

# School of Medical Rehabilitation

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## SECTION 1: Degree Programs Offered

### 1.1 Programs

Program/Degree	Years to Complete	Total Credit Hours
Master of Occupational Therapy (M.O.T.)	Regular Program: 2 years*	107
	Accelerated Program: 1 year**	12
Bachelor of Medical Rehabilitation (Physical Therapy) (B.M.R.(P.T.))***	4 years (University 1 plus 3 years)	140

Bachelor of Medical Rehabilitation (Respiratory Therapy) (B.M.R.(R.T.))	Regular Program: 4 years (University 1 plus 3 years)	109
	Degree Completion Program: 5 years	30

\* Requires prior completion of a 3 or 4-year undergraduate degree.

\*\* Requires prior completion of a Bachelor of Medical Rehabilitation (Occupational Therapy) degree or equivalent.

\*\*\* Prospective students are advised that a major curriculum change for Physical Therapy is proposed to begin in 2010. There will be no intake of students into the B.M.R.(P.T.) program in 2009 to allow for the phase-in of the proposed new program. Interested students are encouraged to check for updates posted on our website as they become available at [umanitoba.ca/medrehab](http://umanitoba.ca/medrehab).

## 1.2 Professional Designations

### Master of Occupational Therapy (M.O.T.)

Graduates from the Master of Occupational Therapy Program have the professional designation M.O.T. It is important to note that occupational therapy is a regulated health profession, by law. To be eligible for employment in Manitoba, graduates must register with the College of Occupational Therapists of Manitoba (COTM) and must successfully complete the Canadian Association of Occupational Therapists (CAOT) National Certification Examination. Regulations are similar in most other Canadian provinces, in that students must be registered with the regulatory body in that jurisdiction and must pass the CAOT National Certification Exam. Writing of the national exam is scheduled twice a year. The University occupational therapy department provides a list of potential MOT graduates to CAOT to verify their eligibility to write the National Certification Exam. Newly-educated occupational therapists are eligible for registration with COTM (or other provincial regulatory body) and for employment prior to convocation and/or writing the national exam, provided they have successfully completed all academic and fieldwork requirements for the MOT program, and have provided the appropriate personnel at the regulatory body with a letter of verification from the Head of the Department of Occupational Therapy (students must request these letters). For information on the registration process in Manitoba, you can visit the COTM web site at [www.cotm.ca](http://www.cotm.ca) or contact them by calling 957-1214. Other provinces have similar provisions to allow some form of registration and thus employment prior to convocation. A listing of provincial regulatory organizations is available from COTM (957-1214) and posted at SMR, or can be found at [www.caot.ca/default.asp?changeID=63&pageID=50](http://www.caot.ca/default.asp?changeID=63&pageID=50).

The Occupational Therapy program maintains accreditation through the Canadian Association of Occupational Therapists. Accreditation was received in 1986, 1989, 1991, 1995, 2000 and 2005.

### Bachelor of Medical Rehabilitation (Physical Therapy) (B.M.R.(P.T.))

Employment Following Senior Internship: New graduate physiotherapists will be allowed to register to practice under the mentorship of a graduate physiotherapist prior to completion of the PCE and prior to convocation from the university under the following procedure:

1. Following successful completion of all academic and clinical coursework, the University of Manitoba (Registrar's Office) will notify the Registrar in writing that the student has been recommended to Senate for convocation.
2. The new graduate will be eligible to register with the regulatory college on the Examination Candidate Register to practice under mentorship once the new graduate has:
  - a) successfully completed Part 1 (The Qualifying Examination) of the PCE;
  - b) provided evidence of professional liability insurance coverage;

- c) completed the registration form and paid the registration fees;
  - d) provided the Registrar with the name of a currently registered physiotherapist who has agreed to serve as the applicant's mentor.
3. The graduate is expected to complete the PCE at the next available session.

Once the new graduate has successfully completed Part 2 of the PCE and has provided the Registrar with a copy of his/her Baccalaureate degree, the Registrar will place the graduate's name on the Active Practice Register and the graduate will be entitled to practice independently.

The Physical Therapy program was awarded ongoing accreditation status until 2015 from the Accreditation Council for Canadian Physiotherapy Academic Programs (ACCPAP).

### **Bachelor of Medical Rehabilitation (Respiratory Therapy) (B.M.R.(R.T.))**

Students admitted into the program of studies in respiratory therapy should note carefully that while the University of Manitoba, School of Medical Rehabilitation may admit students to its course of studies, the right to practice as a respiratory therapist is granted only through the appropriate authority of the province concerned, through a process of licensure. Many provinces and states have licensure and many require their licensed practitioners to be "Registered Respiratory Therapists." Only the Canadian Society of Respiratory Therapists has the right to confer the title of "Registered Respiratory Therapist" by virtue of a candidate's successful completion of national registration examinations, as well as other factors being taken into account. Although possession of a criminal record is frequently not relevant in so far as admission to an academic course of studies, it may be a barrier to becoming qualified to practice as a registered respiratory therapist at a later time. Persons contemplating practice as a registered respiratory therapist should consider communicating with the Executive Director of the Canadian Society of Respiratory Therapists and the Registrar, President or Executive Director of the provincial licensing organization as soon as possible, if they have concerns or questions with respect to this matter. Students will be advised concerning details of the national registration examinations during the orientation process to the program of studies. Students who become members of the Canadian Society of Respiratory Therapists (CSRT) or who apply to write the Canadian Board for Respiratory Care (CBRC) credentialing examinations will receive a copy of the National Occupational Profile which forms the basis of the national examination and has been incorporated into the curriculum planning process for the respiratory therapy program at the University of Manitoba. Students are highly encouraged to become student members of both provincial and national professional associations. Certain aspects of the educational program will be directed toward developing in the student an understanding and appreciation of professional practice issues.

The Respiratory Therapy program maintains accreditation through the Council on Accreditation of Respiratory Therapy Education (CoARTE). Accreditation was most recently awarded in 2007 for a 5-year term.

## **SECTION 2: Admission Requirements**

The following is a summary of the admission requirements. Equivalent academic courses completed at the University of Manitoba or recognized universities elsewhere will be considered. All admission requirements, as well as application deadline dates and forms, are included in applicant information packages that are available from the School of Medical Rehabilitation general office, R106-771 McDermot Avenue, Bannatyne Campus. P.T. and R.T. info can also be obtained from the Admissions Office, Enrolment Services, 424 University Centre. This information is also posted on the university's website.

### **2.1 Course Requirements: Occupational Therapy**

#### **Regular Program**

Completion of a previous undergraduate degree, minimum B average in last 60 credit hours of study, completion of all program prerequisite courses or approved alternates with no grade in prerequisites below a C. Prerequisite courses include all of the courses listed below or equivalents approved by the M.O.T. Admissions Committee:

- SOC 1200 Introduction to Sociology
- PSYC 1200 Introduction to Psychology
- PSYC 2290 Child Development
- PSYC 2370 Developmental Psychology from Adolescence to Old Age

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- STAT 1000 Basic Statistical Analysis 1
- BIOL 1410 Anatomy of the Human Body
- BIOL 1412 Physiology of the Human Body.

#### **Accelerated Option**

Completion of a B.M.R.(O.T.) degree or equivalent, minimum B average in the last 60 credit hours of the degree, completion of an additional 42 credit hours of non-O.T. degree credits, and evidence of having passed the Canadian Association of Occupational Therapists (C.A.O.T.) certification examination and/or eligibility for registration in Manitoba by the College of Occupational Therapists of Manitoba (C.O.T.M.).

### **2.2 Course Requirements: Physical Therapy**

Prospective students are advised that a major curriculum change for Physical Therapy is proposed. Interested students are encouraged to check for updates posted on our website as they become *available* at [umanitoba.ca/medrehab](http://umanitoba.ca/medrehab).

Both BIOL 1020 and BIOL 1030 Biology 1 & 2, or both BIOL 1000 and BIOL 1010 Biology, or both BIOL 1410 and BIOL 1412 Human Anatomy and Physiology (or BIOL 2410 and BIOL 2420 Physiology 1 & 2 in lieu of BIOL 1412)

PSYC 1200 Introduction to Psychology

3 credit hour course to satisfy the written English requirement

6-9 credit hours of electives to total 30 credit hours in University 1

#### **Other requirements: Physical Therapy**

Minimum GPA required for consideration: 3.0. Minimum GPA of 3.0 in core courses.

The written English requirement must be satisfied in University 1; the mathematics requirement is satisfied after admission to Physical Therapy by the required course, REHB 2460.

Selection criteria: 50% interview and 50% grades. Volunteer experiences are strongly recommended prior to application.

#### **High school prerequisites for Physical Therapy degree only**

High school prerequisites: Biology 40S, English 40S, Chemistry 40S or Physics 40S and Math 40S.

### **2.3 Course Requirements: Respiratory Therapy**

#### **Regular Program**

BIOL 1020 and BIOL 1030 Biology 1 & 2, or both BIOL 1000 and BIOL 1010 Biology

SOC 1200 Introduction to Sociology

PSYC 1200 Introduction to Psychology

3 credit hour course to satisfy the written English requirement

9 credit hours of electives to total 30 credit hours in University 1

#### **Other requirements: Respiratory Therapy**

Minimum GPA for consideration is 2.5

The mathematics requirement is satisfied after admission to Respiratory Therapy by required course REHB 2460. This is subject to change in 2010 and may be required as a prerequisite course. Alternate courses will also be allowed. Please check with the department for a list of acceptable courses.

The following High School Courses are highly recommended: Biology 40S, English 40S, Mathematics 40S, Chemistry 40S and Physics 40S.

Selection Criteria: 67% Grades and 33% Interview.

Applicants having less than 30 credit hours in a regular winter session will be considered if they have an AGPA of 3.0 or better.

#### **Degree Completion Program**

In addition to the regular degree program in Respiratory Therapy, the School offers a degree completion program for individuals who qualify. Generally, individuals who have attained a diploma in respiratory therapy

from an accredited program of studies in Canada, who are actively involved in the practice of the profession, and who demonstrate an interest in continuing their studies in this field, will be accepted. The degree completion program requires a minimum of 30 credit hours of study to be determined by the student in consultation with the department head and/or faculty advisor. Applications are available on-line or by calling the Admissions Office.

## SECTION 3: Faculty Academic Regulations

### 3.1 General

#### Occupational Therapy

Program requirements are those of the Faculty of Graduate Studies. MOT Program Supplemental Regulations are available on the School of Medical Rehabilitation website.

#### Physical Therapy and Respiratory Therapy

The provisions of the chapter, General Academic Regulations and Requirements, and the chapter, University Policies, apply to all students. In addition, the School of Medical Rehabilitation has regulations and requirements, published below, that apply specifically to its' students.

Policies with regard to admissions, selection, academic progression of the student, compulsory attendance, examination procedures, supplemental examination procedures, and withdrawal dates are in force and are on file in the general office of the School of Medical Rehabilitation.

### 3.2 Health Requirements

Students in all departments are required to provide a health history and immunization record. A student will not be permitted to attend fieldwork/clinical placements until all health, immunization and CPR requirements are current.

#### Immunizations

Standard Health Record Form Packages are sent to new students in Occupational Therapy, Physical Therapy and Respiratory Therapy upon acceptance into the programs. New students in Occupational Therapy and Physical Therapy are required to return forms to their respective departments by the dates published yearly in the Health Record Form Packages. New students in Respiratory Therapy are required to return forms by August 31. Returning students in all three programs are required annually to review and update immunizations as necessary.

#### Cardiopulmonary Resuscitation Certification

All students of the Department of Occupational Therapy are required to obtain certification in cardiopulmonary resuscitation. Certification must be at the Basic Rescuer Level. New students in the program must provide proof of certification within the first 2 weeks of classes of the academic year in which they commence classes. This certification must have an issue date on or after July 1 of the year the student commences classes in the program. Second year students must provide proof of re-certification by October 1 of their second year in the program. This certification must have an issue date during or after the last week of August of the current year. Certification must remain current for all fieldwork experiences.

All students (both new and returning) in the Department of Physical Therapy are required to obtain certification in cardiopulmonary resuscitation annually. Certification must be at the Basic Rescuer Level. Proof of certification must be provided by October 1 and must not have an issue date prior to the last week of August of the current year. This will ensure that the certification remains current until the end of the clinical placement period for each year of the program.

All students of the Department of Respiratory Therapy are required to obtain certification in cardiopulmonary resuscitation. Certification must be at the Basic Rescuer Level. First and second year students must provide proof of certification before their first fieldwork experience, usually mid-September. Third year students will be certified/re-certified by the program at the beginning of their clinical internship year in preparation for advanced level certification(s) in cardiopulmonary resuscitation.

### 3.3 Dean's Honour List

#### Undergraduate Students (Physical Therapy and Respiratory Therapy)

Students carrying a full course load, with a sessional Grade Point Average of 3.7 or higher and have not done resit or supplemental exams, are placed on the Dean's Honour List.

### 3.4 Attendance

Regular attendance is expected of all students in all courses. Prior permission is required for any anticipated absences. Students absent from class due to illness may be required to present a certificate from a physician. Unexcused absence from an examination may result in a grade of zero for that examination. Make-up examinations may be allowed under special circumstances.

### 3.5 Criminal Record Check and Child Abuse Registry Check

Students are advised that clinical/fieldwork education sites require that students complete a Criminal Record Check and a Child Abuse Registry Check.

New students in the Master of Occupational Therapy program must provide results of a Child Abuse Registry Check and a Criminal Record Check within the first 2 weeks of classes of the academic year in which they commence classes. Both checks must have an issue date after July 1 of the year the student commences classes in the program. Second year students must provide updated results by October 1 of their second year in the program. Both checks must have an issue date during or after the last week of August of the current year.

All physical therapy students are required to obtain a formal Criminal Record Check and a formal Child Abuse Registry Check by October 1 of each year of the program. Both documents must not have an issue date prior to the last week of August of the current year, to ensure that they remain current until the end of the clinical placement period for each year of the program. Additionally, new students are required to complete a criminal record self-declaration form at the time of application to the program.

All respiratory therapy students are required to produce a Criminal Record Check and a Child Abuse Registry Check by August 15 of the year in which they commence classes. Both the Criminal Record Check and the Child Abuse Registry Check must be completed within a six-month time period prior to commencing the program.

## SECTION 4: Program and Graduation Requirements

### 4.1 Academic Education

#### Occupational Therapy

Course No.		Credit Hours
<b>First Year</b>		
OT 6100	Human Determinants of Occupational Performance	6
OT 6110	Theoretical and Philosophical Foundations of Occupational Therapy	3
OT 6120	Health and Disability	3
OT 6130	Occupational Therapy Practice Skills 1	3
OT 6140	Enabling and Professional Development Skills	7
OT 6190	Fieldwork Preparation	1
OT 6200	Basic Fieldwork	4
OT 6300	Occupational Analysis and Adaptation	4
OT 6310	The Environment and Occupational Performance	4
OT 6320	Health Conditions and Occupational Performance	4
OT 6330	Occupational Therapy Practice Skills 2	4
OT 6350	Research Methods for Evidence-Based Practice	4
OT 6400	Intermediate Fieldwork 1	8
Total credit hours		55

#### Second Year

OT 7540	Advanced Enabling and Professional Development Skills 1	4
OT 7560	Occupational Therapy Process Across the Lifespan 1	6
OT 7570	Advanced Practice in OT 1	6
OT 7600	Intermediate Fieldwork 2	8
OT 7740	Advanced Enabling and Professional Development Skills 2	4

OT 7750	Independent Study	6
OT 7760	Occupational Therapy Process Across the Lifespan 2	6
OT 7770	Advanced Practice in OT 2	6
OT 7800	Advanced Fieldwork	6
Total credit hours		52

All academic and fieldwork courses and a professional portfolio must be successfully completed in order to graduate.

Students may not obtain any grade lower than "C+" in all required courses.

See University of Manitoba Graduate Calendar for descriptions of courses in the Master of Occupational Therapy (M.O.T.) program.

### Physical Therapy

Course No.		Credit Hours
<b>First Year</b>		
Not offered in 2009-2010		
REHB 1200	Basic Clinical Sciences	3
REHB 1480	Human Anatomy – Systems	3
REHB 1490	Musculoskeletal Anatomy 1	2
REHB 1500	Musculoskeletal Anatomy 2	3
PT 1700	Psychosocial Issues	6
PT 1730	Physical Therapy Management	10
PT 1740	Cardiorespiratory Clinical Education	7
PT 1750	Rehabilitation Exercise 1	6
PT 1910	Pathology and Clinical Manifestations	5
Total credit hours		45

### Second Year

Not offered in 2010-2011		
REHB 2410	Pathology and Clinical Manifestations	4
REHB 2450	Research Methodology for Medical Rehabilitation	3
REHB 2460	Statistics	3
PT 2720	Electro-Physical Agents in Physical Therapy Management	3
PT 2750	Rehabilitation Exercise 2	2
PT 2760	Orthopedic Assessment and Management 1	6
PT 2770	Orthopedic Assessment and Management 2	6
PT 2780	Musculoskeletal Clinical Education	10
PT 2790	Physical Therapy Management of Musculoskeletal Disorders	8
PT 2890	Rehabilitation Biomechanics	3
Total credit hours		48

### Third Year

REHB 3410	Pathology and Clinical Manifestations of Neurological Conditions	3
REHB 3460	Introduction to Health Care Administration and Management	3
REHB 3930	Neuroanatomy	3
REHB 3940	Neurosciences	3
PT 3730	Advanced Musculoskeletal Topics	3
PT 3740	Integrated Tutorials	3
PT 3750	Physical Therapy Neurological Interventions Across the Lifespan 1	6
PT 3760	Physical Therapy Neurological Interventions Across the Lifespan 2	7
PT 3880	Clinical Education in Neurological Disorders	8
PT 3920	Summer Internship	8
Total credit hours		47

Students may not obtain any grade lower than "C" in all required courses.

### Respiratory Therapy

Course No.		Credit Hours
<b>First Year</b>		

ANAT 1030	Human Anatomy	3
PHGY 1030	Fundamentals of Medical Physiology	6
RESP 1270	Respiratory Anatomy and Physiology	3
RESP 1280	Medical Microbiology and Disease Transmission	2
RESP 1290	Cardiopulmonary Pharmacology	2
RESP 1320	Applied Sciences for Respiratory Therapy	3
RESP 1330	Technical Aspects of Respiratory Therapy	3
RESP 1360	Treatment Administration in Respiratory Care	3
RESP 1370	Ventilatory Support Principles	6
RESP 1380	Basic Fieldwork 1	4
Total credit hours		35

### Second Year

REHB 2450	Research Methodology for Medical Rehabilitation	3
REHB 2460	Statistics	3
RESP 2300	Respiratory Clinical Assessment	6
RESP 2310	Clinical Aspects of Ventilatory Management	3
RESP 2320	Ventilatory Support Instrumentation	6
RESP 2330	Pulmonary Investigations	3
RESP 2340	Physiologic Measurements and Instrumentation	3
RESP 2350	Cardiology	3
RESP 2360	Pediatrics	3
RESP 2370	Anesthesiology	3
Total credit hours		36

### Third Year

REHB 3460	Introduction to Health Care Administration and Management	3
RESP 3300	Seminars in Respiratory Care	3
RESP 3310	Clinical Education in Intensive Care	10
RESP 3320	Clinical Education in Pediatric Respiratory Care	3
RESP 3330	Clinical Education in Neonatal Respiratory Care	4
RESP 3340	Clinical Education in Maternal/Fetal Health	1
RESP 3350	Clinical Education in Pulmonary Diagnostics	3
RESP 3360	Clinical Education in Anesthesia	3
RESP 3370	Clinical Education in Community Care	4
RESP 3380	Clinical Education in Respiratory Care	4
Total credit hours		38

Students may not obtain any grade lower than "C" in all required courses.

## 4.2 Clinical/Fieldwork Education

### Occupational Therapy

See University of Manitoba Graduate Calendar for descriptions of courses in the Master of Occupational Therapy (M.O.T.) program.

### Physical Therapy

1,200 full-time hours of clinical/practical experience are required. Clinical placements are conducted from March to August of the first, second and third years of the program. Placements occur primarily in locations in Manitoba, Saskatchewan, northwest Ontario and Kivalliq Region of Nunavut. Students are advised to take into account the financial implications of the summer placement requirements of the B.M.R.(P.T.) program. All students should be prepared to be placed outside of Winnipeg for a minimum of one placement.

### Respiratory Therapy

1,600 full-time hours of clinical/fieldwork experience are required. Clinical placements are integrated throughout the three academic years with the majority of the clinical placements occurring in Year 3, the internship year. Placements during the regular academic year all take place within greater Winnipeg. Placements occur within a variety of hospital, public and private settings. (Refer to start and end dates for all years of the program.)

## SECTION 5: Course Descriptions

PT 1XXX – year 1 courses  
 PT 2XXX – year 2 courses  
 PT 3XXX – year 3 courses  
 REHB 1XXX – year 1 courses  
 REHB 2XXX – year 2 courses  
 REHB 3XXX – year 3 courses

RESP 1XXX – year 1 courses  
 RESP 2XXX – year 2 courses  
 RESP 3XXX – year 3 courses

**OT 4130 Re-Entry Fieldwork Cr.Hrs.8** Self-directed period of fieldwork preparation followed by a seven-week fieldwork education experience under the supervision of a

licensed occupational therapist. Course evaluated on a pass/fail basis. *Prerequisites:* an earned degree in occupational therapy, permission of Head of Department of Occupational Therapy.

**PT 1700 Psychosocial Issues Cr.Hrs.6** A general course to provide an overview of psychosocial behaviour and the implication for physiotherapy practice.

**PT 1730 Physical Therapy Management Cr.Hrs.10** A theory and practical course on applying physical therapy techniques to patients with cardio and respiratory disorders.

**PT 1740 Cardiorespiratory Clinical Education Cr.Hrs.7** Consists of an introductory period of clinical practice and specific practice related to the management of cardiorespiratory conditions. Course evaluated on a pass/fail basis.

**PT 1750 Rehabilitation Exercise 1 Cr.Hrs.6** Consists of lecture, tutorials, and practical sessions focused on topics of exercise physiology, fitness testing and training and rehabilitation exercise skills related to the healthy adult and selected patient populations.

**PT 1910 Pathology and Clinical Manifestations Cr.Hrs.5** A theory course including the basic principles of pathology and microbiology; the natural history, pathology, clinical manifestations, management and prognosis of patients with disorders of the cardiovascular and respiratory systems. Corequisite: REHB 1200.

**PT 2720 Electro-Physical Agents in Physical Therapy Management Cr.Hrs.3** Selection and application of electro-physical agents in physical therapy.

**PT 2750 Rehabilitation Exercise 2 Cr.Hrs.2** A lecture and lab based course which focuses on the development of comprehensive rehabilitation, health, and fitness exercise programs for normal subjects, clients with specific conditions/disabilities, and athletes.

**PT 2760 Orthopedic Assessment and Management 1 Cr.Hrs.6** Integrated approach to the orthopedic assessment and management of upper limb, lower limb, and spinal disorders.

**PT 2770 Orthopedic Assessment and Management 2 Cr.Hrs.6** Integrated approach to the physiotherapy assessment and management of upper limb, lower limb, and spinal disorders. Successful completion of PT 2760 and PT 2770 equivalent to E2/V2 level of professional classification.

**PT 2780 Musculoskeletal Clinical Education Cr.Hrs.10** Consists of a period of clinical practice related to the management of musculoskeletal conditions. Course evaluated on a pass/fail basis.

**PT 2790 Physical Therapy Management of Musculoskeletal Disorders Cr.Hrs.8** A theory and practical course on physical therapy management of patients with specific disorders.

**PT 2890 Rehabilitation Biomechanics Cr.Hrs.3** Theory and practical application of biomechanics of human movement in relation to rehabilitation. *Prerequisites:* REHB 1480, REHB 1490 and REHB 1500, or equivalent.

**PT 3730 Advanced Musculoskeletal Topics Cr.Hrs.3** A theory, practical and tutorial-based course designed to provide the opportunity for problem-solving through the integration of relevant information, in the areas of orthopedic and sports physiotherapy.

**PT 3740 Integrated Tutorials Cr.Hrs.3** A theory, practical and tutorial-based course designed to provide the opportunity for problem-solving through the integration of relevant information, in the physiotherapy management of geriatric, women's health, and multi-system conditions.

**PT 3750 Physical Therapy Neurological Interventions Across the Lifespan 1 Cr.Hrs.6** A theory and practical course on the basic principles of the application of techniques used in the Physical Therapy management of clients with neurological conditions, with a focus on neurological assessment and the treatment for spinal cord injured clients and clients with certain neurological conditions.

**PT 3760 Physical Therapy Neurological Interventions Across the Lifespan 2 Cr.Hrs.7** A theory and practical course on the basic principles of the application of techniques used in the Physical Therapy management of clients with neurological conditions, with a focus on neurological treatment.

**PT 3880 Clinical Education in Neurological Disorders Cr.Hrs.8** Consists of a period of clinical practice related to the management of neurological conditions. Course evaluated on a pass/fail basis.

**PT 3920 Summer Internship Cr.Hrs.8** An eight-week period of clinical/practical experience under the direction and supervision of registered physiotherapists. Course evaluated on a pass/fail basis.

**REHB 1200 Basic Clinical Sciences Cr.Hrs.3** A lecture and tutorial course covering basic physiology related to membrane, muscle, pain and the cardiovascular, respiratory, endocrine, and immune systems.

**REHB 1480 Human Anatomy - Systems Cr.Hrs.3** Lecture and laboratory study of the microscopic and macroscopic structure of the major systems of the human body. Living anatomy of the cardiorespiratory system.

**REHB 1490 Musculoskeletal Anatomy 1 Cr.Hrs.2** Lecture and laboratory study, including living anatomy, of the musculoskeletal structures of the head, neck and trunk.

**REHB 1500 Musculoskeletal Anatomy 2 Cr.Hrs.3** Lecture and laboratory study, including living anatomy, of the musculoskeletal structures of the upper and lower extremities.

**REHB 2410 Pathology and Clinical Manifestations Cr.Hrs.4** A theory course including the basic principles of pathology and clinical manifestations, management and prognosis of patients with musculoskeletal disorders. *Prerequisite:* PT 1910.

**REHB 2450 Research Methodology for Medical Rehabilitation Cr.Hrs.3** A theory and practical course designed to provide a basic understanding of research principles and their application in Medical Rehabilitation.

**REHB 2460 Statistics Cr.Hrs.3** A theory and practical course designed to provide a basic understanding of statistics with application to Medical Rehabilitation.

**REHB 3410 Pathology and Clinical Manifestations of Neurological Conditions Cr.Hrs.3** Theoretical study of neurological pathology and clinical manifestations of the basic principles of medical management of persons with neurological disorders. *Prerequisite:* REHB 2410.

**REHB 3460 Introduction to Health Care Administration and Management Cr.Hrs.3** An introduction to professional and administrative issues of current concern to respiratory and physical therapists. Topics to be covered in lecture and seminar format are health care systems, professional ethics, departmental administration, principles of supervision, and medical and legal responsibilities.

**REHB 3930 Neuroanatomy Cr.Hrs.3** The study of neuroanatomy and neurophysiology of the human body.

**REHB 3940 Neurosciences Cr.Hrs.3** The study of neuroanatomy and neurophysiology of the human body.

**RESP 1270 Respiratory Anatomy and Physiology Cr.Hrs.3** Principles of pulmonary mechanics, ventilation, diffusion, perfusion, ventilation-perfusion relationships, gas transport, control of ventilation, and acid-base physiology.

**RESP 1280 Medical Microbiology and Disease Transmission Cr.Hrs.2** Introduction to Medical Microbiology with emphasis on common pathogens, disease transmission, principles of asepsis, isolation sterilization and disinfection procedures.

**RESP 1290 Cardiopulmonary Pharmacology Cr.Hrs.2** Pharmacology principles, phases of drug events, factors modifying drug effect, drug preparation, individual pharmacologic agents including: ANS drugs, CNS drugs, cardiac medications, respiratory medications, antibiotics.

**RESP 1320 Applied Sciences for Respiratory Therapy Cr.Hrs.3** Gas laws, unique behaviour of specialty gases, fluid dynamics, fundamental principles of electricity, electronics and electrical safety, concepts of basic and advanced chemistry not treated in REHB 1200.

**RESP 1330 Technical Aspects of Respiratory Therapy Cr.Hrs.3** Medical gas and supply systems, flowmetering devices, regulators, medical gas outlets, vacuum systems, regulatory authorities on the supply, production and distribution of medical gases.

**RESP 1360 Treatment Administration in Respiratory Care Cr.Hrs.3** Administration of medical gases, humidity and aerosol therapy, environmental therapy, positive pressure breathing devices, respiratory exercises, incentive spirometry and bedside spirometry.

**RESP 1370 Ventilatory Support Principles Cr.Hrs.6** Physical principles of continuous ventilatory support including: physics of ventilator operation and physiological aspects of ventilatory support. Provides a framework for RESP 2310 and RESP 2320.

**RESP 1380 Basic Fieldwork 1 Cr.Hrs.4** A preparatory period followed by four weeks of field experience under supervision of a practicing respiratory therapist at one or more approved clinical sites. Course evaluated on a pass/fail basis.

**RESP 2300 Respiratory Clinical Assessment Cr.Hrs.6** The correlation of pathophysiological mechanisms with the clinical manifestations of the common respiratory diseases and how rational management evolves from this understanding.

**RESP 2310 Clinical Aspects of Ventilatory Management Cr.Hrs.3** Lecture, seminar and laboratory simulation on adult and pediatric ventilatory management. Estimation of ventilatory requirements, ventilator selection, weaning, ventilatory adjuncts, transport, and long term ventilatory support.

**RESP 2320 Ventilatory Support Instrumentation Cr.Hrs.6** Comprehensive review of the components, operation and use of specified adult, pediatric and neonatal mechanical ventilators. Classroom and laboratory sessions.

**RESP 2330 Pulmonary Investigations Cr.Hrs.3** Lung function testing principles and procedures including: static and dynamic measures, determination of volumes and capacities, exercise physiology. An analysis of lung function changes relative to common disease physiology.

**RESP 2340 Physiologic Measurements and Instrumentation Cr.Hrs.3** Acid base physiology, interpretation of physiologic values, design theory, operation and care of gas analyzing devices, oximetry, capnography.

**RESP 2350 Cardiology Cr.Hrs.3** Aspects of clinical assessment of the cardiovascular system, pathophysiology and selected treatment regimens and modalities. Laboratory on rhythm analysis and aspects of advanced cardiac life support.

**RESP 2360 Pediatrics Cr.Hrs.3** Normal physiology, diseases and treatment, the child in hospital environment, high risk neonates, principles of intensive care, pediatric emergencies and fetal and maternal medicine.

**RESP 2370 Anesthesiology Cr.Hrs.3** Principles of anesthesia, airway management, pain management, anesthetic agents, function of the anesthesia machine, pre- and postoperative assessment, recovery and safety features in the operating room.

**RESP 3300 Seminars in Respiratory Care Cr.Hrs.3** A series of seminars on Respiratory Disease and other clinical topics designed to bring together practical and theoretical aspects of the program.

**RESP 3310 Clinical Education in Intensive Care Cr.Hrs.10** This course consists of 10 weeks of clinical experience in the adult intensive care setting in an approved clinical site. Course evaluated on a pass/fail basis.

**RESP 3320 Clinical Education in Pediatric Respiratory Care Cr.Hrs.3** Three weeks of clinical experience in the Pediatric Intensive Care Unit at Children's Hospital. Shiftwork and extended shifts may be required. Course evaluated on a pass/fail basis.

**RESP 3330 Clinical Education in Neonatal Respiratory Care Cr.Hrs.4** Four weeks of clinical experience in the Neonatal Intensive Care Unit at Children's Hospital and/or St. Boniface General Hospital. Shiftwork and extended shifts may be required. Course

evaluated on a pass/fail basis.

**RESP 3340 Clinical Education in Maternal/Fetal Health Cr.Hrs.1** One week of clinical experience in maternal and fetal health at the Women's Centre, Health Sciences Centre. Course evaluated on a pass/fail basis.

**RESP 3350 Clinical Education in Pulmonary Diagnostics Cr.Hrs.3** Three weeks of clinical experience in the pulmonary diagnostic laboratory of an approved clinical site. Course evaluated on a pass/fail basis.

**RESP 3360 Clinical Education in Anesthesia Cr.Hrs.3** Three weeks of clinical experience designed to acquaint the student with actual clinical techniques and proce-

dures used in the operating and recovery room. Course evaluated on a pass/fail basis.

**RESP 3370 Clinical Education in Community Care Cr.Hrs.4** Four weeks of clinical experience in community care settings including: pre-hospital care, health and wellness promotion, interfacility transport, chronic care, home care and community outreach. Course evaluated on a pass/fail basis.

**RESP 3380 Clinical Education in Respiratory Care Cr.Hrs.4** Four weeks of clinical experience spent in the non-intensive care setting working with a variety of medical and surgical patients. Course evaluated on a pass/fail basis.