



Faculty of Health Sciences

TO: Curriculum and Program Review Committee

FROM: Mary Bluechardt, Dean

SUBJECT: UOIT – CMCC Rehabilitation Program Option

DATE: April 15, 2011

The Faculty of Health Sciences recommends:

That the Curriculum and Program Review Committee approve the addition of a Rehabilitation program option in the Bachelor of Health Sciences (Honours) Kinesiology Specialization, to be jointly delivered by UOIT and the Canadian Memorial Chiropractic College.

MAJOR PROGRAM MODIFICATIONS – PROPOSAL BRIEF

Kinesiology Specialization Program Option in Rehabilitation with Canadian Memorial Chiropractic College

1. INTRODUCTION

The Kinesiology specialization is directed toward understanding the role and application of exercise for health improvement, fitness and rehabilitation. The degree aims to prepare kinesiology practitioners who are able to safely prescribe individualized exercise programs to improve or maintain the health, functional capacity and global well-being of a range of healthy and clinical populations.

The Kinesiology specialization includes the study of biomechanics, anatomy, physiology, exercise physiology and psychology, motor control and psychomotor behaviour. In these areas of study, students have the opportunity to take an in-depth look at the scientific principles underlying human movement. These principles are then applied to optimizing human performance through appropriate assessment, prevention and intervention in both health promotion and rehabilitation contexts. There are currently two different concentrations within kinesiology: Exercise Science and Health and Wellness. This modification seeks to add a new program option, in Rehabilitation.

The Rehabilitation option will be part of an articulation agreement between the Canadian Memorial Chiropractic College (CMCC) and UOIT which provides an opportunity for students to complete their Bachelor of Health Sciences (Honours) degree and their Doctor of Chiropractic (D.C.) degree in 7 years instead of 8 years.

It is part of UOIT's mission "to provide career-oriented undergraduate and graduate university programs with a primary focus on those programs that are innovative and responsive to the needs of students and employers". The Rehabilitation option is an excellent fit with this aspect of UOIT's mission.

Currently a large number of kinesiology graduates from across Ontario attend CMCC upon graduation. CMCC accepts students with a minimum of three years of undergraduate study, but most students admitted to CMCC currently complete their full degrees in order to: 1) increase their GPA and chance of acceptance in a highly competitive admission process and 2) to ensure they have an honours degree should they wish to pursue post-graduate study and other opportunities that a dual-degree credential would provide them .

UOIT's Kinesiology program already has a strong rehabilitation focus and the course offerings at CMCC are very complementary to those offered at UOIT. There are strong parallels with courses offered in the first two years of the chiropractic programme at CMCC and the final year core courses and electives offered at UOIT, which enables us to create this degree completion opportunity which is unique in Ontario.

The Rehabilitation option provides UOIT students the opportunity to be exposed to chiropractic early in their undergraduate studies so that they can be knowledgeable about chiropractic as a career, and begin building their career path. It also gives UOIT students the opportunity to take anatomy dissection courses which UOIT does not have the facilities to offer, putting them in a strong position for admission to CMCC or to post-graduate study in other areas of rehabilitation science such as physiotherapy or occupational therapy, as well as providing them with a learning opportunity that would not otherwise be available at UOIT. Additionally, the students accepted into CMCC through this option will be eligible to apply for advanced standing toward their anatomy and research courses at CMCC based on the courses they will complete at UOIT.

By creating this pathway with CMCC, the Rehabilitation option will provide UOIT students the opportunity for advanced entry to a guaranteed number of spaces at CMCC each year, while still allowing them to complete their Honours degree from UOIT.

A maximum of twenty five students will be accepted into the Rehabilitation option at the end of their first year at UOIT. A maximum of 10 of the 25 students will be guaranteed places at CMCC prior to starting their third year at UOIT, pending a satisfactory pre-admission interview at CMCC and the maintenance of a cumulative GPA of 3.0 in their third year at UOIT. The remaining 15 students from this option will also be in a strong position to obtain admission to CMCC through normal admission channels after the 3rd or 4th year of their UOIT degree.

All 25 students in the Rehabilitation option will have the opportunity to take two UOIT elective anatomy dissection courses which will utilize CMCC facilities in the third year of their UOIT degree. Combined with their other pre-requisite courses (HLSC 1200U, HLSC 1201U and HLSC 3470U) students will then be eligible to write the CMCC advanced standing exam in anatomy at CMCC. These courses provide a unique opportunity to be exposed to dissection based anatomy in a state of the art anatomy laboratory at CMCC, a facility which is not available at UOIT.

UOIT students who are offered a place at CMCC will also be offered an opportunity to apply for advanced standing at CMCC in two of their required research courses, based on a satisfactory assessment by CMCC of their case study presentation in UOIT's HLSC 3910U – Research Methods for Health Care Professional: Theory and Application ,

The Rehabilitation option students will also be offered workshops and observation opportunities at CMCC starting in their second year at UOIT. The workshops are intended to increase their knowledge of what chiropractors do, expose them to current CMCC students and clinicians, and help them to prepare for their CMCC pre-admission interview.

Depending on their success in achieving advanced standing, and how students choose to complete their courses, students admitted through this pathway will be eligible for graduation at UOIT following their 2nd or 3rd year at CMCC.

2. DEGREE REQUIREMENTS

a. Program learning outcomes

Description of the abilities that graduates of the new program component are expected to demonstrate in the following areas consistent with the provincial degree level expectations:

1. Depth and breadth of knowledge;
2. Knowledge of methodologies;
3. Application of knowledge;
4. Communication skills;
5. Awareness of limits of knowledge and;
6. Autonomy and professional capacity

Graduates from this option will acquire the same abilities as graduates in the current kinesiology stream in exercise science in:

1. Depth and breadth of knowledge;
2. Application of knowledge;
3. Knowledge of methodologies;
4. Communication skills;
5. Awareness of limits of knowledge and;
6. Autonomy and professional capacity

Bachelor of Health Sciences in Kinesiology (Rehabilitation science program option) - *This degree is awarded to students who have demonstrated the ability to:*

- Synthesize knowledge of anatomy, biomechanics, motor learning and control, exercise physiology, exercise principles and exercise rehabilitation to identify, evaluate, analyze and solve problems related to human health and performance.
- Utilize information technology and of computer hardware and software to solve problems and acquire, process, analyze and present data in manner that demonstrates a capacity to evaluate and synthesize information.
- Communicate effectively in written, spoken and visual form with both health science clinicians and with members of the general public on matters related to exercise, health and rehabilitation.
- Extrapolate independent learning and analytical skills to individual cases in kinesiology and rehabilitation in order to formulate evidence based patient management plans.
- Relate to members of other health care professions in a manner which enables the graduate to be an effective member of a multi-disciplinary health care team.

- Recognize and value the outlooks that people from various social, ethnic and religious backgrounds may bring to health care and incorporate this knowledge into interactions with colleagues, clients and families.
- Appreciate the importance of new and emerging technologies, and the strategies available for life-long learning.

b. Admission requirements

Students finishing their first year of the Bachelor of Health Science (Honours) – Kinesiology Specialization will have the opportunity to apply to the Program Option, per the process outlined by the Faculty of Health Sciences, in the spring following their first year of studies. Up to a maximum of 25 students will be admitted to the Rehabilitation Program Option each year.

In order to be eligible to apply for the Rehabilitation Program Option, students must be finishing the first year of the Bachelor of Health Science (Honours) – Kinesiology Specialization and following the program map outlined for the Exercise Science Option.

In order to be accepted, students must complete all required courses (30 credits) in their first year of studies, with no individual course grade below a C (60 per cent). Possession of minimum requirements does not guarantee acceptance to participate in the Rehabilitation Program Option. Preference will be given to applicants with the best qualifications.

Acceptance to the Program Option does not guarantee admission to CMCC.

Program Option Progression:

UOIT students accepted into the Program Option will follow a revised curriculum map beginning in their second year. Students achieve and maintain a minimum cumulative B average or 3.0 GPA, with no individual course grade below a C (60 per cent), by the end of their second year in order to continue in the Rehabilitation Program Option.

Program Option Agreement Admission Requirements – CMCC:

Students who have qualified for acceptance to the Rehabilitation Program Option will have the opportunity to apply for Advanced Entry to the CMCC DC program in the beginning of the first term of their second year of studies. CMCC will guarantee an annual maximum of 10 spaces per year.

Advanced Entry will be offered upon successful completion of an admissions interview in the year of application. An unconditional offer of admission to CMCC will be made based on successful completion of the following academic requirements: three full years of study (90 credit hours at UOIT) and a minimum cumulative grade point average (CGPA) of 3.00 on a 4.00 grade point scale, with no failures. All Academic Requirements must be completed no later than May 31 of the year of registration at CMCC.

The remaining 15 students who are not offered advanced entry from this stream will continue in their degree program at UOIT but will be in a strong position to obtain admission to CMCC through normal CMCC admission channels after the 3rd year of undergraduate study.

c. Program structure

Summary of Changes

The following changes are reflective of upcoming curriculum revisions that are being proposed for the Exercise Science concentration of the Kinesiology specialization. The kinesiology program originally developed from within a Health Sciences degree pathway and many of the core courses were adopted from the original degree program. A more coherent and comprehensive curriculum specific to kinesiology is now being developed and the changes in this pathway reflect this.

The following current core courses will become electives for the Exercise Science concentration and these changes will also be made in the program map for the Rehabilitation program option:

- HLSC 2201U - Introduction to Health Information Management
- HLSC 3805U – Introduction to Epidemiology
- HLSC 2801U – Understanding Health Care and Therapeutics in Canada

The following changes will be made to all program maps for all concentrations in the Kinesiology Specialization:

- Term change: HLSC 3410U – Human Motor Control and Learning
- Term change: HLSC 3710U – Ethics
- Term and year change: HLSC 4412U – Exercise Rehabilitation I: Cardiac, Respiratory and Metabolic Conditions
- Term change: HLSC 4413U – Exercise Rehabilitation II: Integrated Case Studies

In addition, the following changes will be specific to the program map for the Rehabilitation program option based on credit articulation with CMCC:

- Two courses in Human Anatomy Dissection will be added as core courses in the 3rd year of the Rehabilitation option:
 - HLSC 4473U – Practical Human Anatomy I: Neck, Head and Spine
 - HLSC 4474U – Practical Human Anatomy II: Upper and Lower Limbs
- Addition of an Open elective in Year 2
- Year and Term Change: HLSC 2825U – Nutrition and Health

Program Map – Rehabilitation Program Option

Students who receive advanced entry to CMCC following the third year of their degree will pursue their studies at CMCC beginning in their fourth year.

Students who are not successful in gaining advanced entry to CMCC will complete their fourth year at UOIT according to the following program map.

| Kinesiology Specialization – Program Option in Rehabilitation | |
|---|---|
| Year 1 (2011/12) | |
| Semester 1 | Semester 2 |
| BIOL 1010U - Biology I | BIOL 1020U - Biology II |
| CHEM 1010U - Chemistry I | CHEM 1020U - Chemistry II |
| CSCI 1800U - Computing Tools for Health Sciences | HLSC 1201U - Anatomy & Physiology II |
| HLSC 1200U - Anatomy & Physiology I | PHYS 1810U - Physics for Health Science |
| HLSC 1701U - Academic Writing: Perspectives in Health | PSYC 1000U - Introductory Psychology |
| Year 2 (2012/13) | |
| Semester 1 | Semester 2 |
| HLSC 2400U - Intro to Movement Science | HLSC 2110U - Foundations in Clinical and Exercise Biochemistry |
| HLSC 2462U - Altered Physiology: Mechanisms of Disease I | HLSC 2401U - Human Growth and Motor Development |
| HLSC 2800U - Health & Wellness | HLSC 2463U - Altered Physiology: Mechanisms of Disease II |
| HLSC 3470U - Kinesiology I: Anatomy of Human Movement | HLSC 3480U - Principles of Fitness & Exercise Prescription |
| Open Elective | HLSC 3800U - Critical Appraisal of Statistics in Health Science |
| Year 3 (2013/14) | |
| Semester 1 | Semester 2 |
| HLSC 3481U - Exercise Physiology | HLSC 4412U - Exercise Rehabilitation I: Cardiac, Respiratory and Metabolic Conditions |
| HLSC 3410U - Human Motor Control & Learning | HLSC 3710U - Ethics |
| HLSC 3910U - Research Methods for Health Care Professionals: Theory and Application | HLSC 3020U - Health and Exercise Psychology |
| HLSC 4471U - Kinesiology II: Musculoskeletal Biomechanics | HLSC 4474U - Practical Human Anatomy II: Upper and Lower Limbs |
| HLSC 4473U - Practical Human Anatomy I: Neck, Head and Spine | HLSC 4482U - Advanced Exercise Prescription |
| Year 4 (2014/15) | |
| Semester 1 | Semester 2 |
| HLSC 4414U - Advanced Topics in Neuromuscular Physiology and Pathophysiology | HLSC 2825U - Nutrition and Health |
| HLSC 4413U - Exercise Rehabilitation II: Integrated Case Studies | HLSC 4472U - Clinical Biomechanics and Ergonomics |
| HLSC 4996U - Research Applications I OR HLSC 4998U - Research Practicum I | HLSC 4997U - Research Applications II OR HLSC 4999U - Research Practicum II |
| Health or Science Elective (2000-level or higher) | Health or Science Elective (2000-level or higher) |
| Kinesiology Elective (3000- or 4000-level) | Kinesiology Elective (3000- or 4000-level) |

Credit Articulation

Students accepted to the UOIT-CMCC Program Option, who are successful in their admission to CMCC, will be eligible for 30 credits obtained through their studies at CMCC. These credits will be pre-approved and awarded based on a *Letter of Permission* obtained through their participation in the Program Option. Students must complete all 30 credits in order for their UOIT degree to be granted.

Credits will be awarded according to the following course equivalencies:

| UOIT (30 credits) | CMCC equivalent |
|--|---|
| HLSC 2825U - Nutrition and Health (3 credits) | PH 2206 - Biochemistry II: Health and Wellness (52 hours) |
| HLSC 4413U - Exercise Rehabilitation II: Integrated case studies (3 credits) | AC 2205 - Rehabilitation in Chiropractic Practice: A regional approach |
| HLSC 4414U - Advanced Topics in Neuromuscular Physiology and Pathophysiology (3 credits) | PH 2205 - Neuroscience for Chiropractic Practice (74 hours) |
| HLSC 4472U Clinical Biomechanics and Ergonomics (3 credits) | AC 2203 - Clinical Biomechanics |
| HLSC 4998U – Research Practicum I and HLSC 4999U - Research Practicum II (6 credits) | RMO 3303 – Student Research Apprenticeship OR RMO 3302 - Original Research Project – Protocol Development and Execution |
| Kinesiology Elective (3000- or 4000-level) (3 credits) | CD 1302 - Orthopaedics for Chiropractic Practice I |
| Kinesiology Elective (3000- or 4000-level) (3 credits) | CD 2302 - Orthopaedics for Chiropractic Practice II |
| Health or Science Elective (2000-level or higher) (3 credits) | Open selection of CMCC course – course to be pre-approved by UOIT to meet credit requirements |
| Health or Science Elective (2000-level or higher) (3 credits) | Open selection of CMCC course – course to be pre-approved by UOIT to meet credit requirements |

Advanced Standing

Students accepted to the UOIT-CMCC Program Option, who are successful in their admission to CMCC, will be eligible to write a challenge exam for Advanced Standing at CMCC for the following courses:

| UOIT | CMCC |
|--|---------------------------------|
| HLSC 4473U– Practical Human Anatomy I; Neck, Head and Spine | AN1101 – Human Gross Anatomy I |
| HLSC 4474U – Practical Human Anatomy II: Upper and Lower Limbs | AN2101 – Human Gross Anatomy II |

| UOIT | CMCC |
|--|---|
| HLSC 3910U – Research Methods for Health Care Professional: Theory and Application | RM 1301 – Applied Research and Biometrics |
| | RM 2301 – Investigative Project – Topic Development |

d. Program content

Proposed course outlines, using the New Course Template, indicating calendar level course descriptions, pre-requisites and co-requisites, credit weight, hours of class, labs and tutorials, mode of delivery and teaching methods, assessment of student learning, and intended learning outcomes

Two new courses are introduced as part of the Rehabilitation program option. See attached new course templates for the following courses:

- HLSC 4473U – Practical Human Anatomy I: Neck, Head and Spine
- HLSC 4474U – Practical Human Anatomy II: Upper and Lower Limbs

3. RESOURCE REQUIREMENTS

a. Faculty members

No new core faculty are required for this stream.

b. Additional academic and non-academic human resources

The process will be undertaken, per the policies outlined by the University, to have collaborating CMCC faculty members who hold PhD and DC degrees be offered adjunct appointments at UOIT

c. Physical resource requirements

No additional resources are required at UOIT, although it is anticipated that a course fee will be proposed for the Applied Anatomy courses

4. BUSINESS PLAN

a. Statement of funding requirements

Delivery of the two new Practical Anatomy Courses will be done on a cost-sharing basis for teaching with CMCC.

b. Statements of resource availability

The Rehabilitation program option will be an additional opportunity for students who are already admitted through the normal UOIT admission process to the Kinesiology program. Additional physical resources will not be required in the support of these students other than what is already provided as part of their regular program of study.

APPROVAL DATES

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|-------------------------------|----------------|
| Date of submission | March 2011 |
| Curriculum Committee approval | April 1, 2011 |
| Executive Committee approval | April 7, 2011 |
| Faculty Council approval | April 15, 2011 |