School of Physical and Occupational Therapy

b.sc. physical THERAPY U3

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S.E., K.B./revised June 2003

McGILL UNIVERSITY
School of Physical and Occupational Therapy

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B.Sc. PHYSICAL THERAPY U3 IMPORTANT DATES:

FALL TERM:	Registration Period	Mar. 27, to Aug. 4, 2003
	Labour Day	Sept. 1, 2003
	Lectures Begin	Sept. 8, 2003
	Course Change (drop/add period)	Mar. 27 to Sept. 14 2003
	Thanksgiving Day	Oct. 13, 2003
	Last Day of Lectures	Nov. 7, 2003
	Examination Period	Nov. 10 – 14, 2003

WINTER TERM: Classes Commence Feb. 9, 2004
Course Change (drop/add period) Mar. 27 2003 to Jan. 18 2004
Midterm Break Feb. 23 – 27, 2004
Last Day of Lectures Apr. 13, 2004
Examination Period Apr.15 – 30, 2004

SUMMER TERM: CLINICAL AFFILIATION

- U3– (5) Week Rotations
  - Nov 17 – Dec 19, 2003
  - Jan 5 – Feb 6, 2004

- Clinical Affiliation Seminars
  (tentative dates- actual dates to be posted on Minerva)
  - § Sept. 19, 2003
  - § Sept. 26, 2003
  - § Oct. 3, 2003
  - § Oct. 7, 2003

U3 CURRICULUM PLAN 2003-2004 PHYSICAL THERAPY PROGRAM

FALL TERM

Academic Term (9 wks) + Exams (1 wks) + clinical affiliation (5 wks) = total 15 Wks

Academic Term Sep 8 to Nov 7	**Exams** Nov 10 to 14	**Clinical Affiliation** Nov 17 to Dec 19
POTH-401 RESEARCH METHODS 3cr		PHTH-420 CLINICIAL AFFILIATION IV 3cr
PHTH-432 PAIN MANAGEMENT 3cr		
PHTH-433 COORDINATED REHABILITATION I 3cr		
POTH-447 SPECIALIZED AREAS OF PRACTICE 2cr		

WINTER TERM

Clinical affiliation (5wks) +Academic Term (8 wks + Exams (2 wks) = Total 21 Weeks

Clinical Affiliation Jan 5 to Feb 6	**Academic Term** Feb 9 to Apr 13	**Exams** Apr 15 to 30
PHTH-421 CLINICIAL AFFILIATION V 3cr	POTH-445 ADMINISTRATION/MANAGEMENT 4cr	
	PHTH-435 COORDINATED REHABILITATION II 2cr	
	PHTH-438 FITNESS/INJURY MANAGEMENT 2cr	
	POTH-446 CURRENT TOPICS IN REHABILITATION 3cr	

NOTE: OCC1 = Occupational Therapy
POTH = Occupational/Physical Therapy
ANAT = Anatomy
PHGY = Physiology

U3 PHYSICAL AND OCCUPATIONAL THERAPY LIST OF REQUIRED COURSES

Fall Term : Sept. 8, to Nov. 7, 2003

Clinical Affiliations Nov. 17, to Feb. 6, 2004

Winter Term Feb. 9, to Apr. 13, 2004

Exam Period: Nov. 10, to 14, 2003

Exam Period: Apr. 15, to 30, 2004

2003-2004 OCCUPATIONAL THEARPY PROGRAM U2		
Course Number	**Course Name**	**Credits**
POTH-401	Research Methods	3
OCC1-424	Splinting and Orthotics	2
OCC1-436	OT Practice V: Medical & Surgical Conditions	3
OCC1-437	OT & Community Mental Health	3
OCC1-438	Psychosocial Theories in OT	3
OCC1-440	Prevocational & Vocational Rehabilitation	2
OCC1-441	Advanced Technology/Ergonomics	2
POTH-445	Administration/Management	4
Fall or Winter Term	Professional Specialty Course	2
OCC1-420	Clinical Affiliation IV	3
OCC1-422	Clinical Affiliation V	3
FALL & WINTER TERMS – TOTAL CREDITS 30		
2003-2004 PHYSICAL THERAPY PROGRAM – U2		
Course Number	**Course Name**	**Credits**
POTH-401	Research Methods	3
PHTH-420	Clinical Affiliation IV	3
PHTH-421	Clinical Affiliation V	3
PHTH-432	Pain Management	3
PHTH-433	Coordinated Rehabilitation I	3
PHTH-434	Biomechanics	3
PHTH-435	Coordinated Rehabilitation II	3
PHTH-438	Fitness/Injury Management	2
POTH-445	Administration/Management	4
POTH-446	Current Topics in Rehabilitation	2
POTH-447	Specialized Areas of Practice	2
FALL & WINTER TERMS – TOTAL CREDITS 31		

POTH-401 RESEARCH METHODS

Credits: 3

Lecturer: N. Korner-Bitensky, Hosmer H201, (514) 398-5457,
nicol.korner-bitensky@mcgill.ca and Members of the faculty

Course Structure:

Two 2-hour sessions per week for 9 weeks. Lectures, seminars or self-directed sessions. Fall term in the third year of the program.

Course Purpose:

The purpose of this course is to expand the knowledge and skills related to research, so that the graduating therapist is able to critically appraise the quality of the research available and to actively participate in research projects.

Learning Objectives:

Upon completion of this course the student will be able to:

1. Describe strengths, weaknesses and applications of various research designs.
2. Design a questionnaire for use with clients, family members or health professionals.
3. Discuss the factors to be considered when selecting a measurement tool for clinical practice or research.
4. Classify the current evidence on the effectiveness of an intervention according to specific guidelines and synthesize this information for clinical applicability.
5. Design an evaluation of an existing or a new program.
6. Describe the concepts of cost, cost effectiveness and cost benefit and how they relate to intervention studies.
7. Have the necessary understanding of research ethics guidelines to serve as a member of an ethics committee that reviews rehabilitation protocols.

Course Schedule:

1. Overview of course: survey methods (sampling)
2. Questionnaire design
3. Statistics : use and misuse
4. Cross-sectional studies : theory and application in rehabilitation
5. Case-control studies : theory and application in rehabilitation

6. Cohort studies : theory and application in rehabilitation diagnostics
7. Experimental and quasi-experimental designs. Cross over studies
8. Association versus cause
9. Outcome measures : reliability, validity, responsiveness
10. Outcome measures : selection and application in rehabilitation
11. In-class quiz
12. Asking and answering a research question
13. Single subject designs : use in clinical practice and research
14. Program evaluation
15. Qualitative approaches
16. Cost analysis in health care
17. Ethics in research
18. Seminars for selected topics

Required Text:

Foundations of Clinical Research : Applications to Practice. 2nd ed. Portney LG, Watkins MP. Appleton & Lange; Norwalk, Connecticut, 2000.

Evaluation:

1. Quiz:	30 marks
2. Seminar presentation and topic critique:	35 marks (10 oral/25 written)
3. Final exam:	35 marks

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POTH-445 ADMINISTRATION/MANAGEMENT

Credits: 4

Lecturers: C. Storr (Co-Coordinator) Davis D2, (514) 398-6561, caroline.storr@mcgill.ca

Course Structure:

The course geared to Physical and Occupational Therapy will consist of lectures, seminars, presentations over an eight week period on Monday and Wednesday mornings from 9:30 a. m. - 12:30 p.m. starting in 2004 following Clinical Affiliation ;OCC1 421/PHTH:421,.

Course Rationale:

This course is the second professional issues course and builds on knowledge acquired in Healthcare and Professionalism; POTH 250

As the practice of Physical and Occupational Therapy shifts from a hospital/rehabilitation base to ambulatory care, the community and the private sector, increased business and management skills are needed. This course is designed to incorporate business administration as it pertains to the health field to include organizational and management knowledge for the development of skills and behaviours required to support practice both in the public and the private sector. It incorporates an understanding of organizational and change theory, as well as marketing and entrepreneurial strategies.

These skills and behaviours in administration and management are developed and refined with experience gained following graduation, and are not expected to be well developed in the entry-level practitioner.

Thus, the skills and behaviours anticipated in the new graduate will involve knowing where and how to obtain the supports, mentoring and resources to fulfill the responsibilities related to administration and management functions which may be required in the work situation. Life-long learning in the area of administration/management is an anticipated outcome.

The goal of this course therefore is to sensitize students to the administrative and management processes appropriate for the changing roles that the physical or occupational therapy graduate will have in the years to come.

Learning Outcomes:

Based on a knowledge of organizational theory, management, health care and human resource policies, the student shall be able to:

1. Position the professions of Occupational and Physical Therapy in relation to legisla-tion, health professional organizations and unionization;
2. Relate professional ethics, liability issues and the law to professional practice;
3. Apply the dimensions of Codes of Ethics to the practice of Occupational and Physical Therapy.
4. Reflect on personal leadership abilities in preparation for a professional practice as a clinician and a fieldwork educator;
5. Given public and private rehabilitation facility situations:

a) Perform an environmental scan

b) Identify the administrative tasks involved in their management;

c) Identify and prepare pertinent facility records and reports and indicate how they are used and maintained;

d) Design a rehabilitation facility for each setting taking into account the specific client population needs and the economic, architectural and human resource factors and merits;

e) Understand and apply marketing principles;

e) Outline a total quality management control program including risk and utilization parameters;

6. Analyse the intricacies of interpersonal relationships and team interactions within the health care system;
7. Identify and provide positive reinforcing recommendations for interpersonal relationships and team management.
8. Assess and modify program process and outcomes

Course Content:

A. Principles of Organizational Theory:

- organizational design and behaviour theory
- development and strategy
- organizational change theory and strategy
- organizational restructuring

- governance

B. Principles of Management Theory to Include:

- development of mission and mandate
- leadership theory
- facilitation of teams
- program and service delivery planning
- matrix and program management and evaluation
- quality management, quality improvement, quality assurance, risk management
- policies and procedures - purpose and development
- departmental planning in public and private sectors

C. Strategic Information Management:

- outcome/effectiveness indicators and charting
- management information, productivity and service utilization
- client-based information systems (case mix, grouping, methodologies and clinical records)
- market and business analysis
- privacy/confidentiality requirements and responsibilities

D. Human Resource Policy, Planning and Management:

- recruitment, selection, retention, evaluation
- compensation systems
- supervision, delegation and facilitation
- labour relations - impact on workplace, work teams, conflict resolution
- curriculum vitae/resume - preparing and interpreting
- job interview process, job preview process
- employee assistance, e.g. stress management counselling
- alternative employment contracts
- equity issues

E. Fiscal Resource Management Including:

- budgeting process
- productivity
- cost-effectiveness

F. Modes of Service Delivery Including:

- institutional practice
- private practice
- community based practice including health management organizations (HMOs), local community health clinics (CLSCs)
- industrial/worksite based practice
- evidence-based practice

G. Standards of Practice Issues:

- efficiency
- efficacy
- appropriateness
- cost effectiveness
- outcome measures

- ethical/legal considerations

H. Marketing and Entrepreneurial Strategies:

- environmental analysis
- developing the business plan and requests for proposal
- outsourcing on non-core competencies, e.g. technical writing, public relations
- strategic marketing
  - business marketing, strategic business planning
  - social marketing

Course Schedule
Winter Term - 2004

The course will be given from 9:30-12:30 on Mondays and Wednesdays starting on February 9th, 2004.

I	Leadership	C. Storr
II	Human Resource Policy	C. Storr
III	Marketing Concepts /Consumer Behaviour	C. Storr
IV	The Basics of Financial Accounting/	Maribeth Ford

Cost-benefit analysis:

V	Entrepreneurship & small business	C. Storr
VI	Private Practitioner Panel/workshop	C. Storr
VII	Principles of Management Theory	A. DiRe
VIII	Quality management /program evaluation	A. DiRe
IX	Standards of Practice Issues	A. DiRe
X	Fiscal Resources & Strategic Information Management	A. DiRe
XI	Professional Issues	C. Storr/L. Asseraf-Pasin
	Advocacy, Cross-Cultural Issues and Liability Orders	
XII	Service Delivery Models/Gaps in Service	G. Prata
XIII	Student Presentations	C. Storr
XIV	Student Presentations	C. Storr

XV	Student Presentations	C. Storr
XVI	Student Presentations	C. Storr
XVII	Student Presentations	C. Storr

Required Readings:

Code des Professions - Editeur Official du Québec
To be assigned by different lecturers.

Recommended Readings:

Bailey, D.M. & Schwartzberg, S.L. *Ethical and Legal Dilemmas in Occupational Therapy*. F.A. Davis.

Blair, J. & Gray, M. (1985). *The Occupational Therapy Manager*. The American Occupational Therapy Association.

Health Care Restructuring: A Resource Manual for Physotherapists (CPA) (Available from the McGill Book Store)

Hickok, R.J. *Physical Therapy Administration and Management*, (2nd edition). American Physi-cal Therapy Association.

Physiotherapy/Occupational Therapy Workload Measurement System. Health and Welfare Canada, 1988.

Purtilo, R. (1993). *Ethical Dimensions in the Health Professions*. W.B. Saunders.

The Canadian Patient's Book of Rights _ Lorne Elkin Rozovsky.

Treatment and Progress Records: A Guide to the Preparation and Keeping of Treatment and Progress Records- Canadian Physiotherapy Association.

Walter, J. (1993). *Physical Therapy Management*. Mosby.

Clinical Practice Guidelines, A Discussion Paper for the Canadian Physiotherapy Association - The Canadian Physiotherapy Association, May 1996.

Evaluation:

1. Group OT/PT Project **60%**
    1. Presentation (scheduled during last 5 classes) (25%)
    2. Paper (due last day of class) (35%)

    Paper = 25%
    Project Outline = 5%
    Peer Group Evaluation = 5%
2. Written Examination - Case-Based Format (during Examination Period) **40%**

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PHTH-420 CLINICAL AFFILIATION IV

PHTH-421 CLINICAL AFFILIATION V

Credits: 3 - PHTH-420
3 - PHTH-421

Lecturer: L. Asseraf-Pasin, Director of Clinical Education, Davis D7, (514) 398-5594, Liliane.asseraf.pasin@mcgill.ca
A. Gaglietta, Assistant Academic Co-ordinator of Clinical Education, Davis D38, (514) 398-4511, Amelia.gaglietta@mcgill.ca

Course Structure:

These two courses are the fourth and fifth of the five Clinical Practicum courses which commenced in U1 and continue over 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 evaluations for these rotations will be used to judge the clinical competence of the student in the overall clinical affiliation program. Each of the five clinical affiliations must be passed sequentially.

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 and therefore a rotation must be repeated for which a satisfactory level of achievement must be obtained. If a subsequent weak pass is obtained during the program, the student will be required to withdraw from the program.

Objectives:

The purpose of the clinical training program is to:

1. Provide opportunity for the integration and application of theoretical knowledge of the basic and clinical sciences to a new clinical context

2. Encourage the student to make use of all resources to supplement and reinforce the material covered in the academic curriculum

3. Provide guidance in the performance of effective evaluation procedures

4. Develop observational, analytical and interpretive abilities for effective evaluation of the patient and planning of treatment goals

5. Develop student's ability to design appropriate treatment programs and modify them according to the changing status and safety of the patient

6. Develop student's ability to execute effective therapeutic procedures

7. Develop student's organizational ability so as to make optimal use of time

8. Develop qualities necessary for effective interpersonal relationships (with patients, other health care professionals and non-professional staff)

9. Develop verbal and written skills

10. Develop professional behaviour in accordance with the existing code of ethics of the O.P.P.Q.

11. Define and strive for achievable outcomes

12. Use differential diagnosis and predict prognosis

Format:

Clinical Session Dates - 2003-2004

U3	Session V	November 17- December 19, 2003
U3	Session VI	January 5 - February 6, 2004

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.

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.

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 sheet. The booklet is made available in March of the first year of studies and must be picked up from Room D5 by March 15. 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.

Hospital Handbook:

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

Immunization:

Reminder: All students must have obtained the immunization card from the McGill Student Health Services before entering the first clinical placement. 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 will result in the student being unable to enter the clinical setting.

Cardiopulmonary Resuscitation:

Reminder*:* It is compulsory that all students have a valid up-to-date CPR certificate before entering each clinical placement. This certification must be maintained over the three years of the program.

Failure to attain a valid CPR certificate Level C before the Clinical Periods will result in the student being unable to enter the clinical setting.

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PHTH-432 PAIN MANAGEMENT

Credits: 3

Lecturers: A. Lamontagne (Coordinator), Hosmer H307, (514) 398-5864
Anouk.lamontagne@mcgill.ca and Guest Lecturers

Course Structure:

This lecture/seminar course takes place in the fall term, twice a week.
Students will attend lectures, participate in clinical solving sessions and perform case presentations.

Learning outcomes:

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

1. Explain the anatomical and neurophysiological bases of pain, including peripheral and central mechanisms, as well as pain modulation.
2. Explain the current theories underlying the physical, psychological and pharmacological bases of pain relief
3. Recognize how age, gender, culture and the environment contribute to experience of pain and must be considered in the assessment and management.
4. Assess pain in adult, pediatric and elderly clients
5. Discuss the difference between acute and chronic pain in terms of assessment and management
6. Describe the pathophysiology and plan appropriate interventions for specific chronic pain syndromes such as phantom limb pain, 'hemiplegic shoulder', fibromyalgia, neuropathic pain and others.
7. Recognize the principles of psychological and pharmacological intervention to treat pain, and the multidisciplinary approach undertaking by pain clinics
8. Search for available WEB resources on pain management, including WEB sites on systematic reviews.
9. Critically analyze the assessment and intervention strategies in pain management.

Required Text:

Pain: A Textbook for Therapists (2002). J. Strong, A.M. Unruh, A. Wright and G.D. Baxter. (Eds). Churchill Livingston, Toronto, 461 p.

Recommended Text:

TBA

Evaluation:

Self-Learning	10%
Assignment	20%
Case presentation (oral)	20%
Final Exam (short answers)	50%

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PHTH-433 COORDINATED REHABILITATION I

Credits: 3

Lecturers: (Co-ordinator): Katherine Berg PhD PT- Director, Physical Therapy , Davis D22, (514) 398-6750, Katherine.Berg@mcgill.ca

Office hours: Wednesdays 11:30 to 2:00pm or by appointment.

Course Description:

4 hours per week for 9 weeks.

A theme-based study of the interdisciplinary approach to rehabilitation. Themes will include health care issues across the lifespan, special problems of adolescents and the aged as well as maternal and child health. The focus is on long-term management.

Course structure:

Classes will consist of lectures, and student lead discussions/ presentations.

Aims:

The course has four specific aims:

1. To familiarize students with common conditions and issues faced by paediatric and geriatric patients.
2. To reinforce students' skills in evidence-based practice including identification of diagnostic, prognostic and outcome measures that influence clinical decisions.
3. To develop introductory skills in encouraging/motivating patients to change or adopt new behaviours
4. To explore coordination of care including role of diverse services and other professionals in meeting patient needs across an episode of care and long term for patients with chronic conditions.

Schedule and lecture outline: To be placed on WebCT prior to the first day of class.

September 8 at 9AM: Seminar on Management of patients with AIDS (attended jointly with OT students)

September 10- 9AM-11am McIntyre room 1034 Pediatrics lectures begin:
E. Kennedy and J. Ruck -Gibis
September 15- 1pm-3pm Meakins Geriatrics lectures begin: K. Berg

Content of pediatrics to include the following conditions: Cerebral Palsy, Developmental Delay, Spina Bifida, Muscular Dystrophy, Osteogenesis Imperfecta, Palgiocephaly/ Torticollis, Brachial Plexus Lesions, Juvenile Rheumatoid Arthritis and Scoliosis/Kyphosis
Content of geriatrics to include: Measurement of physical function, Comprehensive Geriatric Assessment, and geriatric syndromes eg Falls and Integrated Health information systems.

Specific Learning Objectives (pediatrics):

The student will:

1. Demonstrate an understanding for the pathophysiology and clinical manifestations of the conditions discussed in the class.

2. Demonstrate an understanding for the way in which the pathophysiology of the condition affects the sensory-motor function of the child.

3- Develop the knowledge and skills to use appropriate assessment tools and outcome measures in the evaluation process.

4- Plan and implement effective treatment strategies based on the clinical manifestations of the condition and the needs of the child and the family.

5- Be able to adapt intervention strategies during the transitions from childhood to adolescence and adolescence to adulthood.

Specific learning objectives (geriatrics):

The Student will on completion of this course, the student shall be able to:

1. Apply knowledge of screening for modifiable and non-modifiable risk factors for falls, functional decline, delirium and incontinence to assessment and care planning.
2. Demonstrate understanding of ICF (International Classification of Functioning) as framework for assessment, planning of multi-dimensional interventions and choice of outcomes for older adults.
3. Apply theories of motivation and behavioral change when encouraging patient self-care management and lifestyle changes.
4. Recognize roles of other professionals and types of geriatric services at different points in progress or recovery of older adults and at different points in continuum of care.

Evaluation:

TBA (via posting on WebCt before first day of class).

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PHTH-434 BIOMECHANICS

Credits: 3

Lecturer: Sophie J. DeSerres, (Co-ordinator), Hosmer 305, (514) 398-4548
Lab (450) 688-9550 Ext. 622, Sophie.deserres@mcgill.ca
Office hours: TBA

Course Structure:

Two 2.5 hour periods per week: Tuesday and Thursday from 9:30 a.m. to 12:00 p.m.

Two optional review sessions: One during the week prior to the mid-term exam and
One during the week prior to the final exam.

Pre-requisite:

POTH-222 Kinesiology – Course open to students in the Physical Therapy Program.

Course Description:

A problem-based course covering the application of physical, physiological and technological principles to the study of the human body in health or disease across the life span. The students will develop a knowledge of how these principles relate to the mechanisms of traumatic or chronic injury, clinical evaluations and treatments.

Learning Outcomes:

1) Acquire knowledge of fundamental principles, general concepts and theories related to the mechanics of the human body and technical aids.
2) Integrate these principles, concepts and theories to prior knowledge of anatomy, physiology, physics and mathematics.
3) Explain the basic theories as they apply to biomechanics.
4) Identify problems and specify the assumptions relevant to the situations of interest.
5) Apply the fundamental principles and general concepts of biomechanics to problems that are novel situations when compared to those presented in class, by formulating the appropriate solutions.
6) Synthesize and analyze the arguments related to a biomechanical theory which generates controversial opinions in the current scientific literature.

Required Text:

Nordin, M. and Frankel, V.H. (2001). *Basic Biomechanics of the Musculoskeletal System*, 3rd Edition. Lippincott Williams & Wilkins, Philadelphia, PA (available at the McGill Bookstore in January).

Supplemental articles, texts and handouts will be distributed to the students, when necessary.

Other References:

Abernathy B, Kippers V, Mackinnon LT, Neal RJ, Hanrahan S (1997). *The Biophysical Foundations of Human Movement. Human Kinetics,* Champaign, IL.

Bell F, (1988) *Principles of Mechanics and Biomechanics*. Stanley Thornes Ltd., Cheltenham, UK.

Brownstein B and Bronner S (1997). *Evaluation Treatment and Outcomes Functional Movement in Orthopaedic and Sports Physical Therapy*. Churchill Livingstone, New York, N. Y.

Enoka RM (2001). *Neuromechanical Basis of Kinesiology*, *Human Kinetics*, (3rd Edition). Champaign, IL.

Gowitzke BA, Milner M (1988). *Scientific Bases of Human Movement*, 3rd Edition. William & Wilkins, Baltimor, MD.

Hamill J and Knutzen KM (1995). *Biomechanical Basis of Human Movemenets*. Williams & Welkins, Media, PA.

Nigg BM and Herzog W (1994). *Biomechanics of the Musculoskeletal System*. John Wiley & Sons, New York, NY.

Oh SJ (1998). *Principles of Clinical Electromyography – Case Studies*. Williams & Wilkins, Baltimore, MD.

Özkaya N and Nordin M (1991). *Fundamentals of Biomechanics: Equilibrium, Motion and Deformation.* Van Nostrade Reinhold, New York, NY.

Soderberg GL (1997). *Kinesiology: Application to Pathological Motion* 2nd Edition. Williams & Wilkins, Baltimore, MD.

Valmassy RL (1996). *Clinical Biomechanics of the Lower Extremities*. Mosby-Year Book, Inc., St. Louis, MO.

Whiting WC and Zernicke RF (1998). *Biomechanics of Musculoskeletal Injury – Human Kinetics,* Champaign, IL.

Winter DA (1991). *Biomechanics and Motor Control of Human Gait.* University of Waterloo Press, Waterloo, Ontario.

Zatsiorsky VM (1998). *Kinematics of Human Motion, Human Kinetics,* Champaign, IL.

Zatsiorsky VM (2002). *Kinetics of Human Motion, Human Kinetics*, Champaign, IL.

Evaluation:

Six individual quizzes	5% each	20% (best 4 out of 6)
Three assignments	5% each	15%
Term project (oral presentation)		10%
Mid-term Examination	20%	
Final Examination		35%

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PHTH-435 COORDINATED REHABILITATION II

Credits: 3

Lecturers: L. Asseraf-Pasin (Course Coordinator), Mary-Ann Dalzell, Claudia Brown, and guest lecturers

Course Structure:

This course will consist of three parts:

- Part I - Two x 2 hours a week for 4 weeks, in Pelvic Floor Physiotherapy
- Part II - Two x 2 hours a week for 4 weeks, in Cancer Rehabilitation
- Part III - 2 hours a week for 1 week, in Developing Cultural Competence in Professional Practice and presentation of students' projects

Course Description:

Part I - Pelvic Floor Physiotherapy:

During the first 2 weeks of this course the student will have the opportunity to understand the concept of pelvi-perineal re-education as well as the role of the physiotherapist in the treatment of pelvic floor disorders. Lectures will cover anatomy, pathophysiology and treatment in reference to each of the three systems inter-related within the pelvic floor.

The second two weeks will begin with a laboratory demonstration of biofeedback applications. The importance of outcome measures and research, evident in this area of expertise as in any other area of physiotherapy, will be underlined. Variations in pathology throughout the life cycle will be demonstrated, and the problem of urinary incontinence within the geriatric population will be highlighted.

Specific Learning Objectives:

Upon completion of Part I, the student will be able to:

- describe the basic anatomy of the pelvic floor and related structures;
- describe the basic physiology of the urinary system and lower digestive tract;
- understand and define pelvic floor dysfunction in relation to urinary, ano-rectal and sexual disorders;
- demonstrate knowledge in the physiotherapy approach to pelvic floor dysfunction (s/a evaluation, treatment and outcome measures).

Explanation, demonstration and discussions pertaining to treatment will allow the student to recognize the functional application of pre-learned modalities such as education, exercise, manual techniques, electrical stimulation and biofeedback.

Part II - Cancer Rehabilitation:

During the second four weeks of this course, the student will be introduced to Cancer Rehabilitation through weekly presentations from specialists working closely with this population. Topics covered will include medical oncology, surgical and radio oncology, nurse oncology, psychologist, physical and occupational therapists' interventions.

Specific Learning Objectives:

Upon completion of Part II, the student will be able to:

- understand the background on cancer pathology, risk stratification, the treatment process and rehabilitation needs throughout the disease trajectory;
- identify clinical issues in targeted areas such as rehabilitation of cancer-related fatigue, pain, lymphedema, radiation fibrosis, neuropathies, cachexia, dyspnea, and musculoskeletal dysfunction.
- understand rehabilitation issues specific to patients with breast, lung, CNS, osteosarcoma, myelosarcoma, bone marrow transplants, and head and neck cancers;

Students will be required to actively participate during interactive rehab oriented sessions following each week's topic.

Part III – Developing Cultural Competence:

During the last week of class, the student will be introduced to the key elements of developing cultural competence in professional practice through different case studies. Students will

also share cultural issues faced during their clinical experiences to stimulate small group discussions and class presentations.

Specific Learning Objective:

- The main goal in this last week is to reinforce student's skills in identifying and understanding cultural differences and the effect of one's own value system on professional practice.

Evaluation:

Class participation & presentation – 20%
Written or videotaped group projects – 80% (to be defined on the first day of class)

Required Text:

TBA

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PHTH-438 FITNESS AND INJURY MANAGEMENT

Credits: 2

Lecturer: Diana Perez, (514) 695-9152, dp.sportsphysio@sympatico.ca
Sarah Marshall, (514) 457-3440 Ext. 2567, ssmarsha@vac-acc.gc.ca
John Caoussias, Bassem Zahabi

Course Structure:

This lecture, seminar, practical course will be presented in eight 3-hour sessions on Mondays from 3:00 p.m.- 6:00 p.m. starting February 2004.

Objectives:

The focus of this lecture/seminar/practical course is on fitness evaluation, exercise program design and prescription, and concepts of wellness as a means of managing and promoting health across the lifespan. By integrating previous knowledge and experience gained throughout the program coupled with new knowledge and skills, the student will be able to:

1. Explain the basic concepts and definitions of fitness, health & wellness and exercise.
2. Design and perform fitness/physical evaluations.

3. Design, monitor and progress exercise programs for fitness, injury rehabilitation & prevention, and disease management.
4. Discuss how exercise / training effects relate to performance in the "real" world;

Specific Content:

1. Topics covered include the following:
2. Fitness assessment, measures and interpretation;
3. Exercise programs: concepts; types; designs; special considerations;
4. Application of physiological principles to exercise program design;
5. Exercise program design, monitoring and progression;
6. Exercise design for common orthopedic conditions;
7. Compliance and psychological issues related to exercising;
8. Workers' compensation: physiotherapeutic intervention and other issues;
9. Ergonomics: work place analysis and injury prevention;
10. Postural deviations: causes and exercise prescription;
11. Concepts of core body strength, spinal and pelvic stability, and functional training;
12. Concepts of stability vs. mobility; peripheral vs. core; stabilizers vs. prime movers; gross vs. specific; neuromuscular control vs. strength / power;
13. Nutrition in the context of fitness and wellness;
14. Wellness and exercise issues specific to women, men, elderly, adolescents, and children.

Required Texts:

Exercise Physiology: Energy, Nutrition and Human Performance. W.D. McArdle, F.I. Katch, & V.L. Katch – 4th ed. Williams and Wilkins: A Waverly Co. Baltimore, MD., USA: 1996.

Recommended Texts:

Physical Fitness and Wellness. S.Greenberg, G.B. Dintiman, B.M. Oakes. Allyn and Bacon: A Simon and Shuster Co. Needham Heights, MA., USA: 1995.

Essentials of Strength Training and Conditioning. National Strength and Conditioning Association. T.R. Baechle and W. Earle, editors – 2nd ed. Human Kinetics: Windsor, ON., CAN.: 2000.

Health Fitness Instructor's Handbook. E.T. Howley & B.D. Franks – 3rd ed. Humans Kinetics: Windsor, ON., CAN.: 1997.

McGee, D.J. (1997). *Orthopaedic Physical Assessment*, (3rd edition). Toronto: W.B. Saunders Co.

Evaluation:

In-class Assignment / Presentation	5%
Take-Home Assignment	5%
In-class Quiz	5%
Group Project	35%
(Presentation –15%; written submission)	20%
Final Exam (Written)	50%

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POTH-446 CURRENT TOPICS IN REHABILITATION

Credits: 2

Lecturer: Stephen Cross, (514) 398-7007, Stephen.cross@mcgill.ca
Richard Preuss, Teaching Assistant

Course Structure:

One 3 hour class per week lasting 9 weeks. The course will be given in the fall semester beginning in September 2003.

Objectives:

By the end of the course, the student shall be able to:

1. Select the appropriate special tests and integrate them into the evaluation of an orthopedic condition.
2. Analyze and understand the individual components of each specific test included in the course.
3. Properly and safely demonstrate and apply all of the special tests included in this course.
4. Demonstrate an understanding of the positive and negative findings of an orthopedic evaluation.
5. Evaluate the findings of an orthopedic evaluation to develop an index of suspicion where serious pathologies are concerned.
6. Evaluate the positive and negative findings of an orthopedic evaluation to develop a physical diagnosis.
7. Integrate all previous and new orthopedic knowledge in order to synthesize an appropriate treatment plan.
8. Integrate all knowledge acquired in the Physical Therapy program when ever necessary.

Course Outline:

Class # 1 - Introduction and course overview
- Anatomic anomalies
- Sprains and Strains
- Palpation
- Nerve mobility tests

Class # 2 Clinical lab
- Special tests in general

Class # 3 - Shoulder

- Shoulder case #1

Class # 4 - Specific case examples for the UE.

Class # 5 - Back and disc pathology
- Acute and chronic inflammation

Class # 6 - Hip + LE case #1

Class # 7 - Knee

Class # 8 - Ankle

Class # 9 - Specific case examples for the LE.
Serious pathology case.

TBA Practical Exams

TBA Final Examination

Recommended Text:

Orthopedic Physical Assessment – 3rd or 4TH Edition, David Magee

Reference Material:

Topical readings from JOSPT will be given

Dress Code:

Shorts and T-shirts will be required for each lecture.

Evaluation:

Students must pass each component of the evaluation to successfully pass the course.

1) **Oral exam**:

(40%) will require you to demonstrate some of the special tests and discuss the positive and negative findings. You will have to show a detailed understanding of each special test. This process will take about 15 minutes to complete.

2) **Written final:**

(60%) will require you to demonstrate an integrated knowledge of orthopedics. This includes the necessary anatomy, physiology, and stages of healing. Questions will draw

upon all of the orthopedic knowledge you have accumulated over the three years of the program. You have to be able to recognize possible findings which should cause suspicion during an examination.

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PHTH-447 SPECIALIZED AREAS OF PRACTICE

Credits: 2

Lecturers: J.P. Dumas (Co-ordinator), Hosmer H307, (514) 398-5864
Jean-pierre.dumas@mcgill.ca
N. Liverani, C. Gibson

Course Structure:

This course will be given in the format of lectures, seminars, workshops and practical sessions in Fall Term starting on September 12th, 2003. The schedule and groups will be given out on the first day of class.

Overall Objectives:

This course will give U3 students the opportunity of building upon their previous U1 and U2 Manual Therapy skill learning and give them the opportunity of integrating this treatment approach with the client care experience gained from their clinical rotations. The presentation of this course will focus on a case-based, client centred approach, and emphasising outcome measures.

Learning Outcomes:

Following the course, the graduate should be able to:

1. Apply clinical reasoning skills in complex orthopaedics cases through the development of assessment and treatment plans.

2. Demonstrate evidence of knowledge integration of U1 and U2 material in area such as :

a) nature, severity and irritability of the patient's problem;
b) architectural designs
c) articular signs

d) neurological signs
e) neuromeningeal test
f) compression and traction tests
g) arterial patency tests
h) basic palpation of articular and soft tissue structures
i) peripheral joint screening tests
j) active, passive, resisted movements
k) muscle length, and
l) ligament stress tests

3) Demonstrate skills and knowledge in the evaluation and treatment of selected orthopaedic conditions such as temporomandibular disorders and pelvic joints dysfunctions

4) Demonstrate the ability to recognize non-mechanical disorders of the neuromuscular articular system (differential diagnosis) and decide which patients may require further professional opinion.

5) Identify and present the scientific evidence related to a controversial issue.

6) Justify the choice of orthopaedic clinical test based on their values and limitations

Required Text:

McGee, DJ (1997). *Orthopaedic Physical Assessment*, (3rd edition). Toronto: W.B. Saunders Co.
Course notes

Evaluation:

Oral Presentation	25%
Practical Examination	30%
Written Examination	45%

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