Twin Cities Campus

Clinical Physiology and Movement Science Postbaccalaureate Certificate

Kinesiology, School of

College of Education and Human Development

Link to a list of faculty for this program.

Contact Information:
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Website: http://ccms.umn.edu/Programs.html

- Program Type: Post-baccalaureate credit certificate/licensure/endorsement
- Requirements for this program are current for Fall 2018
- Length of program in credits: 12
- This program does not require summer semesters for timely completion.
- Degree: Clinical Physiology & Movement Science Pbacc Cert

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The clinical physiology and movement science postbaccalaureate certificate program is aimed at D.N.P. and M.D. fellows in nursing and medicine, as well as professionals in clinical fields, such as physical, occupational, and speech therapy. In addition, engineers working in the area of medical technology or medical device development are potential candidates. The interdisciplinary coursework combines physiology and movement science with clinical skills for research and the diagnosis and assessment of disease conditions. Students have the option to tailor the program to their individual needs and interest. They may select from a list of more than 30 courses. Developed by faculty with a rich collective expertise from across the University, the programs offer students a choice of two tracks: clinical physiology and clinical movement science.

Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission

The preferred undergraduate GPA for admittance to the program is 3.00.

Students wishing to pursue the certificate program must have completed a bachelor's degree, preferably in an allied health sciences or natural science field.

Special Application Requirements:
If the individual is applying for a certificate and is not currently enrolled in a graduate program at the University of Minnesota, two letters of support will be requested and a GPA of 3.0 or greater (or equivalent if there were a different student evaluation system) from a previous graduate program will be required. Submission package includes: clinical physiology and movement science application form, resume or curriculum vitae, transcripts, two letters of support, and documented language proficiency. Deadline for Fall semester admission is July 15; deadline for Spring semester admission is November 15.

International applicants must submit score(s) from one of the following tests:

- TOEFL
  - Internet Based - Total Score: 79
  - Paper Based - Total Score: 550

The preferred English language test is Test of English as Foreign Language

Key to test abbreviations(TOEFL).

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.

Program Requirements

Use of 4xxx courses toward program requirements is permitted under certain conditions with adviser approval.

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A minimum GPA of 3.0 is required for students to remain in good standing.

Required Course

This course is required for both the Clinical Movement Science track and the Clinical Physiology track:
CPMS 5101 - Introduction to Clinical Physiology and Movement Science (3.0 cr)

Elective Courses

The following courses are offered by a number of graduate programs and can be used as course electives for the certificate program in consultation with the adviser. NURS 8173 and SAPH 8173 are cross-listed.
BMEN 5201 - Advanced Biomechanics (3.0 cr)
or CPMS 5201 - Colloquium in Clinical Physiology and Movement Science (1.0 cr)
or CPMS 8201 - Seminar in Clinical Physiology and Movement Science (1.0 cr)
or KIN 5122 - Applied Exercise Physiology (3.0 cr)
or KIN 5141 - Nutrition and Exercise for Health Promotion and Disease Prevention (3.0 cr)
or KIN 5235 - Advanced Biomechanics II: Kinetics (3.0 cr)
or KIN 5385 - Exercise for Healthy Aging & Disease Prevention and Management (3.0 cr)
or KIN 5485 - Exercise Testing and Prescription (3.0 cr)
or KIN 5585 *{Inactive}*(2.0 cr)
or KIN 5941 - Clinical Movement Neuroscience (3.0 cr)
or KIN 8122 - Seminar: Exercise Physiology (2.0 cr)
or KIN 8132 - Seminar: Motor Development (3.0 cr)
or KIN 8135 - Seminar: Motor Control and Learning (3.0 cr)
or NURS 5222 - Advanced Human Physiology (2.0 cr)
or NURS 8171 - Qualitative Research Design and Methods (3.0 - 4.0 cr)
or NURS 8173 - Principles and Methods of Implementing Research (3.0 cr)
or SAPH 8173 - Principles and Methods of Implementing Research (3.0 cr)
or NURS 8175 - Quantitative Research Design and Methods (3.0 cr)
or OT 5393 *{Inactive}*(4.0 cr)
or OTOL 5993 - Directed Studies (1.0 - 12.0 cr)
or OTOL 8239 - Otoneurology (1.0 - 2.0 cr)
or OTOL 8244 - Seminar: Current Literature (1.0 cr)
or PUBH 6320 - Fundamentals of Epidemiology (3.0 cr)
or PUBH 6341 - Epidemiologic Methods I (3.0 cr)
or PUBH 6342 - Epidemiologic Methods II (3.0 cr)
or PUBH 7415 - Introduction to Clinical Trials (3.0 cr)
or PUBH 7420 - Clinical Trials: Design, Implementation, and Analysis (3.0 cr)
or RSC 5135 - Advanced Biomechanics I: Kinematics (3.0 cr)
or RSC 5814 - Age, Exercise, and Rehabilitation (2.0 cr)
or RSC 5841 - Applied Data Acquisition and Processing (3.0 cr)
or RSC 8130 - Current Literature Seminar (1.0 - 3.0 cr)
or RSC 8135 - Human Kinematics (3.0 cr)
or RSC 8170 - Special Topics in Rehabilitation Science (1.0 - 3.0 cr)
or RSC 8282 - Problems in Human Movement (4.0 cr)

Program Sub-plans

Students are required to complete one of the following sub-plans.
Students may not complete the program with more than one sub-plan.

Clinical Movement Science

Clinical movement science is a new, interdisciplinary field of study focusing on human movement dysfunctions due to neurological or orthopedic diseases or diminished physical activity. This new field bridges the gap between basic and clinical sciences by crossing the boundaries of traditional disciplines of neurology, neurophysiology, kinesiology, and physical and occupational therapy. The curriculum includes a required core course that covers the theory and application of clinical physiology and movement science. Elective courses are chosen from a broad list of offerings in departments such as kinesiology, public health, rehabilitation science, and otolaryngology.

The postbaccalaureate certificate requires a minimum of 12 semester credits. CPMS 5101 serves as a required core course for all students seeking a certificate. Electives are selected in consultation with the faculty adviser and approved by the director of graduate studies (DGS), in order to satisfy the requirements for the certificate. The specific courses chosen will depend on the background and goals of the individual student.

Sample Program for Clinical Movement Science Track

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Required
CPMS 5101 - Introduction to Clinical Physiology and Movement Science (3.0 cr)
Electives
Students should register for 2 credits of OTOL 8239.
RSC 5841 - Applied Data Acquisition and Processing (3.0 cr)
OTOL 8239 - Otoneurology (1.0 - 2.0 cr)
KIN 5941 - Clinical Movement Neuroscience (3.0 cr)

Clinical Physiology

This sub-plan is optional and does not fulfill the sub-plan requirement for this program.

Clinical physiology is a branch of physiology that bridges basic physiology and clinical medicine. It joins the gap between basic and clinical sciences by crossing the boundaries of traditional disciplines of neurology, neurophysiology, kinesiology, and physical and occupational therapy. The curriculum includes a required core course that covers the theory and application of clinical physiology and movement science. Elective courses are chosen from a broad list of offerings in departments such as kinesiology, public health, rehabilitation science, and otolaryngology.

The postbaccalaureate certificate requires a minimum of 12 semester credits. CPMS 5101 is required for all students seeking a certificate. Electives are selected in consultation with the faculty adviser and approved by the director of graduate studies (DGS) in order to satisfy the requirements for the certificate. The specific courses chosen will depend on the background and goals of the individual student.

Sample Program for Clinical Physiology Track
Required
CPMS 5101 - Introduction to Clinical Physiology and Movement Science (3.0 cr)
Electives
KIN 5385 - Exercise for Healthy Aging & Disease Prevention and Management (3.0 cr)
PUBH 7420 - Clinical Trials: Design, Implementation, and Analysis (3.0 cr)
RSC 8130 - Current Literature Seminar (1.0 - 3.0 cr)
KIN 8122 - Seminar: Exercise Physiology (2.0 cr)

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