

I. COURSE DESCRIPTION:

The purpose of this course is to provide the student with basic skills performed by an OTA. The emphasis will be on the management of musculoskeletal conditions, particularly the use of assistive devices, splints and computers used to maximize independent function. Lab sessions will familiarize students with the array of potential supplies, their correct use and application and the safe fabrication and application of these devices. The student will gain the necessary skills to assist in the construction of assistive devices and splints as directed by an Occupational Therapist. In addition, the application of joint range of motion and muscle strength, joint protection and work simplification will be covered. The student will become familiar with ADL/IADL considerations, accessibility issues and vocational rehabilitation.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

In general, this course addresses Learning Outcomes of the Program Standards in: communication skills (1,2,8O – 12O), interpersonal skills (1,2,7,9O –12O), safety (1,2,4,8O – 12O), professional competence (1,2,4,5,6,8O -12O), documentation skills (1,4,5) and application skills (1,2,4,8O – 12O). It addresses all of the Generic Skills Learning Outcomes.

Upon successful completion of this course, the student will:

1. **Demonstrate an understanding of the clinical presentation of common musculoskeletal conditions managed in an Occupational Therapy setting.**

Potential Elements of the Performance:

- Discuss the various types and levels of **amputations**, postoperative complications and the role of rehabilitation in helping the client regain functional independence in ADL
- Discuss causes, signs and symptoms associated with **back injuries** Describe major **arthritic diseases** and discuss common signs and symptoms, challenges with ADL and effective treatment interventions
- Review common **lower extremity fractures and joint arthroplasty** and discuss the role of rehabilitation in helping the client regain independence in ADL
- Review measures of burn injury severity, medical management for different types of **burns** and issues related to scar management
- Review common causes and types of **acute hand injuries**, postoperative complications and the role of rehabilitation in maximizing functional ability of the hand
- Discuss the psychosocial aspect of physical dysfunction

2. Demonstrate an understanding of the role of the OT and the OTA in the Occupational Therapy management of common musculoskeletal conditions.

Potential Elements of the Performance:

- Discuss assessments related to the following conditions
- Describe interventions provided by the OT and the OTA:
 - **Amputations**-education regarding phantom pain, training in the use of prosthetics, ADL training
 - **Back Injuries**-pain management, training in the use of assistive devices
 - **Arthritis**-joint protection techniques, splinting, modalities, exercises
 - **Joint Arthroplasty**-contraindications and precautions
 - **Burns**-wound management, prevention of deformities, maintenance of ROM and ADL training
 - **Acute Hand Injuries**-splinting following surgical intervention or acute injury , the use of modalities, evaluation of function, exercises and ADL training

3. Demonstrate skill in the education/instruction of ADL in clients with specific musculoskeletal conditions.

Potential Elements of the Performance:

- Demonstrate the ability to provide training in the areas of ADL to ensure maximum functioning
- Demonstrate confidence and skill in the training in the use of assistive devices
- Demonstrate the ability to teach clients new methods for performing ADL tasks with the use of prosthetics
- Demonstrate the ability to teach a client how to mobilize in a wheelchair

4. Demonstrate safe and appropriate handling skills in specific musculoskeletal conditions.

Potential Elements of the Performance:

- Discuss specific handling, positioning and transferring principles related to musculoskeletal conditions such as:
 - **amputations**
 - **joint arthroplasty**
 - **burns**
- Describe and practice handling, positioning and transferring techniques

5. Demonstrate an understanding and application of basic energy conservation and joint protection principles to ADLs and IADLs in clients with specific musculoskeletal conditions.

Potential Elements of the Performance:

- Review principles of energy conservation and work simplification as discussed in Semester II
- Review principles of joint protection
- Apply these principles to specific conditions, including arthritis, back injuries, amputations and joint arthroplasty
- Review the role of assistive devices/adaptive equipment in conserving energy

6. Demonstrate knowledge and skill in the selection and implementation of therapeutic activities for individual clients and groups of clients with musculoskeletal conditions under the supervision of an Occupational Therapist.

Potential Elements of the Performance:

- Demonstrate knowledge and skill related to the assessment and intervention of joint range of motion and muscle strength
- Demonstrate the ability to select and adapt treatment strategies and the ability to safely implement these strategies
- Demonstrate the ability to effectively grade activities to meet the client's abilities and enhance continued progression
- Discuss remedial vs. compensatory training for individuals with musculoskeletal disorders
- Define and discuss "Vocational Rehabilitation"

7. Demonstrate skill in observing and reporting any changes in client's progress to the Occupational Therapist.

Potential Elements of the Performance:

- Review the use of checklists and charting systems used to monitor progress with musculoskeletal conditions
- Discuss verbal and written reporting of clinical observations

8. Demonstrate an understanding of the application of a range of assistive devices, the safe use of, and maintenance of assistive devices used to maximize function in Occupational Therapy clients with musculoskeletal conditions.

Potential Elements of the Performance:

- Discuss commonly used assistive devices for the following musculoskeletal conditions:
 - **amputations**
 - **back injuries**
 - **arthritic diseases**
 - **lower extremity fractures and joint arthroplasty**
 - **burns**
 - **acute hand injuries**

9. Demonstrate an understanding of the use of splints in the Occupational Therapy management of musculoskeletal conditions.

Potential Elements of the Performance:

- Review indications for the fabrication of splints
- Discuss the role of the OTA in splinting
- Demonstrate the ability to assist in the fabrication of a splint

10. Demonstrate knowledge regarding the use of assistive technology (computers, ECU's, electric wheelchairs) to maximize function in clients with musculoskeletal conditions.

Potential Elements of the Performance:

- Discuss the role of computers in the treatment of musculoskeletal disorders
- Demonstrate general knowledge regarding the selection and use of electric wheelchairs with clients with musculoskeletal conditions
- Review the use of assistive technology devices such as environmental control units

11. Demonstrate an increased awareness of accessibility issues for clients with musculoskeletal conditions.

Potential Elements of the Performance:

- Consider various barriers and challenges regarding accessibility in the home environment and in the community
- Demonstrate knowledge and involvement in the City of Sault Ste. Marie's Accessibility Advisory Committee and Accessibility Plan
- Assist the Accessibility Advisory Committee by completing a "Barrier Identification Checklist"

III. TOPICS:

1. Common causes, symptoms and medical intervention for the following musculoskeletal conditions:
 - **amputations**
 - **back injuries**
 - **arthritic diseases**
 - **lower extremity fractures and joint arthroplasty**
 - **burns**
 - **acute hand injuries**
2. The role of the OT and OTA in providing treatment interventions for the above musculoskeletal conditions (education, therapeutic activity, observation and reporting)
3. Handling, positioning and transferring skills related to musculoskeletal conditions
4. ADL training and the use of assistive devices
5. Splinting
6. Assistive technology-computers, environmental control units, electric wheelchairs
7. Accessibility

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Early, M.B. (1998). Physical Dysfunction Practice Skills for the Occupational Therapy Assistant. St. Louis, MO: Mosby

Hirama, H. (1986). Occupational Therapy Assistant: A Primer. Baltimore, MD: CHESSE Publications, Inc.

Pierson, F. (2002). Principles and Techniques of Patient Care. (3rd. ed.) W.B. Saunders.

Hansen, R, and Atchison, B. (1999). Conditions in OT Effects on Occupational Performance. (1999).Williams & Wilkins.

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 post-secondary 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 professor and/or the Special Needs office. Visit Room E1101 or call Extension 703 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 post-secondary institutions.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. 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.