

TEACHERS COLLEGE

COLUMBIA UNIVERSITY

MASTER OF ARTS DEGREE MOTOR LEARNING AND CONTROL SPECIALIZATION PROSPECTIVE STUDENTS GUIDE

PROGRAM OVERVIEW

The Master of Arts (M.A.) program in Motor Learning & Control (Major Code: MTLG) is a program within Movement Sciences and Education in the Department of Biobehavioral Sciences (BBS). The program is designed to provide students with a broad background in movement sciences and related areas. This program is designed for students seeking broad study of motor learning and control. Students with any undergraduate major will be considered. The program provides content relevant to students from a range of applied areas, including dance, Pilates, yoga, movement practitioners (e.g. Feldenkrais Method, Alexander technique), physical and occupational therapists, coaches, and trainers. Students can use this degree to advance their professional practice or to use as a stepping stone for subsequent application to medical, physical therapy, or occupational therapy schools, or doctoral study in kinesiology or rehabilitation sciences.

Study focuses on the behavioral, biomechanical, and neural bases of development, acquisition, and performance of functional movement skills. Acquisition of skill is examined over the life span in typically developing children and adults and individuals with movement disorders. Movement analysis is used to elucidate the neuromotor control processes underlying skilled performance in everyday functional behaviors. The practitioner's role in facilitating skill learning and performance is emphasized.

The M.A. program emphasizes bridging between the movement sciences and clinical or educational practice. The objective is to develop a comprehensive and coherent view of theory and research that can be applied to practice within the student's professional field.

The program requires 32 points of graduate study and includes:

1. Substantive study of theory and research as embodied in lecture and laboratory courses.
2. Development of clinical or educational skills in laboratory and fieldwork courses.
3. Research training to enable students to read and interpret original research and to carry out educational, clinical or laboratory research.
4. Seminars to discuss theory and research, identification of research problems, and clinical/educational applications.
5. Elective courses to meet specific student needs which may be taken throughout Teachers College in such areas as anatomy, biology, business, computer science, health education, higher and adult education, neurosciences, nutrition, physiology, psychology, science education and statistics.

A final project is required for the M.A. and may involve one of three options:

1. A scholarly review of research and theory within a topical area drawing application to educational or clinical practice.
2. An educational project including the development of an assessment instrument/method for clinical or educational practice or a presentation for a continuing education program.
3. A basic or applied research study under the advisement of a faculty member or advanced doctoral student (note this option is required if considering doctoral study).

For the M.A. degree, students may also, in consultation with their faculty advisor, create a flexibly designed program of study cutting across specialization areas (Motor Learning and Applied Exercise Physiology), which will meet their professional needs and academic interests. Students with diverse interests may also exchange courses for other department offerings in consult with an advisor.

The M.A. program can be completed in 18 months of full-time study or two to three years of part-time study (depending on the student's other responsibilities).

SPECIAL ADMISSION REQUIREMENTS/ACADEMIC PREREQUISITES

While students have come from a variety of fields, the following backgrounds are most appropriate: movement sciences, exercise science, physical therapy, occupational therapy, physical education, dance, athletic training, biology, nutrition, nursing, and psychology. Students with strong academic records, who have deficiencies in their science backgrounds, may be admitted with the understanding that these deficiencies will be remedied with appropriate courses.

Students are required to complete all of the following courses with a grade of B or better. Students who earn grades B- or below will need to retake those courses and will be charged tuition again. It is recommended that prospective students communicate with an academic advisor to discuss program plans prior to admission. Students are encouraged to make an appointment to visit the college for at least half a day to meet with faculty and current students, to audit a course or seminar, and to become acquainted with research areas and resources. Applicants are reviewed on an ongoing basis throughout the academic year. Prior to formal admission, enrollment in up to 8 points of study as a non-matriculated student is permitted.

COURSE WORK REQUIREMENTS

Core Coursework (23 Credits)

BBS 5060	Neuromuscular response and adaptation to exercise (2 points)
BBS 5068	Brain and Behavior I: Communication in the nervous system (2 points)
BBSR 5055	Bases of motor control systems (3 points)
BBSR 5582	Research design in the movement sciences (3 points)
BBSR 4060	Motor learning (3 points)
BBSR 4161	Motor learning laboratory (2 with <i>co-requisite</i> BBSR 4060)
BBSR 5028	Motor development across the lifespan (3 points)
BBSR 4050	Biomechanical analysis of human movement (3 points)
BBSR 5504	Research training seminar (Section 002) (2 points)

Substantive Study (6 credits)

Standard Courses

BBSR 4005	Applied anatomy and biomechanics (3 points)
BBSR 4055	Neuromotor processes (3 points)

- BBSR 4090** Physical fitness, weight control and relaxation (3 points)
BBSR 4095 Applied physiology I (3 points)
BBSR 5050 Neurophysiology of motor control and electromyography (3 points)
BBSR 5057 Movement disorders (3 points)
BBSR 5095 Exercise and health (3 points)
BBSR 4070 Psychosocial Aspects of Sports and Exercise (3 points)
BBSR 5199 Conference Seminar (3 points)

Laboratory Courses

- BBSR 4151** Laboratory methods in biomechanics (3 points)
BBSR 4195 Applied physiology laboratory I (3 points)
BBSR 5151 Introduction to the analysis of biomechanical signals (3 points)
BBSR 5194 Applied physiology laboratory II (3 points)
BBSR 5195 Advanced applied physiology laboratory (3 points)

Elective Courses (3 credits)

Students should take 2-3 credits outside the Movement Sciences area (along with required courses BBS 5060 and BBS 5068) to meet the Teachers College breadth requirement. Please see the academic schedule and academic catalog for a full list of available courses. Popular breadth elective courses for students in Movement Sciences have included courses in Health and Behavioral Studies (HBSE), Human Development (HUDM), Neuroscience and Education (BBSN), Dance (A&HG), and Measurement and Statistics (HUDM). Please note that courses taken at Columbia Schools outside of Teachers College cannot count toward the breadth elective requirement. It is recommended that you discuss your electives with your advisor or program faculty for assistance in selecting courses that may contribute toward your educational and career goals. Courses outside of Movement Sciences (BBSR) that you use to fulfill core degree requirements and/or research methods requirements can also count toward the breadth requirement.

RESEARCH TRAINING REQUIREMENTS

BBSR 5504 (sect 002) Research training in motor learning (2). Students will enroll in this competency-based course during their last semester of study to immerse themselves in current research in motor learning and control, as well as receive advisement on their final project. Students are expected to attend monthly course meetings during each semester of their MA program, but are only required to enroll in this course in their final semester. Note that if all coursework is complete but the student has not completed the final project, students must continue to enroll for 1 point (above and beyond the 32 points) each semester until the project is complete.

WORK STUDY AND FINANCIAL AID

Work study positions are also available to US citizens and permanent residents who have applied for and received work study allocations. Financial aid is also available, and students are encouraged to indicate being considered for financial aid on their applications. For more information, contact the Teachers College Office of Financial Aid.

RESEARCH & TEACHING ASSISTANT POSITIONS

We have a limited number of Research Assistant (RA) and Teaching Assistant (TA) positions available in the BBS Department and Motor Learning Program. To inquire about current RA positions, please contact individual

faculty to identify what positions are available in our labs. TA positions are typically reserved for advanced masters or doctoral students, but master's students with expertise in an area may be considered.

ADDITIONAL INFORMATION

Additional information about the program and labs can be found on our website:

<https://www.tc.columbia.edu/biobehavioral-sciences/motor-learning-and-control/>

A description of the above courses can be found at <http://www.tc.columbia.edu/biobehavioral-sciences/movement-science-and-education/academics/courses-offered/>

Additional BBSR and other courses can be found in the Teachers College Academic Catalogue at -

<http://www.tc.columbia.edu/catalog/>

Additional information about Financial Aid can be found here:

<https://www.tc.columbia.edu/admission/financial-aid/>

For international students, please visit our International Students Website:

<https://www.tc.columbia.edu/international/>

TO APPLY, please visit:

<https://www.tc.columbia.edu/admission/how-to-apply/>

TEACHERS COLLEGE AND PROGRAM POLICIES

Teachers College Diversity Mission Statement

To establish Teachers College as an institution that actively attracts, supports and retains diverse students, faculty and staff at all levels, demonstrated through its commitment to social justice, its respectful and vibrant community and its encouragement and support of each individual in the achievement of his or her full potential.

Transfer Credit

No transfer credits may be accepted for the Master of Arts program.

Satisfactory Progress

Students are expected to make satisfactory progress toward the completion of degree requirements. Program faculty will review each student's progress annually. Please note that satisfactory performance in the Motor Learning program is defined as: no incomplete grades, and no core required courses in which the grade earned is lower than B. Grades of B- or below in any core required course will result in retaking of the course. Any student receiving 8 or more points in grades of C- or lower is not permitted to continue registration at the College in any capacity and may not receive a degree or diploma. Petitions for exception to this policy are to be submitted, in writing, to the Registrar with a written recommendation from the department in which the student was last enrolled. Such petitions will be submitted to a faculty committee for review and decision.

Where there are concerns about satisfactory progress, students will be informed by the program faculty. If a student is performing below expectations, he/she may be required to complete additional course work. The program will provide a plan and timeline for remediation, so students know the expectation for them to

continue in the program. If satisfactory progress is not maintained a student may be dismissed from the program.

Resolution of Student Academic Program Concerns

Any student who has a concern regarding an academic matter may seek assistance. The procedure for resolving academic program concerns (see note of grade correction process below) begins with either the faculty member (if the concern is related to a course) or the student's advisor. If the student is not satisfied with the response or resolution achieved at this first level, or if speaking with the faculty member presents a conflict of interest for the student, the student should proceed to speak with the Program Director in the area in which the academic concern resides. If the student is not satisfied with the response or resolution achieved through the Program Director, the student should proceed to speak with the Chair of the academic department in which the academic concern resides. If the student is still not satisfied with the response or resolution achieved through the Department Chair, or if speaking with the Department Chair presents a conflict of interest for the student, the next step is to contact the Office of the Vice Provost. At any stage of the process, students are welcome to seek the advice and guidance of the Ombudsman, who is charged with attempting to informally resolve student dissatisfaction of an academic nature on a completely confidential basis.

Grade Correction Procedure

The instructor for a course has the responsibility for setting the requirements for a course and making an evaluation of students' work. Once a grade has been given, the instructor is not free to change the grade unless the instructor indicates to the Registrar that an error was made in the original grade transmitted. If a student believes that an error has been made, he/she must take the initiative in bringing about the necessary correction prior to the conclusion of the semester immediately following the semester in which the course was taken. The normal procedure for effecting a correction would be through direct discussion between the student and the instructor. If redress cannot be attained through such discussions, the student may next appeal to the department chairperson of the department offering the course. If resolution cannot be attained through appeal, the student may next appeal to the Vice Provost. In situations where the student feels that such an appeal process might not be in the student's interest, counsel and assistance can be sought from the Ombudsman or the Vice Provost.

Students with Disabilities

The College will make reasonable accommodations for persons with documented disabilities. Students are encouraged to contact the Office of Access and Services for Individuals with Disabilities (OASID) for information about registering with the office. You can reach OASID by email at oasid@tc.columbia.edu, stop by 163 Thorndike Hall or call 212-678-3689. Services are available only to students who are registered and submit appropriate documentation. As your instructor, I am happy to discuss specific needs with you as well.

Students' Rights & Responsibilities

The rights and responsibilities of students and other members of the Teachers College community are addressed in the annual Catalog and the Statutes of Teachers College as well as in College policies and practices. The information provided within the relevant section of the Student Handbook includes selected policies and practices, as well as outline the disciplinary procedures of the College. Students are expected to be familiar with and adhere to these policies and practices. The most current versions of Teachers College policies are available in the TC Policy Library.

Statement on Academic Conduct

Teachers College (TC or the College) expects members of the College community to observe traditional norms of scholarly discourse, academic integrity, and fairness. All members of the College community are expected to exhibit the high level of personal integrity which society must demand of professionals.

Teachers College insists on the greatest degree of freedom of inquiry, teaching, learning, and expression for all of its members. Thus activities which disrupt the regular and essential operation of the College or Columbia University are not permitted. For matters of gender-based misconduct involving students including sexual assault, domestic violence, dating violence, and stalking the Gender-Based Misconduct Policy for Students can be found at <http://sexualrespect.columbia.edu>.

Students or other members of the College community may charge students with violating these standards. Students found guilty of violating these standards of conduct may be subject to appropriate disciplinary action, ranging from reprimand to disciplinary probation, suspension or expulsion. For a full statement of the policy, please visit the TC Policy Library.

Non-Discrimination Policy

Continuing its long-standing policy to support active equality for all persons, Teachers College does not discriminate on the basis of race, color, religion, creed, sex, sexual orientation, national origin, ancestry, age, marital status, citizenship status, veteran status, disability, pregnancy, gender expression or any other criterion specified by federal, state or local laws, in the administration of its admissions, employment and educational policies or scholarship, loan, athletic and other school-administered programs. Rather, Teachers College affirms that it admits students and selects employees regardless of their race, color, religion, creed, sex, sexual orientation, national origin, ancestry, age, marital status, citizenship status, veteran status, disability, pregnancy, gender expression or any other criterion specified by federal, state or local laws and thereafter accords them all the rights and privileges generally made available to students or employees at the school.

Students with concerns about the application of civil rights laws (including Title IX, the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and the Age Discrimination Act) may wish to speak with Vice Provost Katie Embree, 113 Zankel, (212) 678-3991, Vice President for Diversity and Community Affairs Janice Robinson, 128 Zankel, (212) 678-3391, Executive Director for Equity and Section 504 Compliance Officer, Melissa Rooker, 128 Zankel, (212) 678-7508, or Ombuds Officer Erwin Flaxman, 280 Grace Dodge, (212) 678-4169. Students with Title IX concerns may also contact Ombuds for Gender-Based Misconduct Riddhi Sandil, 325 Horace Mann, (212) 678-4016.

For a full statement of the policy, please visit the TC Policy Library.

Movement Sciences and Education/Kinesiology Program
 Department of Biobehavioral Sciences
 Teachers College Columbia University
 525 West 120th Street, Box 93
 New York, NY 10027, USA

<http://www.tc.columbia.edu/biobehavioral-sciences/movement-science-and-education/motor-learning-and-control/>

Phone: (212) 678-3325 Email: movementscience@tc.columbia.edu

Motor Learning Program Director: Lori Quinn, PT, EdD, FAPTA

Motor Learning MA Director: Julie Fineman, PT, EdD