School of Physical and Occupational Therapy
3654 Promenade-Sir-William-Osler
Montreal, Quebec
H3G 1Y5

COURSE GUIDE

B.Sc. PHYSICAL THERAPY U-1

2002-2003

IMPORTANT DATES

Term A:	Registration Period	Aug. 6 - Sept. 4, 2002
	Labour Day	Sept. 2, 2002
	First Day of Classes	Sept. 4, 2002
	Course Change (drop/add period)	Sept. 4 - 15, 2002
	Thanksgiving Day	Oct. 14, 2002
	Last Day of Classes	Dec. 4, 2002
	Examination Period	Dec. 6 - 20, 2002
Term B:	Classes Commence	Jan. 6, 2003
	Course Change (drop/add period)	Nov. 4, 2002 - Jan. 19, 2003
	Midterm Break - Three days only	Feb. 26 - 28, 2003
	Last Day of Classes	Mar. 7, 2003
	Examination Period	Mar. 10 - 21, 2003
	CLINICAL AFFILIATION - Session 1	Mar. 24 - May. 2, 2003
	Easter	Apr. 18 - 21, 2003
	Classes Reconvene	May 5, 2003
	Victoria Day	May 19, 2003
	Last Day of Classes	May 23, 2003
	Final Examination Period	May 26 - 30, 2003

McGILL UNIVERSITY
School of Physical and Occupational Therapy

COURSE GUIDE
B.Sc. (PHYSICAL THERAPY) U-1

INDEX

PAGE

U1 CURRICULA PLAN - 2002-2003 - PHYSICAL THERAPY PROGRAM

FALL: TERM A

Academic Term (13 wks) + Exams (2 wks) = Total 15 wks

Academic Term Sept 4 - Dec 4	Exams Dec 6 - 20
ANAT-315 ANATOMY 4cr	
PHGY-201 PHYSIOLOGY 3cr	
POTH-248 COMMUNICATION/PROFESSIONALISM 2cr	
POTH-239 ASSESSMENT IN REHABILITATION I 2cr	
POTH-260 LIFE SPAN 2cr	
PHTH-235 MOVEMENT SCIENCE & PRACTICE 3cr	

NOTE: PHTH-PT & POTH-PT/OT

WINTER: TERM B

Academic Term (10 wks) + Exams (1 wk)+ Clinical I (6 wks) + Integration Block (3 wks) + Exams (1 wk) = Total 21 wks

Academic Term Jan 6 - Mar 7	Exams Mar 10 - 21	Clinical Block Mar 24 - May 2	Integration Block May 5 - 23	Exams May 26 -30
ANAT-316 ANATOMY 2cr		PHTH-220 CLINICAL AFFILIATION I	POTH-222 KINESIOLOGY 3cr	
PHGY-202 PHYSIOLOGY 3cr			PHTH-236 MOVEMENT I: Musculoskeletal 4cr	
POTH-250 HEALTH CARE AND PROFESSIONALISM 2cr				
PHTH-241 ASSESSMENT II: MUSCULOSKELETAL 2cr				
PHTH-236 MOVEMENT I: MUSCULOSKELETAL 4cr				

Term A:
Sept. 4 to Dec. 4, 2002
Exam Period:

Term B:
Jan. 6 to Mar. 7, 2003
Exam Period:

Clinical Affiliation:
Mar. 24 to May 2, 2003
Courses:

Dec. 6 to 20, 2002 Mar. 10 to 21, 2003 May 5 to 23, 2003

Exam Period:
May 26 to 30, 2003

2002-2003 OCCUPATIONAL THERAPY PROGRAM - U1		
Course Number	**Course Name**	**Credits**
PHGY-201	Human Physiology: Control Systems	3
PHGY-202	Human Physiology: Body Functions	3
OCC1-220	Clinical Affiliation I	0
POTH-222	Kinesiology	3
OCC1-235	Occupation as Therapy	3
OCC1-236	OT Practice I : Musculoskeletal Conditions	4
POTH-239	Assessment of Rehabilitation I	2
OCC1-240	Assessment of Performance I	2
POTH-248	Communication/Professionalism	2
POTH-250	Health Care and Professionalism	2
POTH-260	Life Span	2
ANAT-315	Regional Anatomy of the Limbs & Back	4
ANAT-316	Human Visceral Anatomy	2
	TERMS A & B - TOTAL CREDITS	**32**

2002-2003 PHYSICAL THERAPY PROGRAM - U1		
Course Number	**Course Name**	**Credits**
PHGY-201	Human Physiology: Control Systems	3
PHGY-202	Human Physiology: Body Functions	3
PHTH-220	Clinical Affiliation I	0
POTH-222	Kinesiology	3
PHTH-235	Movement Science & Practice	3
PHTH-236	Movement I: Musculoskeletal	4
POTH-239	Assessment in Rehabilitation I	2
PHTH-241	Assessment II: Musculoskeletal	2
POTH -248	Communication/Professionalism	2
POTH-250	Health Care And Professionalism	2
POTH-260	Life Span	2
ANAT-315	Regional Anatomy of the Limbs & Back	4
ANAT-316	Human Visceral Anatomy	2
	TERMS A & B - TOTAL CREDITS	**32**

POTH-222 KINESIOLOGY

Spring 2003 Dr. McKinley, x4498 Hosmer Room 300B/B17, E-mail: patricia.mckinley@mcgill.ca

Credits: 3

Lecturer: P. McKinley

COURSE STRUCTURE

This 48 hour course is given in lecture, seminar and/or practical formats. The course commences on May 5, 2003 and runs until May 23, 2003. The class will be taught in a 3-hour block every morning (9:00 a.m. to 12:00 p.m.).

OBJECTIVES

Upon completion of this course, the student should be able to:

Skills and Behaviours:

1. Identify the developmental level of an individual relative to current knowledge.
2. Interpret and evaluate the validity of kinematic, kinetic and EMG methods at a beginning level.
3. Perform measurement of angular movement, linear displacement, velocity, muscle activity patterns and force, and joint torque.
4. Utilize basic biomechanical principles in interpretation, modification and selection of testing and treatment, intervention and worksite modifications.
5. Use a critical appraisal approach in understanding the motor control approach to practice.
6. Utilize a critical appraisal approach to kinesiology as applied to physical and occupational therapy.
7. Construct functional restoration programs consistent with specific needs such as aging, changing work demands and environment.
8. Become a critical consumer of the literature with the goal of applying the knowledge to clinical practice.
9. Collaborate effectively with other health professionals.
10. Carry out a literature review, demonstrate library skills, write purposefully, and prepare a specific report.
11. Become aware of client satisfaction, particularly related to outcomes: predicted vs actual.
12. Define problems from the client's perspective, occupation and lifestyle, including anticipated problems.
13. Determine continuation, progression or discontinuation of interventions based on evaluative tools.
14. Assess and interpret gait, balance and coordination, posture, range of motion, fatigue, endurance and strength from a kinesiological perspective (use of EMG, kinematics and kinetics).

Knowledge:

1. Define kinematics and explain how it may be used as an evaluative tool.
2. Define kinetics, distinguish between static and dynamical analysis, and explain how it may be used as an evaluative tool.
3. Define electromyography, and describe the origin, characteristics and measurement of EMG signals.
4. Discuss the qualitative and quantitative principles of motion and posture analysis.
5. Discuss the modifiers which may affect motor learning/control, including motor development and aging, orthotics, prosthetics and assistive devices, gender and body structure, and environment.
6. Use an integrated approach in application of intervention and outcome measurement as applied to: balance, posture and coordination, functional abilities evaluation, lifting, locomotion, occupational tasks and physical demands analysis.
7. Become acquainted with principles of ergonomics and practices, and return to work process.
8. Describe motor unit recruitment and the relationships to force production, fatigue and pathology.
9. Relate how principles of kinesiology may be used to evaluate programs, qualitative and quantitative research.
10. Use principles of preparing a scientific report, including literature review, evaluation of information, argument synthesis and graphical presentation.
11. Discuss theories of motor control as applied to kinematic and kinetic analysis: dynamical systems, distributed control.
12. Discuss how neural plasticity may be important in designing and evaluating interventions.

CONTENT

May 5-23, 2003

Research Papers, syllabus and power point presentations will be discussed and placed on webCT

WEEK 1 MUSCLE MECHANICS AND EMG reference pages in syllabus:

WEEK 2 EMG and KINETICS

WEEK 3 KINETICS, KINEMATICS

WEEK 4 Motor control aspects

REQUIRED TEXT

Course Pack.

EVALUATION

Course requirements:

Group paper:	40 pts
Final exam:	60 pts

Group paper:

Select a problem from your clinical experiences and describe how the use of kinematic, kinetic and EMG analysis could be used to further evidence based practice.

1. Describe your target population, including inclusion and exclusion criteria **5** pts
2. Describe the intervention(s) you propose to use **5** pts
3. Describe your outcome measures that you normally use (ie Berg Balance, nine hole peg test) **5** pts
4. Describe how you would use kinesiological techniques to better understand how the person is or is not doing the task appropriately and if the intervention in working. **20** pts
5. Maximum 5 pages (references and illustrations not included)
6. Due: at end of course lectures.

Final Examination

Take home exam. Due one week after it has been given to you. You will have to work on a problem in a similar manner to that of the group paper and two other questions as well. It is will essay in nature. You must use references for this as well.

POTH-239 - ASSESSMENT IN REHABILITATION I

Credits: 2

Lecturers: S. Beaulieu (Co-Coordinator), R. Toomey (Co-Coordinator), S. Fucile, A. Gaglietta

COURSE STRUCTURE

This course includes 1.5 hour lectures and 2 hours laboratory sessions per week with small group work and both instructor-directed and student-directed learning experiences.

GOAL

The student therapist will acquire beginning-level knowledge and skills necessary for the basic physical assessment of clients seen by physical and occupational therapists with emphasis on self-directed learning and evidence-based practice.

OUTCOMES

Upon completion of this section, the student therapist will demonstrate knowledge by being able to:

1. Reinforce material learned in Anatomy - ANAT-315.

2. Perform an on-line literature search pertaining to specific measures.

3. Interpret and apply the basic principles of reliability and validity theory to physical assessment.

4. Apply the knowledge learned in the following areas:

    a) Manual muscle testing
    b) Goniometry
    c) Evaluation of sensory function
    d) Evaluation of hand and finger strength
    e) Evaluation of oedema
    f) Evaluation of posture
    g) Evaluation of gait and its deviations
    h) Pain assessment

5. Explain the SOAPIE system of charting.

6. Organize statements into subjective and objective domains

The student will be able to perform the following skills:

1. Accurately demonstrate:

    a) Palpation of bony and soft tissue landmark
    b) Visual inspection
    c) Manual muscle testing
    d) Goniometry
    e) Evaluation of sensory function
    f) Evaluation of hand and finger strength
    g) Evaluation of oedema
    h) Evaluation of posture
    i) Evaluation of gait and its deviations

2. Document the information obtained in the objective evaluation in SOAPIE format.

3. Conduct an initial history taking interview.

4. Document the information obtained in an initial history taking interview in SOAPIE format.

5. Demonstrate safe and effective patient handling skills.

6. Show respect for peers, self and faculty.

7. Demonstrate the ability to establish rapport with simulated patients.

8. Demonstrate a respect for the clinical involvement of other health professionals to avoid unnecessary duplication of services provided to the client.

Moreover the student will demonstrate the following learning behaviours:

1. Be prepared for each lab session.

2. Be punctual at all times.

3. Be able to accept constructive criticism.

4. Be able to identify concepts that are not understood and to formulate appropriate questions for clarification.

5. Be able to develop and maintain team/group building skills

6. Independence in seeking pertinent information of materials covered.

7. Actively and independently participate in labs.

COURSE CONTENT

Learning activities have been organized using a regional approach which is complementary to the course ***Regional Anatomy of the Limbs and Back - ANAT-315***.

REQUIRED DRESS FOR LABORATORY SESSIONS

Shorts and Shirts (females: halter-type or racer-back tops)

REQUIRED REFERENCES **required in other course(s)*

*Cole, B., Finch, E., Gowland, C., Mayo, N. (2002) *Physical Rehabilitation Outcome Measures* (2nd edition) Canadian Physiotherapy Association.

Assessment in Rehabilitation I - POTH-239 **Course Pack.**

For goniometry and manual muscle testing:
Clarkson, H.M. (2000). *Musculoskeletal Assessment. Joint Range of Motion and Manual Muscle Strength* (2nd edition). Lippincott Williams & Wilkins.

For palpation:
***** Anatomy - ANAT-315 Course pack

RECOMMENDED REFERENCES

Magee, D.J. (2002). *Orthopedic Physical Assessment*. (4th edition). Philadelphia: W.B Saunders.

Trombly, C.A. & Radomski, M.V. (2001) *Occupational Therapy for Physical Dysfunction* (5th edition). Lippincott Williams & Wilkins.

REQUIRED MATERIALS

Clinical Tools Kit **(**purchased in class during the first week, price to be announced)
Goniometers: 360°, 30 cm
180°, 15 cm
Finger
Tape measure

STUDENT EVALUATION

To be announced at the first day of class

N.B. The final practical exam must be passed with a C+ or better in order to pass the course and in order to be admitted to the first clinical placement (OT Clinical Affiliation I - OCC1-220 or PT Clinical Affiliation I - PHTH-220).

POTH-248 - COMMUNICATION AND PROFESSIONALISM

Credits: 2

Lecturers: N. Larivière (Coordinator)

COURSE STRUCTURE

Two hours per week for thirteen weeks. The format will include lecture/seminar/class participation.

This course will explore two integrated themes:

Theme 1: The fundamentals of communication
Theme 2: Psychosocial Issues in Health, Impairment, Disability and Handicap

COURSE OBJECTIVES

Rehabilitation services should provide competent and compassionate therapeutic interventions. Towards this aim, this course shall:

1. allow students to acquire the fundamental skills and strategies necessary for effective professional communication;
2. prepare students to deal with a number of psychosocial issues which have implications for impairment, disability and handicap, and an impact on rehabilitation and well-being.

REQUIRED TEXTS

Adler, R.B. and Rodman, G. (2002). *Understanding Human Communication*. (7th edition). Fort Worth, Texas, Brace Harcourt.

Course Pack.

EVALUATION

Multiple Choice Exam.	50%
Term paper	40%
Oral presentation	10%

POTH-250 - HEALTH CARE AND PROFESSIONALISM

Credits: 2

Lecturers: L. Asseraf-Pasin (Coordinator), A. Thomas, Guest Lecturers

COURSE STRUCTURE

This course will incorporate lectures/seminars/panel presentations and a research reading project to be done over 9 weeks for 2 to 3½ hours per week.

OVERALL OBJECTIVES

Effective delivery of rehabilitation services requires that the entry level practitioner recognize and respond to the influence of social, cultural, economic, legislative and demographic factors impacting on health and rehabilitation service delivery, both locally and globally.

COURSE OBJECTIVES

1. HEALTH CARE POLICY

Canadian and Quebec Health Care Systems

- Health and social service legislation/policy including:
  - Canada Health Act
  - Relevant federal/provincial legislation
- Relevant health and social service organizations which influence and/or assist the delivery of health and social services
- Funding mechanisms (public and private) which will support health and social service needs, goals and/or research for individuals and groups
- Provincial licensing regulations re practitioners, practices, institutions
- Consent to treatment, power of attorney etc. as applied to persons with disabilities

*So that the graduate will have acquired the **Skills and Behaviours** to:*

- Apply international health definitions and parameters to local context
- Adapt to changing and developing information systems as they relate to Health Care Policy, systems and Delivery
- be sensitive to impact of public policy (present and future) on rehabilitation services
- be sensitive to ethical and legal considerations in health service delivery including rationing of health care
- be able to suggest strategies to influence public policy
- optimize benefits for clients by judicious use of knowledge of policy, legislation and funding sources

II PROFESSIONALISM

1. Ethical Dimensions

The entry-level therapist has distinctive knowledge, skills and behaviours which characterizes her/him as a professional and which forms the basis for professional practice. The professional will have an understanding of the following concepts:

1. A scientific body of knowledge that forms the basis of evidence-based practice.
2. Independent practice is supported by autonomy, self-regulation and direct access.
3. Ethical behaviour based on a personal code of behaviour rules of conduct and values, legal requirements and a professional code of ethics.
4. Professional legal, regulatory status.
5. The variety of professional roles incorporated within professional practice include **traditional** and **innovative roles:**

   from: Clinician, learner, entrepreneur, supervisor, delegator, leader, manager, consultant, educator, researcher

   to: Negotiator, lobbyist, expert witness and change agent.

6. Scope of practice of Occupational Therapy, Physical Therapy and of other descriptions.
7. Professional Associations' roles and responsibilities including ways and means of influencing public policies.

*So that the graduate will demonstrate the **skills and behaviours** that promote*:

- the value of evidence-based practice and its acceptance as forming the cornerstone of all practice;
- respect of culture and ethics of particular groups or individuals;
- interactions with clients, colleagues, employers and others with emphasis on
  - accountability and responsibility
  - commitment
  - effective communication;
- respect of professional standards (standards of practice and clinical guidelines);
- identification with professional associations/affiliations;
- the qualities of:
  - appetite for life-long learning
  - thoughtful, reflective practice
  - ongoing self-evaluation
  - knowledge of limitations
  - ability to refer
  - assertiveness
  - effective communication skills (verbal, nonverbal, written)
  - critical thinking
  - effective -
    - clinical decision making
    - critical analysis
    - ability to negotiate
    - ability to manage conflict
  - best practice' at all times, basing decisions and actions on **outcome measures**

2. Professional and Support based - Collaborative Team Relationships

Topics: Client-centred care
Multidisciplinary vs. Interdisciplinary vs. Pluridisciplinary
The team member attributes
Professional roles incorporated within professional practice

*So that the graduate will have acquired the **skills and behaviours** to*:

- involve the client in planning and managing rehabilitation therapy;
- facilitate the empowerment of clients by providing information and encouraging independence; involving self-help/advocacy resources as appropriate;
- promote effective team work;
- promote efficient collaboration between the different parties involved in the health care process;
- promote interactions with colleagues, clients, employers and others with emphasis on
  - accountability
  - commitment
  - effective communication.

REQUIRED TEXTS

The Professional Code, Éditeur officielle du Québec.

Bill 120, An Act Respecting Health Services and Social Services and Amending Various Legislation, Assented to 4 September 1991, Québec Official Publisher (1991).

RECOMMENDED TEXTS

Scott, R. (1998). *Professional Ethics: A Guide for Rehabilitation Professionals*. Mosby.

Parsons & Parsons. *Health Care Ethics*. Wall & Emerson Inc.

Williams & Wilkins (1997). *Stedman's Concise Medical Dictionary for the Health Professional*, (3rd edition)

REFERENCE TEXTS

Rachlis, M. & Kushner, C. (1994). *Strong Medicine*. Harper Perennial, Harper Collins Publishers Ltd.
Purtilo, R. (1993). *Ethical Dimensions in the Health Professions*, (2nd edition). W.B. Saunders Co.

EVALUATION

Topics covered in this course form a framework for professional practice. Evaluation of the application of this material will be through further professional courses given over the next three years and in professional practice.

Research Health Project	35%	(To be handed in by March 6, 2003)
Essay/Short-Answer Exam	35%	(To be done during the March 10-21, 2003 Examination period)
Quizzes	20%	(Quizzes will be given in class during Lectures 4 and 8)
Participation	10%	(Presence 5% & In-Class Participation 5%)

POTH-260 - LIFE SPAN

Credits: 2

Lecturers: R. Birnbaum (Coordinator), Guest Lecturers

COURSE STRUCTURE

This is an interactive lecture course, 2 hours per week for Term A.

GOAL

This course will provide an overview of competency across performance domains through the life span.

LEARNING OBJECTIVES

1. To appreciate that the life span is an ongoing developmental process involving both continuity and change, and is influenced by genetic and environmental factors.

2. To summarize different developmental events from the perspective of major developmental theories.

3. To be aware of neuromaturational and motor control theories of motor development.

4. To appreciate the sequence of development that occurs across sensory, cognitive/perceptual, physical/motor, play/leisure, language, and psychosocial domains from conception to death.

5. To characterize the unique changes associated with each stage of development.

6. To understand the influences of cultural background as well as family dynamics on development.

7. To appreciate major areas of controversy and new directions in the study of human development.

8. To begin to apply a self-directed approach to learning.

CONTENT

- Developmental theories and controversies
- Basic embryology and genetics
- Neonatal neurobehavioral performance
- Motor principles and theories
- Developmental competency in gross motor, fine motor, perceptual, cognitive, social, behavioral, play, daily living skills and language for the:
    a) infant
    b) preschooler
    c) school age child
    d) adolescent
- Family function and cultural background and their effects on development.

- Theories and developmental changes characteristic of the young adult and during the middle years.
- Physiologic, psychosocial, and cognitive changes associated with aging.
- Changing roles and activities in the elderly.
- Death and dying.

REQUIRED TEXT

Berger, K.S. (1997). *The developing person through the life span*. New York, Worth Publishers.

EVALUATION

Child Observation	30%
Midterm Examination	30%
Final Examination	35%
Group Presentation	5%

ANAT-315 - REGIONAL ANATOMY OF THE LIMBS & BACK

Credits: 4

Lecturers: *Regional Anatomy Section:* G. C. Bennett, Department of Anatomy
Functional Anatomy Section: S. Beaulieu, T. Norcia, N. Liverani, A. Gaglietta

COURSE STRUCTURE

A lecture and laboratory course of 2 hours of lecture and 4 hours of prosection including 2-3 sessions on dissection and 2 hours of functional laboratory per week. This course will cover regional gross anatomy of the skeleton, joints, muscles and neurovascular structures of the limbs and back. Lectures and the prosection laboratory will be given by the Department of Anatomy. The functional anatomy laboratory will be given by the School of Physical and Occupational Therapy.

REGIONAL ANATOMY SECTION

STRUCTURE

This section consists of 2-hour lecture sessions per week and 2 hour laboratory periods per group per week starting September 4, 2002.

OBJECTIVES

Emphasis is placed on understanding anatomical concepts rather than rote memorization. Upon completion of this section, the student will be able to understand and utilize the acquired anatomical information as needed in other professional courses:

1. The movements of the different body segments in terms of planes and axes.

2. The bones of the skeleton in terms of why they have the architecture they do, how this relates to their function and the stresses acting upon them and the areas of weakness of bones in terms of possible fracture sites.

3. The structure of different types of joints and their supporting ligaments and tendons, the movements permitted and the factors that make them susceptible to dislocation, inflammation or calcification.

4. The structure of different types of bursae and tendon sheaths, and the factors that make them susceptible to bursitis or tenosynovitis.

5. The importance of fasciae (and retinaculae), in terms of compartmentalization, muscle function, impingement problems (e.g. carpel tunnel syndrome), and containment spread of infections.

6. The structure, attachment sites and functions of different muscles and muscle groups, especially in terms of neural control of functional movements.

7. The structure, relationships and distribution of peripheral nerves, especially in terms of their sites of potential injury and the effects of such injury on loss of muscle function or cutaneous sensation.

    i) The structure, relationships and distribution of arteries and veins, especially in terms of their sites of potential injury and the effects of such injury on loss of muscle function, gangrene, etc.

ii) The importance of anastomoses around joints, in terms of maintaining blood supply to distal regions if a vessel is occluded.

8. The differences between the Lower Limb and Upper Limb, in terms of the specialized function of the Lower Limb for locomotion (stance and gait) and the Upper Limb for hand manipulation.

9. An elementary understanding of radiology and other clinically important imaging techniques, and their role in the assessment of both normal anatomy and traumatic or pathological alterations.

LABORATORY ETIQUETTE

Necessary Equipment:
- lab coat
- instruments (forceps, etc.)
- latex gloves

Use of Laboratory During Laboratory Periods:

- Entry to the GROSS LABORATORY at all times is strictly restricted to students registered in Anatomy courses in our department (Physical and Occupational Therapy; Medicine; Dentistry; B.Sc. Students in 504-214 course)
- Respect for cadavers (all donated)
- No food or drink
- No photographs
- Prosections are kept in plastic bags, along with moistened cloth rags
- Each plastic bag is identified with a clothes-peg
- Each prosection is identified with a tag
- Prosections are preserved with mixture of aldehyde, phenol and alcohol
- Prosections and accompanying cloth rags must be continually kept moist with new alcohol solution

REQUIRED TEXT

Course Pack.

EVALUATION

Regional Anatomy Section:

Written multiple choice examinations:

Midterm			
Final Exam	33.6%	**TOTAL:**	56%

Laboratory examinations:

"Spot" Exam			
Midterm	9.6%		
Final Exam	14.4%	**TOTAL:**	24%
			80%

FUNCTIONAL ANATOMY SECTION

COURSE STRUCTURE

This section consists of laboratory sessions of 2 hours per week for 12 weeks.

OBJECTIVES

Upon completion of this section, the student therapist will be able to:

1. Visually inspect, palpate and identify:
   - C bony landmarks
   - C soft tissue structures
   - C arterial pulses
2. Demonstrate and interpret the movement of body segments in terms of planes and axes.
3. Identify and understand muscle actions: isotonic, isometric, concentric and eccentric contractions.
4. Understand and demonstrate the use of proximal muscles for stabilization while using distal joints and muscles in functional movements.
5. Demonstrate normal muscles in action.
6. Interpret potential patterns of muscle weakness or paralysis due to dysfunction of nerves, muscles and joints.
7. Identify joint structures and understand movement of specific joints (according to classification).
8. Demonstrate professional behaviour throughout the labs.
9. Demonstrate organization skills by completing the lab preparation activities and working independently in labs.

REQUIRED DRESS FOR LABORATORY SESSIONS

Shorts and Shirts (females: halter-type or racer back tops)

REQUIRED TEXT

Moore, K.L., & Dalley, A.F. (1999). *Clinical Oriented Anatomy* (4th edition). Lippincott Williams & Wilkins.

RECOMMENDED READING

Hoppenfeld, S. (1976). *Physical Examination of the Spine & Extremities*. New York, Prentice-Hall.

Jenkins, D. (Ed.). (1998). *Hollinshead's Functional Anatomy of the Limbs & Back*, (7th edition). Saunders.

EVALUATION

Functional Anatomy Section: 20%

Note: Students who miss more than three (3) practical laboratories without a legitimate reason will not be permitted to take the final examination.

The student therapist is expected to present a professional approach throughout all of his/her learning experience.

PHTH-220 - CLINICAL AFFILIATION I

Credits: 0

Lecturer: L. Asseraf-Pasin, Academic Coordinator of Clinical Education
A. Gaglietta, Assistant Academic Coordinator of Clinical Education

COURSE STRUCTURE

This course is the first of five Clinical Affiliation courses commencing in U1 and continuing throughout the three years of the program. Clinical experience in the various McGill teaching hospitals or other accredited centres is provided. The student is given the opportunity to practice physical therapy, to observe in other clinical disciplines and participate in teaching rounds and in in-service education. An evaluation of performance is given for each rotation by the supervising therapists who use the clinical assessment form "***Clinical Performance Instrument***", shown on the following pages. The final evaluation for this rotation will be used to judge the clinical competence of the student as part of the overall evaluation of the clinical affiliation program.

If a student does not achieve a satisfactory standing on a particular rotation, **IT MUST BE REPEATED AND A SATISFACTORY LEVEL OF ACHIEVEMENT MUST BE OBTAINED.** If a student is unsuccessful in the repeat rotation, he/she will be asked to withdraw from the program. Every effort will be made to arrange the repeat rotation within the three-year period. As this, however, is not always possible, students required to complete an additional clinical rotation should be prepared to convocate in the Fall of the final year. **Please note that only one rotation may be repeated if failed. A failure of any subsequent Clinical Affiliation course will require the student to withdraw from the program.** Satisfactory standing in all required professional courses and clinical placements each year are mandatory to be able to continue in the Physical Therapy program. Students must pass all the required professional courses before undertaking the designated clinical course for their level of training. If a clinical placement has to be deferred which would lead to it being completed out of the specified program sequence of professional-clinical-professional courses, the student may not be given permission to take the subsequent professional courses until that clinical placement has been successfully completed. This would lead to delayed graduation.

Please refer to section ***f)*** **of the** ***Academic Advancement*** **in the** ***Academic Regulations***.
In Addition please note that beginning with the admission class in 2002, all clinical affiliation courses **(PHTH-220, PHTH-320, PHTH-321, PHTH-420, PHTH-421)** will be graded **PASS/WEAK PASS/ FAIL**.

Two weak passes will be considered as equivalent to a FAILURE.

OBJECTIVES

The purpose of the clinical affiliation program is to:

1. orientate the student to hospital organization and department functioning;

2. orientate the student to the role of the therapist in the orthopaedic setting (including rheumatology, burns and plastics);

3. develop the student's awareness of professional behaviour in accordance with the code of ethics (OPQ);

4. develop the student's sense of observation in order that the student recognizes the facts pertinent to the presenting problem;

5. develop the student's skills in recognizing the physical and psychological needs of the patient;

6. provide the opportunity for the student to apply previous theoretical knowledge;

7. provide the opportunity for the student to observe and subsequently perform a complete orthopaedic assessment;

8. provide the opportunity for the student to gain experience in application of treatment techniques;

9. guide the student in the development of communication skills - (patient and health personnel);

10. provide the student with guidance and experience in methods of recording;

11. provide the student with the opportunity to learn about achievable outcomes;

12. expose the student to differential diagnosis and predictive physical therapy.

Format

The Physical Therapy Program is made up of 105 credits of academic and clinical courses given over three years in seven semesters. The five Clinical Affiliation courses make up over 1000 hours of clinical practice and have a course value of 18 credits. These clinical affiliations start in Term B of Year one, incorporate a summer semester of 12 weeks between Years two and three and finish with a fall and winter block in Year three.

2002-2003	**Winter Term** (March - April, 2003)	**PHTH-220**	**6 weeks**	**0 credits**
2003-2004	**Summer Term** (May, June, July 2004)	**PHTH-320**	**6 weeks**	**6 credits**
2003-2004	**Summer Term** (June, July, August 2004)	**PHTH-321**	**6 weeks**	**6 credits**
2004-2005	**Fall Term** (November-December, 2004)	**PHTH-420**	**5 weeks**	**3 credits**
2004-2005	**Winter Term** (January-February 2005)	**PHTH-421**	**5 weeks**	**3 credits**

Clinical Session Dates - 2003

U1 Session I **March 24 - May 2, 2003**

Fieldwork placement will be arranged with McGill teaching hospitals, McGill affiliated hospitals and centres. Every effort will be made to place students in the Montreal region. At times students may request fieldwork outside of the Montreal region. When students are placed in out-of-town facilities, travel and accommodation are the student's responsibility.

This course is structured as follows:

I Principles for Moving Patients Safely Workshop (PDSB)
II Clinical Affiliation Seminars
III Traditional Clinical Affiliations
IV Non-Traditional Clinical Affiliations

I PRINCIPLES FOR MOVING PATIENTS SAFELY (PDSB) WORKSHOP

This is a compulsory 1-day weekend workshop scheduled in Term A. There is a lab fee of approximately $25.00. Successful completion of this workshop is a pre-requisite for fieldwork placement.

REQUIRED TEXT

Principles for moving patients safely. ASSTSAS 1999. Price to be confirmed.
This text is required for workshop participation and a reference for all future clinical affiliation courses.

II CLINICAL AFFILIATION SEMINARS

Prior to the first affiliation, in Term B, U1 students will participate in a series of seminars which will cover topics related to occupational therapy fieldwork. These seminars are mandatory.

DRESS CODE

Each student is responsible to purchase the following for use in the clinical setting: full length navy blue or black pants; white top either polo style or shirt with sleeves; plain white or navy sweater may be worn over the shirt. Walking shoes (no canvas shoes or sandals) and matching socks are required. An identification tag (purchased through the Students Society) is compulsory and must be worn on the outside of the shirt or sweater at all times when in the clinical setting.

REFERENCE MATERIALS

As required by the particular rotation and clinical instructors during the affiliation.

STUDENT EVALUATION

Each rotation will be evaluated by a supervising therapist, using the clinical assessment form, "***Clinical Performance Instrument***", to be credited as follows:

PHTH-220 - 0 credits	PHTH-320 - 6 credits	PHTH-420 - 3 credits
	PHTH-321 - 6 credits	PHTH-421 - 3 credits

HOSPITAL EVALUATION

For each rotation the student is required to complete the "Student Evaluation of Hospital Affiliation" form. The completed form must be handed to the Centre Coordinator of Clinical Education on the last day of the rotation. As well, students must complete a self-evaluation form.

STUDENT EXPERIENCE BOOKLET

During the clinical program the students are required to complete the appropriate clinical experience sheets. The booklet is made available in March of the first year of studies and must be picked up from Room D5 by March 15th. The student is responsible to enter the information on each rotation and present it to the next hospital. **Following completion of the final rotation in U3 the completed booklet must be returned to the Academic Coordinator of Clinical Education, Room D7, Davis House. Failure to do so may result in a delay of final clinical mark and graduation.**

HOSPITAL HANDBOOK

Prior to **one week before** the beginning of a rotation the student must obtain the Hospital Handbook from the Clinical Practicum Office (D5). The student is expected to read it before the start of the rotation.

IMMUNIZATION

Before entering the first clinical placement: All students must obtain the immunization card from the McGill Student Health Services. This card indicates that the student has the necessary inoculations for clinical practice. The card must be presented to the Centre Coordinator of Clinical Education on the first morning of each clinical practice period.

Failure to complete the required tests before the Clinical Periods: Student will not be permitted to enter the clinical setting.

CARDIOPULMONARY RESUSCITATION

Before entering the first clinical placement: It is compulsory that all students have a valid up-to-date CPR certificate. This certification must be maintained over the three years of the program. Without a valid up-to-date CPR certificate **Level C**, the student will not be permitted to enter the clinical setting. The student is required to present a copy of the certification to the Academic Clinical Coordinator, L. Asseraf-Pasin, before the last day of January in the first year of the UI program.

GUIDELINES FOR INTERNATIONAL PLACEMENTS

POLICY

Eligibility Criteria

1. To be considered for a placement outside Canada, students must be approved by the Academic Coordinator of Clinical Education. Prior to making a recommendation, the Clinical Coordinator will require the student to demonstrate the following criteria:

   a) The student must have maintained a minimum academic standing of a **GPA of 3.5 (B+)** and have progressed through the program with no conditions.

   b) The student must maintain a B+ (75-79%) standing in each of their fieldwork placements prior to the international placement.

   c) The student must demonstrate strong interpersonal skills, including tact and diplomacy, and well developed judgement skills as documented on previous performance evaluations (specifically under professional relationships and professional competency section of the Clinical Performance Instrument of Physical Therapy Students (CPI), with a minimum rating of B+.

2. The student applying for an international placement shall agree to accept responsibility for:

   a) Cost of medical coverage (student already has access to some medical coverage, as a result of the fee paid to Student's Society).

   b) Obtaining a visa (this includes obtaining information from specific embassy/consulate re: if a specific student visa is required, if a letter from fieldwork coordinator and/or letter from facility re: purpose of stay is needed).

   c) Accommodation (at times, the clinical coordinator/immediate supervisor may be willing to assist in this area, but this cannot be counted on at all times, therefore the student is responsible for finding accommodation. Often, embassies/consulates or tourism boards can help in this area).

   d) Travel (confirmation of airplane tickets should only be carried out once the fieldwork coordinator has confirmed the international placement).

   e) Cost of supervision in countries where there is a fee for supervision (at times this is encountered; if it does happen, the student must to be prepared to pay this extra fee. This is not the responsibility of the University.

   f) Malpractice Insurance (each student has coverage for contingent malpractice insurance; at times, this insurance is not considered sufficient enough by certain facilities; if that is the case, the student is responsible for the payment of any extra insurance coverage requested by the facility).

PROCEDURE

NOTE: All students will be given the guidelines for international placements during the Fall Term of first year. If a student is considering this option, he/she must initiate the request for an international placement with the Academic Coordinator of Clinical Education at least one year prior to the placement.

At least 12 months before the onset of the applicable fieldwork block, the student must request in writing, to the Academic Coordinator of Clinical Education, his/her wish to complete a fieldwork placement outside of Canada.

The letter should state:

1. the country of desired destination, indicating an awareness of cultural, gender and social differences and environment;

2. why the student would like to do an international placement in that country;

3. the requested placement session for completing this experience.

International placements are a privilege and are subject to the approval of the Clinical Coordinator/Physical Therapy Faculty. The student shall obtain a letter of reference from one fieldwork supervisor and one faculty member to support the application to participate in an out-of-country placement. These letters of reference must be forwarded directly to Academic Coordinator of Clinical Education (ACCE).

Once all the documentation is submitted, the ACCE will assess the suitability of the request based on the above criteria. If there is a need, the ACCE has the right to call upon the Physical Therapy Faculty to assess the student's eligibility for an international placement.

The student will then be advised, by the ACCE, whether he/she has been granted approval for an international placement.

RESTRICTIONS

The student will be granted one international placement per year, in U2 and U3, for a maximum of two placements, with the following restrictions:

1. The countries chosen must be members of the World Federation of Physical Therapy. The School reserves the right to approve the qualifications of the supervising therapist.

2. The student must choose within the list of approved international placements. The School will develop not more than five new international placements per year.

3. The School reserves the right to limit the total number of international placements organized per year.

4. Students may apply for a maximum of two placements, overall, in the following combination.

   1.2.1 one in the US and one overseas; or
   1.2.2 two in the US;

   Both placements cannot be overseas.

5. A second international placement may be undertaken only if the student has performed satisfactorily in the first international placement.

6. The first opportunity for a student to do an international placement will be in the summer clinical term following U2 in Clinical Affiliation III (580-321C). This will be scheduled in either the second or third block of U2 summer clinical affiliations.

RESPONSIBILITIES

Student:

The student will:

1. Commit to the placement through a letter of intent outlining the request.

2. The student will have accepted responsibility for the following:

    a) Cost of medical coverage
    b) Obtaining a visa
    c) Accommodation
    d) Travel
    e) Cost of supervision in countries where there is a fee for supervision

    f) Malpractice Insurance
    7) Cost for any cancellation

    The fee paid by the student to the Student's Society, annually, provides medical coverage; it is the student's responsibility to inquire if coverage is sufficient for travelling to the country in question.

    McGill University will also provide for worker's compensation, so in the case of a work-related accident, there is full coverage, no matter where the placement will take place (procedure to follow in the event of an accident will be made available to the student).

    McGill University also provides contingent malpractice insurance;

    In the event that this insurance is deemed insufficient by the facility, it is the student's responsibility to purchase additional coverage.

    Be responsible with permission of the ACCE for writing a letter to the Field Coordinator requesting placement in one of their affiliated facilities.

3. Write a letter of introduction to the National Physical Therapy Association of the country or write to the coordinator of the school or facility requesting permission for a placement in which he/she wishes to complete his/her fieldwork. The following should be included in the letter:

    a) Permission has been granted from McGill University - Physical Therapy Program to investigate the possibility of completing fieldwork in that country.
    b) Reasons for seeking fieldwork in that country.
    c) Dates and length of placement.
    d) A request for a list of universities or facilities to contact for fieldwork opportunities.

4. Be responsible for timely fulfilment of all requirements necessary for entry into that country i.e. student visa (if required), medical preparation (i.e. immunization/vaccination) and coverage, financial obligations (i.e. trave and accommodations arrangements, coverage of extra malpractice insurance (if required).

5. Be knowledgeable in the language of origin of the country he/she has selected.

6. Provide the Academic Coordinator of Clinical Education with copies of correspondence between student and facility offering the placement. The student should not call or write to the facility without prior permission from the ACCE.
7. Continue correspondence with the National Association, university or facility to ensure requirements of the facility and McGill University - Physical Therapy Fieldwork Program are met.

8. Apply for a placement in Québec/outside Québec for the following reason: if the international placement is cancelled (host country cancels, student does not maintain academic/fieldwork standing), the student will still be able to complete the required fieldwork.

9. Begin fieldwork.

10. Agree to complete the Student Evaluation of Placement Form, as well as any addendum specific to international placements and ensure that the CPI are completed at the Mid-Term and Final. At the end of the placement the student must submit a completed copy of the CPI to the ACCE.

    A representative from the fieldwork facility and/or the student will contact the Academic Coordinator of Clinical Education or the Associate Director of the Physical Therapy Program if specific concerns arise during the placement and ensure that the CPI are completed at the Mid-Term 2nd final. The student must submit a completed copy of the CPI to the ACCE.

Fieldwork Facility:

The fieldwork facility will:

1. Provide the following information in writing, in order to meet the fieldwork site approval criteria:

    a) Documents required as per Canadian Association of Occupational Therapists (CAOT) Physical Therapy Fieldwork Education Site Approval Guidelines
    b) An abbreviated résumé of the supervising therapist(s)

    The above must be forwarded to :

    Academic Coordinator of Clinical Education
    Physical Therapy Program
    School of Physical & Physical Therapy
    McGill University
    3654 Promenade Sir William Osler
    Montréal, Québec
    Canada H3G 1Y5

    Telephone: (514) 398-5594 Fax: (514) 398-6360

2. Ensure that the Coordinator of Physical Therapy Services/Physical Therapy Clinical Supervisor at the Facility will agree to complete McGill University - School of Physical & Occupational Therapy Fieldwork Evaluation Forms.

3. Sign a cooperation agreement between McGill University and the Facility, prior commencement of clinical placement and define a back-up plan within the facility or another agency in case of cancellation of the rotation.

4. Commit to placement (specific dates to be determined and approved by both Academic Coordinator of Clinical Education and Supervising Physical Therapist) in writing.

5. Ensure that the Physiotherapist who will be supervising the student will have knowledge of the English or French language (oral and written, in order to be able to communicate with the Academic Coordinator of Clinical Education.

Academic Coordinator of Clinical Education:

The Academic Coordinator of Clinical Education (ACCE) will:

1. Review the student's application and will approve the request based on established Eligibility Criteria (see - page 23).

2. Request an abbreviated résumé for the Physical Therapy Department and the potential supervising therapist, including educational background and years of experience directly supervising students. Please note that in order to supervise a student, the therapist must have had at least one year of clinical experience and must be certified/registered according to the standards of the host country.

3. Ensure that two copies of a cooperation agreement have been forwarded and returned signed by the receiving Facility, upon receipt of documentation fulfilling requirements of Physical Therapy Fieldwork Education Site Approval Guidelines.

4. Forward to the Facility:

    a) a letter of confirmation for the placement
    b) a copy of the cooperation agreement signed by all parties (student(s), Facility and McGill University)
    c) an outline of the curriculum
    d) School of Physical & Occupational Therapy Course Guide(s)
    e) expectations for student performance/fieldwork objectives
    f) policies related to:
        i. student assignments in clinical settings
        ii. time loss
        iii. failure during a placement
        iv. Student Performance Report Form
        v. Student Evaluation of Placement Form

5. Notify student to finalize travel and accommodation arrangements.

6. Provide resource material for supervisor (when necessary), which will be delivered by the student.

7. Initiate contact with facility via phone or Fax or E-mail at midterm in order to obtain feedback re: progress in placement, as well as at the end of placement.

8. Write a letter of appreciation to facility and request letter of permission to forward name and address of approved facility to CAOT placement service, therefore making formal approval status of the facility.

INTERNATIONAL PLACEMENTS SCHEDULE

Fall Term (U1): orientation and introduction to International Placements (hand out guidelines)

Winter Term (U1): reminder to students of deadline for applying for international placements

Integration Block (U1): deadline for initiating request for an international placement in second year

Requests after this period will not be considered

RESPONSIBILITIES OF STUDENT	SUGGESTED TARGET DATES
Request the international placement (or Item # 1)	12 months prior to placement. Student must respect deadline provided by the ACCE.
Accept responsibility for all items mentioned in #2 (or Item 2)	Immediately upon acceptance of placement by ACCE
Find the placement/facility and/or select from list of available placements and write a letter requesting a placement (or Item 3)	Immediately upon being granted approval for the placement by the ACCE
Be responsible for all requirements for entry into the country of choice (or Item 4)	Ongoing
Keep ACCE informed of all communications and/or provide copies of correspondence with the facility (or Item 6)	Ongoing
Continue correspondence with the facility and the University in order to ensure that all requirements are met (or Item 7)	Ongoing
Must consider a contingency plan (placement in Quebec or outside Quebec) if the international placement is cancelled	Ongoing
Agree to complete student evaluation of placement and ensure that CPI are completed at Mid-Term and Final	end of placement

PHTH-235 - MOVEMENT SCIENCE AND PRACTICE

Credits: 3

Lecturers: D. St-Pierre (Coordinator), Guylaine. Boutin, A Gaglietta, M. Mattei, E. Aston-McCrimmon, L. Asseraf

COURSE STRUCTURE

This course is made up a combination of lectures and practicals open labs for 8 to 10 hours a week over 13 weeks.

GOAL

The overall goal of the course is to enable the student to design and implement an appropriate exercise program for musculoskeletal impairments, in patients across the lifespan, based on evidence based practice.

OBJECTIVES

1. The student will be able to apply knowledge of the properties of muscle and connective tissue to design a safe exercise program aimed at improving range of motion, flexibility, strength, power, endurance, balance and proprioception.

2. The student will be able to determine the short and long terms goals appropriate for a given case history and to prioritise in order of importance, taking into consideration the functional status, age and lifestyle of the patient.

3. The student will be able to demonstrate appropriate verbal communication skills with the patient or caregiver in order to:

    - Demonstrate sensitivity to the overall needs of the patient
    - Educate the patient or caregiver
    - Determine with the patient or caregiver the treatment priorities
    - Teach the exercise program
    - Encourage the patient's independence throughout the treatment plan
    - Teach the use of an assistive device

4. The student will be able to demonstrate appropriate manual skills in order to:

    - Apply specific techniques to improve range of motion and strength
    - Enhance the teaching or effectiveness of an exercise
    - Safely assist the patient in lifts and transfers
    - Adjust the assistive device

5. The student will be able to document in writing the exercise program.

PERFORMANCE OBJECTIVE

The student will be able to demonstrate knowledge and understanding necessary to implement and carry out an age-specific exercise program that meets specific goals.

COURSE CONTENT

Theory and practice of exercise, including how to move effectively and teach and exercise, will be explored across the life span.:

Topics to be covered:

- Exercise specificity
- Assistive devices
- The healing process
- Determining short and long term goals
- Range of motion and stretching exercises
- Properties of connective tissue
- Properties of skeletal muscle
- Strength training
- Muscle endurance training
- Power training
- Proprioception and balance
- Aquatic rehabilitation

Dress code:

Students must dress in shorts and T-shirt, with or without sleeves depending on the area of the body to be treated.

EVALUATION

-3 Quizzes worth 5%	15%
Assignment:	
-Written	10%
-Oral	10%
-Small written assignment	2%
-Spot checks	3%
-Final Written Examination	20%
-Final Oral Practical	40%

N.B. ***The final oral practical exam must be passed with a C+ or better in order to pass the course.***

This course is a pre-requisite to PHTH-236 (Movement 1 : Musculoskeletal) and to PHTH-220 (Clinical Affiliation 1) offered in the second semester. Movement Science & Practice (PHTH-235) must be passed with a grade of 60 or higher prior to entering clinical affiliation PHTH-220.

REQUIRED TEXTS

Therapeutic Exercise - Technique for Intervention. By William D Brandy and Barbara Sanders. Lippincott Williams and Wilkins, 2001-06-27

Course Pack.

RECOMMENDED TEXTS

Therapeutic exercise. Moving toward function. By Carriie M. Hall, and Lori Thein Brody. Lippincott Williams and Wilkins. 1999

PHTH-236 - MOVEMENT I - MUSCULOSKELETAL
Treatment Procedures for Disorders of the Musculoskeletal System

Credits: 4

Lecturers: J.P. Dumas (Coordinator), E. Aston-McCrimmon, S. De Serres, R. Dykes, M. Kosiuk, A. Gaglietta, D. Perez, R. Toomey, M. Visintin, Guest Lecturers

COURSE STRUCTURE

This course is comprised of four sections, two of which (Sections A and D) are combined with the Occupational Therapy course OCC1-236: To facilitate learning the material from the different sections will be integrated throughout the semester and will be evaluated together during the final practical and written exams for sections A to C.

Section A: Histopathology/Pharmacology/Conditions
Section B: Management of Musculoskeletal Disorders
Section C: Prosthetic Management
Section D: Integrative/Reflective Approach to Management of Musculoskeletal Disorders

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SECTION A: CONDITIONS, PATHOLOGY, HISTOLOGY AND PHARMACOLOGY

Lecturers: J.P. Dumas (Co-Coordinator), S. Fucile (Co-Coordinator), E. Aston-McCrimmon, B. Nedelec

COURSE STRUCTURE

Conditions:	Fourteen 1½ -hour lectures
Histology:	Three 2-hour lectures
Pathology:	One 2-hour lecture
Pharmacy:	One 2-hour lecture
Wound Healing:	One 2-hour lecture

LEARNING OUTCOMES

On completion of this course, the student will be able to:

1. describe the disorders of the musculoskeletal system, in terms of etiology, pathology and signs and symptoms of various orthopaedic conditions.

2. describe the structure of normal tissue in the musculoskeletal system, and the basic pathological changes that occur in orthopaedic conditions.

3. identify and describe the basic actions of pharmaceutical agents used in the treatment of orthopaedic conditions, be aware of their implications to therapeutic intervention and have obtained the skills for self-directed exploration of those pharmaceutical agents which are encountered in clinical practice.

COURSE CONTENT

These lectures will cover the cellular composition of body tissues and their response to injury, as well as the diseases' processes in various musculoskeletal conditions.

This course follows a guest lecturer format, whereby physicians and clinicians present on a variety of orthopaedic conditions, as well as on the topics of pathology, histology, wound healing and pharmacology.

REQUIRED TEXTS

Steinberg, G.G., Akins, C.M. and Baran, D.T. (1999). *Orthopaedics in Primary Care*, (3rd edition). Published by Lippincott, Williams and Wilkins.

RECOMMENDED TEXT

Salter, R.B. (1999). *Textbook of Disorders and Injuries of the Musculoskeletal System*. (3rd edition). Baltimore, Maryland, Williams and Wilkins.

SECTION B: MANAGEMENT OF MUSCULOSKELETAL DISORDERS

Lecturer: R. Toomey (Coordinator), J.P. Dumas, A. Gaglietta, M. Visintin, Guest Lecturers

STRUCTURE

Two 3½-hour lectures/practicals per week for 9 weeks.

GOAL

The overall goal of this section is to present a comprehensive approach to the management of surgical and non-surgical musculoskeletal (including rheumatic) conditions of the upper and lower extremities and introduce the management of simple cervical and lumbar disorders. In order to facilitate the achievement of this goal, students are provided with additional readings and are presented with patients undergoing treatment.

OBJECTIVES

On completion of this course, the student shall be able to:

1. develop an appropriate orthopaedic assessment and treatment plan for a given patient by integrating the knowledge learned in Movement Science and Practice PHTH-235, Assessment in Rehabilitation POTH-239 and Anatomy ANAT-315.

2. discuss a variety of musculoskeletal pathologies related to the extremities.

3. define the role and responsibility of physical therapists in order to determine when a referral to other health professionals is indicated.

4. recognize the roles of other health professionals in the management of musculoskeletal conditions.

5. further develop accurate assessment techniques and a sound interpretation of the results of these assessments.

6. critically evaluate a number of case studies in order to design appropriate Physical Therapy management including home programs, accurate documentation of assessment results, goals, treatment plans, expected outcomes and patient/family education as indicated.

PERFORMANCE OBJECTIVES

The student will demonstrate knowledge and understanding of the concepts, skills and professional behaviors required to effectively and safely perform musculoskeletal treatments and evaluations of patients' outcomes.

KNOWLEDGE

The student shall be able to:

1. describe the osteokinematics and arthrokinematics of normal joint movement and how abnormal movement can influence treatment selection and outcome.

2. outline the process of soft tissue healing and how these stages of healing influence treatment selection and outcomes.

3. explain the effect of immobilization on tissue healing and its effect on Physical Therapy management.

4. describe how pain affects treatment selection and outcome.

5. analyse musculoskeletal deformities, their causes and how they influence treatment selection and outcome.

6. interpret upper and lower extremity peripheral nerve entrapments/injuries and their clinical presentations.

7. recognize the frequently used medical and surgical interventions for common musculoskeletal disorders and their rehabilitation protocols.

8. describe the measurement and treatment concepts related to reliable and valid diagnoses, prognoses and evaluation.

9. recount concepts related to critical appraisal of the evidence for effectiveness of treatment interventions.

10. describe treatment strategies to improve and/or maintain:
    - range of motion
    - strength
    - irritability/pain
    - joint mobility
    - swelling
    - posture
    - gait
    - muscle atrophy
    - balance/proprioception
    - function/ADL
    - abnormal sensation

11. apply the concept of differential diagnoses of common musculoskeletal disorders across the life span in terms of their pathology, cause, clinical presentation and treatment management.

SKILLS

The student shall be able to:

1. communicate in a professional manner given the psychological, cognitive, social and cultural factors which might influence communication.

2. elicit and accurately record a patient's pertinent history.

3. read and document using the SOAPIE system

5. determine the patient's status including technical factors such as level of irritability from the subjective assessment prior to the objective assessment.

6. analyse and interpret assessment findings to properly identify the problems.

7. select, apply and re-evaluate safe and effective treatment techniques in the following areas. Emphasis is on safety and comfort. These include:
   - •postural correction
   - •gait correction
   - •active/passive movements
   - •joint mobilizations
   - •some taping
   - •therapeutic exercise - isometric/concentric/eccentric/closed-open kinetic chain

8. consistently demonstrate safe handling.

9. consistently demonstrate good body mechanics.

10. plan, deliver progress and re-evaluate treatment effectiveness.

11. formulate a complete and comprehensive problem list in order of priority.

12. establish realistic short and long term goals.

13. plan and implement an appropriate treatment approach.

14. determine and select the appropriate treatment tools.

15. demonstrate effective patient and family education skills.

16. instruct patients in lifestyle management which may be directly or indirectly adverse to the patient.

17. evaluate treatment outcomes.

18. review patient goals.

19. estimate predictive outcomes.

20. plan patient discharge.

21. demonstrate appropriate professional behaviours.

TEACHING METHODS

- Mini lectures
- Supervised practise
- Role play/patient simulation
- Small group work
- Case studies
- Hospital visit

REQUIRED TEXTS

Steinberg, G.G., Akins, C.M. and Baran, D.T. (1999). *Orthopaedics in Primary Care*, (3rd edition). Published by Lippincott, Williams and Wilkins.

Hall, C.M. and Brody, L.T. (1999). *Therapeutic Exercise: moving toward function*, (1st edition). Published by Lippincott, Williams and Wilkins.

Primer on the Rheumatic Disease - committee of the American Rheumatism Association, Section of the Arthritis Foundation.

Readings for Rheumatology lectures will be assigned from the Arthritis Canada web site address:

http://www.arthritis.ca/new.html.

Course Pack.

SECTION C: PROSTHETIC MANAGEMENT

Lecturer: M. Aston-McCrimmon, S. De Serres, R. Dykes

STRUCTURE

Two 2-hour lectures and 1-hour practical per week for the first four weeks of term, plus a clinical visit.

GOAL

The goal of this section is to give students an overall approach to the rehabilitation management of amputees.

This rehabilitation process is geared to improving function and quality of life throughout the life span.

OBJECTIVES

On completion of this course, the student will be able to:

1. describe the etiology and clinical features that may lead to amputations..

2. develop an assessment plan for the amputee based on age of cause.

3. develop a management program for amputees based on age, conditions and cause.

4. have an understanding and appreciation of the psychological impact which results after amputation depending on age and cause.

5. discuss the role, responsibility and limitations of the physical therapist in the evaluation and rehabilitation of the amputee in the use of a prosthesis.

6. describe and discuss the components and basic principles involved in upper and lower prostheses and orthoses with emphasis no lower extremity prostheses.

7. describe the role of the physical therapist in relation to the multidisciplinary team in total amputee patient management.

8. given a real or simulated situation be able to:

   a) evaluate the fit, alignment, pre-operatively, post-operatively, preprosthetically and with the prosthesis
   b) select and teach therapeutic exercises for the amputee in all stages of management
   c) use the apply stump bandages to the patient and instruct the patient accordingly

9. evaluate the fit, alignment, appropriateness and use of prostheses.

10. instruct the amputee in gait training and use of the prosthesis in activities of daily living.

CONTENT

The following aspects of the rheumatic diseases will be covered:

- Pre-and post-surgical evaluation of the patient
- Pre-and post-operative management of amputees
- Pre-prosthetic and prosthetic training for amputees
- Components of prostheses and biomechanical principles
- Normal gait and gait deviations
- Gait training activities
- Dressings

REQUIRED TEXTS

Bella J. May. *Amputations and Prosthetics - A Case Study Approach*. F.A. Davis Co.

O'Sullivan, S. & Schmitz, T. *Physical Rehabilitation: Assessment and Treatment,* (3rd edition). F.A. Davis Co.

REFERENCE MATERIAL

Lower-limb Prosthetics, 1998 revision-New York University Medical Center.

SECTION D: INTEGRATIVE/REFLECTIVE APPROACH TO MANAGEMENT OF MUSCULOSKELETAL DISORDERS

Lecturers: S. Beaulieu (Co-Coordinator), J.P. Dumas (Co-Coordinator), A. Gaglietta, E. Aston- McCrimmon, S. Fucile

STRUCTURE

This course will consist of 3½ hours of seminar, 3 days per week for a period of 3 weeks.

OVERALL OBJECTIVES

Occupational and physical therapy students will work together to apply knowledge acquired in musculoskeletal
courses to manage client cases.

COURSE OBJECTIVES

At the end of this course, the student will:

- demonstrate the use of the client-centred approach in case managements.

- demonstrate communication skills required for taking a history, assessing and treating clients (for example, Instructing patients). They will be attentive to clients, and they will demonstrate empathy and interest when interacting with them (in addition see History Taking Checklist handout provided in Assessment in Rehabilitation I).

- identify the other allied health professionals involved in a client's care.

- summarize and prioritize aspects of a case (for example, medical history), eliminating duplication, minimizing overlap and favouring complementarity.

- report verbally, clearly and coherently, the various aspects of the clients' case, all the while maintaining a professional demeanour.

- identify the strengths and weaknesses of group reports given by fellow students and by themselves

COURSE EVALUATION

Section A-C (January-March)

Conditions: Quiz	5%
Management: Quiz	5%
Project	5%
Practical Examination Modified OSCE	40%
Final Written Examination	30%

Section D (May)

The grade received in this section will complete the total mark of the courses PHTH-236.

In Physical Therapy: PHTH-236 Movement I: Musculoskeletal	15%
TOTAL	**100%**

Students must pass all required sections of courses including the modified OSCE, with a grade of at least 60% (C+), before proceeding to clinical placements.

PHTH-241 - ASSESSMENT II: MUSCULOSKELETAL

Credits: 2

Lecturers: J.P. Dumas (Coordinator), G.Boutin, N. Liverani

COURSE STRUCTURE

This course will consist of 1½ -hour lecture/seminars and 3-hour practical sessions per week for ten weeks starting Monday, January 6, 2003 from 9:30 a.m. to 3:00 p.m. as scheduled.

OVERALL GOAL

The overall goal of this section is to present a comprehensive approach in the evaluation of peripheral and vertebral joints and introduce the use of joint mobilisation to treat musculoskeletal disorders. This course will be closely linked with PHTH-236 Movements 1: Musculoskeletal.

OBJECTIVES

A seminar and practical course which focuses on the soft tissue diagnoses of musculoskeletal disorders. The student will acquire the beginning-level knowledge and skills necessary to:

1. perform a subjective evaluation in a professional manner to identify the nature, the severity and the irritability of the patient's condition;
2. recognize the suitability of a patient for manual therapy treatments with proper knowledge of contraindications or precautions to be taken to pursue with the objective examination;
3. perform an orthopaedic objective examination of peripheral and vertebral joints in a concise and organized manner including observation, active, passive, resisted movements, ligaments stress tests, neurological examination if applicable and neural tension test;
4. improve one's manual dexterity with surface anatomy of peripheral joints through practice of soft tissue palpation and use of anatomical theoretical knowledge and relationships;
5. analyse the data gathered through the evaluation and recognize the manifestations of different pathologies and rule out different conditions throughout the objective evaluation;
6. determine the proper treatment procedure and re-evaluation after each technique to verify its effect and pertinence.

REQUIRED TEXT

McGee, D.J. (2002). *Orhopaedic Physical Assessment*, (4th edition). Toronto: W.B. Saunders Co.

EVALUATION

Written Midterm	10%
Assignment	10%
Practical	35%
Written Final	45%

Student must pass the modified OSCE (combined with PHTH-236, with a grade of at least 60% (C+) before proceeding to clinical placements.

TERM PAPERS

PROCEDURE FOR FULFILLING TERM PAPER REQUIREMENTS

No paper will be accepted late without an explanation to and on approval by the staff involved, **PRIOR** to the original date of submission. A new deadline may then be arranged between the staff and student **if the staff considers the request to be valid.** Failure to conform to this procedure may mean that the student will automatically receive a mark of "0" for the paper.

GUIDELINES FOR WRITING A TERM PAPER

– TERM PAPERS

- must be typewritten and double spaced.
- size of paper, 8 ½ x 11", heavy duty, white bond.
- margin: 1" on all sides.
- written in Times New Roman, Arial or Courier New font.

– SEPARATE PAGE FOR THE FOLLOWING READINGS:

- title page
- abstract
- acknowledgement
- index of contents
- introduction and objective of paper
- presentation
- discussion
- conclusion
- reference or bibliography
- appendix

a) Title page shall contain

- title of article
- author's name
- course number
- professor's name
- date

b) Abstract

- 100 to 250 words may be required (depending on the professor)
- the abstract is a concise statement about what was done, what was found and what was concluded.

c) Acknowledgement Includes

- names and positions of any individuals who have helped in the preparation of the project, in assessing the results, or in preparing the illustrations or graphs, as well as;

- names of any agency such as professional organizations or the Dominion Bureau of Statistics who have provided data.

d) Index of Contents

- this must be included with their page numbers.

e) Introduction

- this section should introduce the topic and state clearly the objective of the paper as well as define any terms which may not be of common usage and known to every one in the particular context of the paper, for example, a qualified therapist is one who ....., and an unqualified therapist is one who .....

f) Presentation

- this part contains the "body" of the paper and it should be subdivided into sections depending on the content. These sub-sections must be listed separately in the index under 'presentation'.

g) Discussion - Conclusion

- this part should reflect whether the paper has helped to clarify or resolve the original purpose.
- practical implications that could be drawn from the paper could be presented here.
- ideas from the paper that could be useful for further study could also be given.

h) Bibliography or References

The term bibliography is much too pretentious except in the case of a library study which contains a complete list of everything published within specified limits about the subject.

References (books, personal comments, documents, articles) are sources through which the author has obtained information. The value of an article is not measured by the number of references and they should not be included merely to impress the professor. The worst sin is to include a list of references which have never been read or seen by the author.

All references, be they ideas or fact from work of another person, must be documented. If they are not, this constitutes "PLAGIARISM".

See Section on "Plagiarism".

TERM PAPERS

The referencing system of the American Psychological Association (APA) may be used for term papers.

Reference Citations in Text

References are to be cited by the author - date method; that is, the surname of the author and the year of publication are inserted in the text at an appropriate point:

Mosey (1974) compared reaction times.
In a recent study of reaction times (Mosey, 1974)

This method gives useful information in the text and enables the reader to locate the citation easily in the alphabetical reference list.

If a paper has two authors, always cite both names every time the reference appears in the text:

Smith and Jones (1975) discovered.

If a paper has more than two authors, cite all authors the first time the reference occurs; include only the surname of the first author followed by 'et al' and the year in all subsequent citations of the same reference.

Williams, Jones and Smith (1975) discovered.....
Williams, et al. (1975) found.....

Multiple citations in parentheses at the same point in text follow the order of the reference list. Therefore, multiple citations of the same author are arranged in chronological order, separated by commas, and the author's name is not repeated for each work. In citing more than one paper by the same author in one year, the suffixes a, b, c, etc., are added after the year, and the year is repeated. (These same suffixes are used in the reference list). In-press citations come last.

Recent studies (Jones, 1956, 1958, 1966a, 1966b, in press-a, in press-b) have shown.

If different authors are cited at the same point in text, the citations are arranged alphabetically by authors' surnames, separated by a semi-colon, and enclosed in one pair of parentheses.

Recent studies (Brown & Smith, 1965; Smith, 1962, 1964; Williams, 1971) have shown.

Reference Lists

The reference list at the end of each journal article establishes the authority of the article by citing material publicly available. Authors should choose references wisely and only include sources that readers can retrieve. A reference list cites works that specifically support a particular article. This is in contrast to a bibliography, which cites works for background or further reading. References cited in text must appear in

the reference list, and conversely, each entry in the reference list must be cited in text. The author must make certain that references appear in both places and are in agreement.

All references should be prepared in the following style:

Sequence

Arrange the elements in a reference entry in the following order:

Author: all authors of the work, with surnames and initials (not full name) in inverted order.
Date of publication.
Title: article, chapter, or book.
Facts of publication: For journals - journal name in full, volume number, inclusive pages.
For books - city of publication, publisher's name.

Punctuation

Use periods to separate the three major subdivisions of a reference citation: author, title, and publication data. Use commas within the subdivisions (e.g. between date and volume number in a journal entry). Use a colon between the place of publication and the book publisher. Use parentheses for extensions, qualifications, or interpretation of each subdivision for the entire entry.

Periods separate the subdivisions:
'Author, J.P.' 'Year' 'Title of the work.' 'Publication data'

Commas separate within subdivisions:
Publication date for journal
'American Psychologist, 28, 376-384.'

Publication data for a book:
'Academic Press'

A colon separates the place of publication and the publisher:
'New York:: Academic Press'

Capitalization

Capitalize entries according to the following:

Journal titles: Capitalize the first letter of the first word of the title.
Article, chapter, or book titles: Capitalize the initial letter of the first work only. Make exceptions according to common usage, such as capital letters for proper names, first word of a title within a title, and first word after a colon or dash.

Abbreviations

Titles of journals are not abbreviated; they are spelled out in full.

Arabic numerals

Although some volume numbers of books and journals are given in roman numerals, APA journals use Arabic numerals for all numbers in reference lists (e.g., Vol.3, not Vol. III).

Examples of Reference Citations

Journals

1. Journal article, one author.
   Harlow, H.F. (1962). Fundamental principles for preparing psychology journals, articles. Journal of Comparative and Physiological Psychology, 55, 893-896.

2. Magazine article, no author.
   The blood business. (1972, September 11). Time, pp. 47-48.

Books

– Book and two authors, second edition, Jr. in name.
  Strunk, W., Jr., & White, E.B. (1979). The elements of style (3rd ed.). New York: Macmillan.

– Article in an edited book, two editors, one volume of multivolume work.
  Riesen, A.H. (1966). Sensory deprivation. In E. Stellar & J.M. Sprague (Eds.), Progress in physiological psychology: Vol. 1 (pp. 239-252). New York: Academic Press.

Online Journals

Author (Year). Title. Journal Title [Type of medium], volume (issue), paging or indicator of length. Available. Supplier/Database name/Item or accession number [Access date].

Example:
Clark, D. (1998). APA is easy! Writing Skills for Nursing Students, [Online] 1(1), 15 paragraphs. Available. Http://www.gcse.edu/~djclark/skills/apa.htm [1999, January 1].

FOOTNOTES

Acknowledgement and author identification:
Standard footnotes of acknowledgement and author identification appear on the first page of an article.

Content footnotes: Content footnotes are explanations or amplifications of the text. Because they are distracting to readers they should only be included if they strengthen the discussion.

Table Footnotes: Table footnotes are appended only to a specific table.

Numbering of Footnotes: Text footnotes should be numbered consecutively throughout the article with superscript Arabic numerals. If, after a footnote occurs it is later mentioned, use a parenthetical note "(see Footnote 3)", rather than the superscript number.

Footnotes to a table should be lettered consecutively within each table with superscript lowercase letters.

i) Appendix

An appendix, although rarely used, is helpful under certain circumstances. If describing certain materials in depth would be distracting or inappropriate to the main body of the paper, you might include an appendix.

Some examples of suitable material for an appendix are:

a) sample of questionnaires, evaluation forms, etc.
b) a list of materials used in the study.
c) samples of patients' productions.

The criterion for including an appendix should be whether it is useful to the reader in understanding, evaluating, or replicating your study. Material of either general or specialized interest should not be presented for its own sake. If an appendix is used, the reference in text should read:

(See Appendix A for complete derivation).

AUDIOVISUAL GUIDELINES

GENERAL INFORMATION

The School has a small video-library which is stored in Hosmer House, Room 11 in the basement. Contents are indexed, filed in order and listed in a folder in Hosmer House, Room 11.

If you wish to use these materials, present your student ID card to Mr. Alan Hammaker, the Chief Technician in Hosmer House, Room 11, who will help you locate the suitable materials and will ask you to fill out a loan card. Your ID card will be returned to you once the borrowed materials are returned.

You may view audiovisual material in the Health Sciences Library in the McIntyre Medical Sciences Building, and by special arrangement in Hosmer and Davis Houses if School equipment and rooms are available.

RULES AND REGULATIONS

1. All audio-visual material to be borrowed MUST BE SIGNED IN AND OUT. A yellow loan card for this purpose is available in Hosmer House, Room 11.

2. Instruction sheets and pamphlets are available for all items of equipment. They are filed alphabetically by manufacturer in Hosmer House, Room 11. STUDENTS MUST LEARN THE CORRECT METHOD OF OPERATION OF ALL EQUIPMENT BEFORE USE. If you are having problems operating the equipment, please contact your course coordinator. If the equipment is not functioning properly, please contact Mr. Alan Hammaker in Hosmer House, Room 11 (398-4516) immediately.

3. Immediately after viewing, all audio-visual materials must be returned to Hosmer House, Room 11.

4. Any equipment in need of repair should be reported to Mr. Alan Hammaker immediately.

TEACHING SLIDES

A file index of slide topics is in Hosmer House, Room 11 along with the slide collection. These are also available for loan on the same basis as other audio-visual materials.

CATALOGUES

A small selection of video-tape and film catalogues is available in Hosmer House, Room 11.

LIBRARY

The McIntyre Health Sciences Library is the main reference and lending library for students in the School of Physical and Occupational Therapy. The following are a few of the pertinent journals available:

Canadian Journal of Occupational Therapy
American Journal of Occupational Therapy
British Journal of Occupational Therapy
Physiotherapy Canada
Physical Therapy (Journal of the American Association)
Journal of Orthopaedic and Sports Physical Therapy
American Journal of Physical Medicine
Rheumatology and Rehabilitation
Developmental Medicine and Child Neurology
Orthotics and Prosthetics
Scandinavian Journal of Rehabilitation Medicine
International Journal of Rehabilitation Research

GENERAL INFORMATION

The McIntyre Health Sciences Library

a) Journal Stack Sections - Journals are placed in the STACK SECTION corresponding to the TITLE of the journal, e.g. AJOT was the title for the American Journal of Occupational Therapy for the years 1978/79, therefore look under AJOT. Prior to and following these dates, the title was changed to 'American Journal of Occupational Therapy', therefore it is now necessary to look under American Journal of Occupational Therapy.

b) The Subject Micro Catalogue System - gives information about journals relevant to occupational therapy and physical therapy. Look up . . . 'Occupational Therapy' or 'Physical Therapy'.

c) Index Medicus and Excerpta Medica - will assist in providing relevant reference material and are invaluable when writing term papers.

d) Journals published prior to 1961 are on the 2nd floor of the McIntyre Medical Sciences Library, those published in 1961 and after are on the 3rd floor.

THE SCHOOL OF PHYSICAL AND OCCUPATIONAL THERAPY

GUIDELINES FOR THE USE OF THE PHYSICAL AND OCCUPATIONAL THERAPY UNDERGRADUATE AND GRADUATE COMPUTER LABORATORY

LOCATION

This computer laboratory of twelve stations is for the exclusive use of the Physical and Occupational Therapy students and is located on the second floor, Room 201D and 201E (situated to the left and right of rooms 235 and 234) of the McIntyre Medical Sciences Building, 3655 Promenade Sir-William-Osler.

HOURS

The laboratory will be open 24 hours a day.

ACCESS

All Physical and Occupational Therapy students will have their own NT account instead of logging on with the general student account. The student's user name will have the structure of the first 5 letters of their last name and the last two digits of his/her graduating year, example: John Smith, Graduating Year 2000, would have a user name of Smith00. If there are two or more Smith family names, then the user name would be Smith001, Smith002. Students have have a last name shorter than 5 letters will have their full last name. The initial password will be the student's ID number which is located below his/her name on his/her ID card. It usually takes the form of 9XXXXXX.

The default client that has been chosen is Outlook Express. Email accounts have also been created for you. The user name is the same as your NT user name (see example above). Email will only have to be set up once; these settings will then be retained on the server after you logoff. This means that when you logoff and come in the next day, the email setup will be downloaded from the server.

In order to change your password, follow the instructions given at the website: https://www.medcor.mcgill.ca/management/cyrusaccpasswd.html. In order to set up Outlook Express, follow the instructions from website http://www.medcor.mcgill.ca/email/outlook_setup.htm.

Students also have space on the NT server where they may save files. By default, when you choose save from Word, it will take you to your folder on the server. From Explorer you can see that there is a mapped drive with the letter K:, this contains all the folders on the server for your class year. You will see all the folders for your class year but you will only have access to your own folder. This data will be backed up every night. All data on the local PC is not backed up. There is also a 35 MB Quota set per user. If you surpass this quota you will not be able to save anymore and you must perform some cleanup.

In order for other students to use the computer, you must logoff. To logoff, you click on Start and select Log Off. If you do not logoff your account is left open and may be used by the next student. This means that they can read your email or any files that you have saved on the server. All accounts will be automatically logged off after 30 minutes of inactivity, all open files will be closed but not saved. In order to change your NT password, you must logon and then press Ctrl + Alt + Delete and then click on the Change Password Button.

Any comments or questions should be directed by email to pravin.mistry@mcgill.ca

August 4, 1999