Employability Skills:

| Check All That Apply | The graduate has reliably demonstrated the ability to: |
|-----------------------------|---|
| X | communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. |
| X | respond to written, spoken, or visual messages in a manner that ensures effective communication. |
| | execute mathematical operations accurately. |
| | apply a systematic approach to solve problems. |
| | use a variety of thinking skills to anticipate and solve problems. |
| X | locate, select, organize, and document information using appropriate technology and information systems. |
| X | analyze, evaluate, and apply relevant information from a variety of sources. |
| | show respect for the diverse opinions, values, belief systems, and contributions of others. |
| | interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals. |
| X | manage the use of time and other resources to complete projects. |
| X | take responsibility for one's own actions, decisions, and consequences. |

General Education Requirements are addressed for the objective of Understanding Technology.

I. COURSE DESCRIPTION:

This 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 competence in the areas of safety, patient and equipment set up and implementation of specific therapeutic modalities, as well as effective instruction, cuing and providing feedback of the client. The student will also be expected to demonstrate knowledge and accuracy regarding surface anatomy as it relates to the application of therapeutic modalities. 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.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

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 effective, professional patient preparation for the application of physical 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 required to apply therapeutic agents.
 - 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

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, Contrast Baths
Ultrasound
Electrical Current – TENS, NMES, Interferential
Traction and Compression Bandaging

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 setup, care and maintenance of equipment.
Potential Elements of the Performance:
- Correctly assemble/set up, prepare equipment, put away and clean for of each physical agent
 - 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)

All other reading and/or a Lab Manual will be 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%), for subsequent courses in the OTA & PTA program which this course is a pre-requisite, and also as partial fulfillment of the OTA & PTA diploma. Performance Based Evaluations require a minimum of 60% in each category of performance.

1. Course Evaluation

| | |
|---|------------|
| Term Project(s) | 10% |
| Quizzes | 10% |
| 3 Written Tests | 35% |
| 3 Performance Based Evaluations – Physical Agents | 30% |
| <u>3 Lab Demonstrations – Surface Anatomy</u> | <u>15%</u> |
| Total | 100% |

Remediation for practical skills is mandatory for any single competency score of less than 3/5 and for patient safety related issues.

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.

4. 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 | 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. | |

If a faculty member determines that a student is at risk of not being successful in their academic pursuits and has exhausted all strategies available to faculty, student contact information may be confidentially provided to Student Services in an effort to offer even more assistance with options for success. Any student wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

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 arrivers will not be guaranteed admission to the room.*

If a faculty member determines that a student is at risk of not being successful in their academic pursuits and has exhausted all strategies available to faculty, student contact information may be confidentially provided to Student Services in an effort to offer even more assistance with options for success. Any student wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

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

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal and LMS form part of this course outline.