

I. COURSE DESCRIPTION:

This course will expand the student's knowledge base acquired in the course HUMAN MOVEMENT (OPA 104). The application of knowledge related to muscle, joint structure and function and the application of biomechanics to human movement throughout the lifespan. The student will be introduced to basic clinical competencies and will have the opportunity to apply the principles of normal functional movement as it relates to exercise, posture, transfers and gait. The student will develop knowledge related to abnormal movement development/patterns and skills in proper handling techniques, the use of assistive ambulation devices and the measurement of joint motion.

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, 8O, 9P, 9O, 10P, 10O), safety (1, 2, 4, 8P, 8O, 9P, 9O, 10P, 10O), professional competence (1, 2, 4, 5, 7, 8P, 8O, 9P, 9O, 10P, 10O), documentation skills (1, 4, 5) and application skills (1, 2, 4, 8P, 8O, 9P, 9O, 10P, 10O). It addresses all of the Generic Skills Learning Outcomes.

Upon successful completion of this course, the student will:

1. Demonstrate and apply knowledge and skills related to the assessment of motor development.
Potential Elements of the Performance:
 - Explain and demonstrate the normal stages of motor development and identify the implications of failure to achieve these
 - Describe key milestones used to assess motor development
2. Demonstrate and apply knowledge related to concepts of movement.
Potential Elements of the Performance:
 - Describe the clinical implications of the essential components of movement (motor, sensory, cognitive, perceptual, psychosocial, environmental) and their inter-relationship
 - Integrate knowledge of concepts of movement and joint movement through the analysis of normal functional movements (ie. ADL, walking, lifting, stairs, sports, occupational performance)
3. Demonstrate and apply knowledge and skills related to muscle and exercise physiology.
Potential Elements of the Performance:
 - Integrate knowledge of muscle and exercise physiology through the analysis of various normal functional movements
 - Identify and define tone and recognize the clinical implications of abnormal muscle tone.

4. Demonstrate and apply knowledge of normal versus abnormal postures and movement related to body alignment and positioning, transfers and lifts.

Potential Elements of the Performance:

- Describe and demonstrate normal body alignment and positioning
- Demonstrate the ability to assist and educate others regarding normal body alignment and positioning
- Identify and define impairments (such as restricted ROM, tone, balance, and cognitive status) and explain how they may affect body alignment, positioning, transfers and ambulation (with and without assistive devices)
- Identify how abnormal postures, movement and impairments may present risk factors and contraindications to the use of lifts, transfers and assistive devices for mobility

5. Demonstrate safe and purposeful handling for normal limbs.

Potential Elements of the Performance:

- Define and explain the purpose of Passive Range of Motion, Active Range of Motion, Active Assistive Range of Motion and Resistive Movement
- Demonstrate and explain the need for safe handling of limbs
- Explain the effect of different impairments (abnormal tone, cognition, sensory and perceptual deficits) on ROM
- Explain the effects of improper handling techniques on the patient and consequently the available ROM

6. Demonstrate an understanding of the implications of age-related changes on normal functional movement.

Potential Elements of the Performance:

- Describe the implications of normal age related changes on:
 - a) bones
 - b) joints
 - c) muscles
 - d) posture
 - e) movement – specific joints, spine, chest wall
 - f) cardio-respiratory systems

7. Demonstrate and apply knowledge related to the assessment of joint movement.

Potential Elements of the Performance:

- Define and describe goniometry
- Explain the essential components of reliable, valid goniometry
- Identify normal range of movement for most synovial joints
- Describe and demonstrate measurement of joint range of motion of synovial joints

8. Demonstrate and apply knowledge and skills related to the application of assistive devices for ambulation.

Potential Elements of the Performance:

- Identify and describe normal and abnormal gait patterns
- Assess parameters of gait (step length, stride length, width of base of support)
- Describe basic gait patterns using assistive devices
- List and describe factors affecting gait (vertical and horizontal displacement, width of base of support, lateral pelvic tilt, step length, stride length)
- Describe normal age-related changes of gait
- Explain the effect of different impairments (abnormal tone, cognition, sensory and perceptual deficits) on gait

III. TOPICS:

1. Motor Development
2. Age Related Changes
3. Application of Concepts/Components of Movement
4. Applied Kinesiology
- 5.. Muscle and Exercise Physiology
6. Posture and Movement
7. Impairments and Mobility
8. Safe and Purposeful Handling of Limbs`
9. Gait Patterns
8. Assessment of Joint Movement

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Kisner and Colby, (2002). Therapeutic Exercise. Foundations and Techniques (4th ed). F.A.Davis Company.

Lippert, Lynn. (2000). Clinical Kinesiology for Physical Therapist Assistants. (3rd. ed.) F.A. Davis Company. (from 1st semester)

Biel, Andrew. (2001). Trail Guide to the Body. (2nd ed.). Andrew Biel Publications. (from 1st semester)

Pierson, F. (2002). Principles and Techniques of Patient Care. (3rd. ed.) Saunders. (from 1st semester)

Students must purchase a goniometer (available at the bookstore).

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.