

MCMASTER UNIVERSITY
Department of Kinesiology

KINESIOLOGY 3Q03
Motor Development Across the Lifespan

Term I

Fall 2017

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COURSE DESCRIPTION

Observation, measurement and critical evaluation of motor development in terms of theories and research evidence. Emphasis will be on the development of motor skills, with specific reference to the nervous and perceptual systems across the lifespan.

COURSE OBJECTIVES

The primary aim of this course is to provide students of kinesiology with an introductory-to- intermediate understanding of the physiological and psychological elements that underlie both typical and atypical motor development across the lifespan. At the end of this course, students should:

1. Know and understand the factors/variables which influence motor skill development. Describe 'typical' motor development,
2. Demonstrate an awareness of how the predictions of the various theoretical approaches would impact on the observation, measurement and development of motor skills,
3. Understand and be able to apply the knowledge of motor development.

COURSE FORMAT

The class will meet three times each week. Course performance is assessed through the completion of verbal and written assignments as well as performance on a midterm and final examination.

REQUIRED TEXT

Haywood, K.M., & Getchell, N. (2014). *Life Span Motor Development* (6th edition). Champaign, IL: Human Kinetics Publishers. *Older editions of this text book are not recommended for this course although there is some overlap across editions.*

Additional references/Supplemental readings may be provided in class.

SOME NOTES ON READINGS/LECTURE NOTES/CLASS ATTENDANCE AND LECTURES

You are expected to attend every class. The readings and lectures will both overlap and complement each other. The lectures are designed to expand and elaborate on the readings and the readings on the lectures; neither is a substitute for the other. Written information contained in lecture notes will be made available via Avenue to Learn (see also the section on On-Line Resources below). These will typically (but perhaps not always) be available before the class.

However, please be aware that the lectures might depart from the notes on Avenue and there will be additional information conveyed in the class that may not appear in the lecture notes. It is YOUR responsibility to cross-check the notes with others if you miss a class. If in-class attendance drops, notes will NOT be posted on Avenue.

Computer use in the classroom is permitted but please note that such use is intended solely to facilitate learning (e.g., note taking, viewing posted material, etc.) for that particular lecture. University policy stipulates that, at the discretion of the instructor or TA, students using a computer in class for any other purpose will be required to turn it off immediately. We would also kindly ask that all cell phone be set to silent mode before the lecture begins.

Course materials provided by the instructor are for use by students registered in this class only. **Under no circumstances** are these materials to be shared, posted or sold to a third party without permission from the instructor. This includes, but is not limited to, online posting of instructor provided lecture/lab notes, online lectures, recordings of lectures, or any lab materials on a website other than the Avenue site designed for this course.

EVALUATION

Tests and Exams:

- Midterm (25%) Wednesday, October 18
- Final examination (35%) Scheduled by Registrar

Motor Disorders Assignment:

- Motor Disorders video Presentation (15%)
- Motor Disorders written paper (25%)

Regarding this assignment, each student must: a) participate in a self-made video presentation that will be uploaded to a viewable hosting site, and b) submit, in WORD format, a written paper. More details on this assignment are outlined below.

POLICY REGARDING CONFLICTS WITH TESTS AND ASSIGNMENTS

Students who miss the midterm test, final exam or any other evaluated work for legitimate reasons such as illness *may* be allowed to write a deferred or "make-up" test. In all instances, ***appropriate documentation must be submitted to the Office of the Associate Dean, Faculty of Science.*** In situations where the Office of the Associate Dean deems sufficient merit in the request, alternative arrangements regarding test deferral or assignment extensions will be made by the course instructor. Please note that in order to maintain the greatest degree of fairness, these alternative times will be within two school days of the originally scheduled test or assignment. If circumstances do not allow for the make-up work to be completed during this time frame, a final opportunity to write any missing tests will be held on ***Friday, December 1st, 9:30-10:30 am or 2:30-3:30 pm.***

Note: it is the student's responsibility to initiate accommodation arrangements for missed work. Failure to do so will result in a grade of zero for the missed work.

University policy provides provision for possible accommodation for missed *work worth less than 25% of your final grade*, for absences (minor medical reasons lasting fewer than 3 days), using the McMaster Student Absence Form (msaf). *Please note that both the midterm test and the final written paper in this course are valued at 25% of your final grade and, as such, accommodation for rewriting these tests will not be granted through the msaf process.*

Students who miss a Registrar-scheduled final exam can apply to the Associate Dean's office for permission to write in the deferred final exam schedule. In all cases, appropriate documentation must be submitted to the Office of the Associate Dean, Faculty of Science, for consideration of deferred examination permission. Under no circumstances will the instructor re-schedule a final exam for individual students.

DROP BOXES

Course drop boxes are located on the second floor of the IWC near IWC 224 (please do not place assignments in the administrative drop box located outside IWC 219C).

ACADEMIC INTEGRITY

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences (e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript reading "Grade of F assigned for academic dishonesty", and/or suspension or expulsion from the university). It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at: <http://www.mcmaster.ca/univsec/policy/AcademicIntegrity.pdf>

The following illustrates only three forms of academic dishonesty:

- Plagiarism (e.g. the submission of work that is not one's own or for which other credit has been obtained),
- Improper collaboration in group work.
- Copying or using unauthorized aids in tests and examinations.

TURNITIN.COM

In this course we will be using a web-based service (Turnitin.com) to reveal plagiarism. Students will be expected to submit their work electronically to Turnitin.com and in hard copy so that it can be checked for academic dishonesty. Students who do not wish to submit their work to Turnitin.com must still submit a copy to the instructor. No penalty will be assigned to a student who does not submit work to Turnitin.com. (e.g., on-line search, etc.). To see the Turnitin.com Policy, please go to :

www.mcmaster.ca/academicintegrity

ACADEMIC ACCOMMODATION OF STUDENTS WITH DISABILITIES

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone (905) 525-9140 ext. 28652 or email sas@mcmaster.ca. For further information, consult McMaster University's Policy of Academic Accommodation of Students with Disabilities:

<http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicAccommodation-StudentsWithDisabilities.pdf>

POLICY ON THE USE OF CALCULATORS IN EXAMINATIONS

The use of calculators during exams will not be permitted (seeing as it is extremely unlikely that they will ever be needed in this course)

ON-LINE LEARNING RESOURCES

This course is subscribed to Avenue to Learn. As a student registered in this course, you will be able to log-in to this site at any time and access certain elements of course content. On this site we will post lecture outlines, assignment information, discussion forums and other materials pertinent to the course. Please note that these materials are provided to guide you through in-class lectures and assist in developing a structured framework for learning. *Because certain information may not be included in these on-line resources, they are NOT to be considered substitutes for lectures.*

Students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

MODIFICATIONS TO COURSE

The instructor and university reserve the right to modify elements of the course during the term including the specific details for the class assignments. You will be informed of any such changes to the course as soon as possible. As well, the university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes. **Note: Details, updates, and/or changes to this course outline will be announced in class and posted on Avenue to Learn.**

OTHER ISSUES

- Full attendance is expected at all lectures.
- Students, whose attendance or performance is severely affected by medical, emotional or other disabilities, should consult with the instructor early in the term to discuss special arrangements. Supporting documentation must be provided.
- Please let us know in advance, preferably in the first week of class, if there are any special learning requests or requirements.
- Students who plan to be absent for varsity athletics, family obligations or other similar commitments should discuss these commitments with the instructor before the withdrawal date.
- All notes posted on Avenue to Learn are the intellectual property of the instructor and are not to be redistributed without permission.
- Should you wish to record a lecture (in any format, whether audio or audio-visual) *you must seek the permission of the instructor* before the lecture begins and you will need to explain the reason for wishing to record the lecture. Note that any such recording will be permitted only for the purposes of private study by the individual student. ***Students may not distribute, email, electronically post, or otherwise communicate these materials to any other person.***

FEEDBACK

It really helps us improve our services when we hear from our students, faculty and staff about what we can do better. A feedback process brings to our attention situations in which we may not have adequately considered accessibility and allows us to better plan for accessibility in the future.

COURSE CONTENT and READINGS

Topic	Readings
INTRODUCTION TO MOTOR DEVELOPMENT Fundamental Concepts Theoretical Perspectives Motion and Stability	Chapters 1, 2, 3
DEVELOPMENT OF MOTOR SKILL Early Motor Development Locomotion Ballistic and Manipulative Skills	Chapters 6, 7, 8, 9
PERCEPTUAL-MOTOR DEVELOPMENT Sensory-Perceptual Development Perception and Action in Development	Chapters 10, 11
FUNCTIONAL CONSTRAINTS TO MOTOR DEVELOPMENT Social and Cultural Constraints Psychosocial Constraints Knowledge Based Constraints	Chapters 12, 13, 14

MOTOR DISORDERS ASSIGNMENT

DETAILS, DATES and PROCEDURES

We value the concept of independent, self-directed learning in this course. To that end, a major component of your evaluation (40%) will be comprised of a two-person team assignment that involves both a recorded verbal presentation and written components (a scientific paper). Both team members must contribute to the creation of the video and the written paper (i.e., there is one paper and one video to be submitted per team)

The overarching purpose of this assignment is provide you with the opportunity (and experience) to conduct a research project and present your findings to a broad audience. To this end, you will select a sample population with a known movement disorder and a specific motor activity that your chosen population finds challenging. Specific details regarding the project are outlined below, but in general you will be expected to demonstrate a thorough understanding of your chosen movement disorder and develop two well researched, ***novel*** interventions (short term and long term) that are designed to alleviate these movement challenges.

PROJECT DETAILS (and examples)

Sample populations

You must choose a population or disorder where the *motor (perceptual-motor) problem* is the **major focus** of your project. Please choose a disorder and an associated age range (be sure to think about reasons for choosing both). Some examples are listed below. This is certainly not an exhaustive list so please do not feel confined by these examples. Be sure to choose a population and/or disorder that will be of interest to both team member:

- Parkinsons' (elderly/adults),
- Developmental Coordination Disorder (children),
- Sensory impaired individuals (blind, vestibular patients, etc.),
- Down syndrome,
- Stroke,
- Autism Spectrum Disorder (ASD)
- Multiple sclerosis
- Cerebral palsy
- Muscular dystrophy
- Huntingdon's Disease,
- ALS
- Attention Deficit Disorder (children)
- Etc., etc.

Sample activities

Once you have identified a sample population, you will also have to choose a motor skill activity (e.g., running, walking, throwing, grasping) that can be evaluated with respect to that population of choice. Examples of these activities can be found in Chapters 7-9 of your text but you are not limited to these. You will need to compare and evaluate your chosen population with respect to "norms" and in view of the various constraints acting on the person (age, stage of illness/disorder, primary and secondary motor/neurological symptoms, etc.). Be sure to be specific when selecting your motor skill activity! Some activities that may appear "simple" on the surface (like walking or buttoning a shirt for example) are actually very complex when studied in the context of motor control and development.

PROCEDURES AND DATES

1. Registration of topic. **To be completed by Friday, September 27th** at the latest:
 - a) Decide on a partner. This is a two-person team project.
 - b) Decide on a **population/disorder** and an **activity/skill**.
 - c) There will be a maximum of 4 topics per disorder & skill. Thus, if you have a topic /disorder that you are particularly interested in pursuing, register it early.
 - d) Discuss and register these ideas (see Appendix A) with me **BEFORE the registration deadline**. In-person discussions with any or all of the TAs are recommended as soon as possible. However, polite and informative email communication with the TAs is OK.
 - e) Get your **topic approved by the TAs**. To do this, electronically submit Appendix A (minus signatures) with the disorder (and type of skill you will be exploring with this disorder) as well as the names & student numbers of both partners that comprise your group. **Please also submit a defining group name** (make sure you remember what this is!!!). We will use this name in any future communications with your group.
 - f) Signatures of both people on your team should be handed to the instructor in class. This signed sheet must be given to the instructor before the start of the class on September 27th. **The disorder, skill and names of the people in the group must be approved by the TA before this point. Only ONE registration sheet is required per team.** You cannot change your choice of disorder after this date. Make sure you do your research early so that topic issues are avoided.
2. Team meetings (throughout the term). To be scheduled and arranged as per your own schedules. I would recommend weekly meetings to determine content, delegate tasks between team members, discuss the questions, watch videos, perform literature searches, read, visit people with movement disorders etc. This time should also be a time of reflection and discussion on class lectures/readings. You should start the process of forming your team as soon as possible. A record of meetings (see Appendix B - or something similar) must be submitted before the day of your presentation.
3. Video presentation of your team's work, 10-12 minutes in length, must be uploaded by (or before) Monday, November 20th. We are still working on the specific details as to where we will host your uploaded presentations. This oral presentation of your work must contain all of the information detailed below. **Both** members of the team must be present in the video and take part in the presentation. Remember...Always aim to make your presentation interesting and clear for the reader.
4. Our goal here is to compile a video library containing information on multiple movement disorders and well researched interventions designed to aid individuals with these particular challenges. As such, these videos will comprise a fairly large and valuable proportion of the content in this course. You will be expected to watch these videos and learn from them....a number of randomly selected questions from these presentations will be on the final exam.
4. The written portion of the assignment must be submitted as a WORD (or similar) document (e-mailed to the TA) on or before **Monday, November 20th**.

WRITTEN ASSIGNMENT

The written assignment will use the format and referencing styles of the American Psychological Association. We will talk about this in class, but you would be well advised to visit:

<http://www.apastyle.org/learn/tutorials/basics-tutorial.aspx> and quickly view the tutorial on APA style. The final length of the written work should be 8-10 pages (single sided, double spaced, 12 point font).

Section I

Define your population/disorder/current treatments

1. **Symptoms:** In this section you will need to consider (and detail) the various individual constraints (subdivide these in terms of both functional and structural constraints) which are symptomatic of this population in general or your chosen sample in particular (i.e., age, severity, onset of disease, subset, etc.). Focus primarily on the Sensory-Motor problems. However, if there are other problems which could impact performance on your chosen skill/activity then you may need to give more details. You can list these, but give descriptions and make sure you are clear as to the type of constraint. Give appropriate reference(s) in the text (a web page address is not a reference...you may use a web page to help you find a “peer-reviewed” reference). (3 marks).
2. **Cause/Aetiology:** Focus on the Sensory-Motor problems and relate the symptoms to their hypothesized cause. Give appropriate reference(s) in the text. The cause might be unknown and there may be many opinions so summarize the most common /accepted of these. Diagrams may help here. In this section, you will need to consider whether these causes are individual, environmental and/or both. (3 marks).
3. **Diagnosis/Prognosis and Behavioural treatments:** Focus on the Sensory-Motor problems. How is this disorder typically diagnosed? What assessment tools are typically used (do not just list without some explanation as to why or what these tests supposedly measure). How reliable are these? How is this disorder typically treated (focus on the behavioural treatments and interventions currently in use). (4 marks)?

(In total, this Section is worth 10 marks)

Section II

In this section you will consider yourself a movement specialist who is required to: (i) observe and assess, (ii) compare to a control group and (iii) examine the effect of two treatment interventions on a sample of your chosen population when they are performing a specific motor activity. You will receive marks based on the following criteria:

1. **Detail your chosen activity** with respect to the demographics (characteristics) of your chosen age-range and population. What are some of the constraints associated with the activity (task, environmental and individual) that will impact the level of achievement/performance on your chosen activity? (3 marks).
2. **Define the performance features.** How will this activity differ across your chosen population sample and an age-matched control group (i.e., what “normally” happens and how will this be different in your chosen sample)? Think about onsets, types of behaviours and the various disorder-related constraints. Diagrams might help (4 marks).

3. **Improving performance:** As a movement specialist, how can you bring about improvements on this skill? Propose one novel long term and one novel short term intervention that could be implemented to: a) change *immediate* performance for the better (the short term) and b) facilitate performance in the long term. Think about what task/environmental constraints could aid the immediate and long term performance on the skill/ task. Be sure to consider and propose ***behavioural*** interventions (i.e., not pharmacological or medical/ surgical). Think about the duration and practical aspects of this intervention). A good way to think about the distinction between the sort and long term interventions is this: The short term helps solve the problem immediately, the long term should make the short intervention irrelevant (i.e., they won't need it anymore). (6 marks)
4. **Assessment:** How will you score performance to enable you to assess the level of proficiency on this skill across people and as a function of your long term intervention? Think about quantitative and qualitative assessment criteria (from class). Use the book & other references to help. Provide references with some examples of the test or assessment tool. Please feel free to make up your own (perhaps in addition to standardized measures) but please give sufficient detail as to why this would be a valid and reliable measure of performance and why this test was chosen, especially if there are existing tests that might be sufficient. (5 marks).
5. **Reference section:** Provide a reference/bibliographic section. References are important. You must always appropriately cite /acknowledge other people's work. If you quote directly from a source then you must also give page numbers next to the text and put the text in quotes. Whilst it is OK to reference and pull some material from web sites, these should not be your main source of information. Remember, information on the web is generally not peer-reviewed. Make sure that you have at least 3-4 peer-reviewed academic journal articles as references. (2 marks).
6. **Pose three multiple choice** (5 option) questions along with the correct answer. If suitable, a selection of these questions will appear on the final exam. Please make the questions specific to both your chosen population and activity. The questions must be based on material contained in your video presentation!! (2 marks)

(This Section is worth 22 marks)

The mark distribution scheme described above adds up to 32. Three additional marks will be available for overall impression (grammar, sentence structure and other stylistic components). Thus the final total grade for this assignment will be 35. This will be reduced such that:

THE WRITTEN ASSIGNMENT WILL ACCOUNT FOR 25% OF YOUR FINAL GRADE.

VIDEO PRESENTATION

The video presentation that you will upload for the class is, essentially, a summary of your written assignment. That said, you do not need to tell us everything there is to know about the particular disorder. The amount of information contained in your video presentation (and written document for that matter) should reflect **sensitivity and discrimination** of material, but not a lack of work, effort or search.

More details on the specifics of this part of your project will be made available once we have some technical details sorted out but in general, marks will be awarded on the basis of 5 criteria: 1) Clarity; 2) Relevance and Succinctness; 3) Information/Content; 4) Presentation Enthusiasm, Creativity, Novelty; and 5) Organization.

THE VIDEO PRESENTATION WILL ACCOUNT FOR 15% OF YOUR FINAL GRADE.

One last important note on team work on this assignment:

One of you should take minutes and provide a summary, see Appendix. (B) of each meeting. At the end of each meeting always discuss dates and content for the next meeting and any upcoming actions so that both of you will be prepared. Remember that your team may comprise two people of different skills and interests. Try and maximize each other's strengths, be fair and empathetic to your partner, engage in discussion and participate fully. There will be times when individual contributions may seem unfair to one or the other of you. However, you are both given the same mark for the final product so help each other. Your effort will be rewarded in terms of what you learn (through your study and interactions) and the final grade. Also, please remember that both members of your team are equally responsible for the integrity of all materials submitted for evaluation of this project.

Appendix A: Motor Disorder Registration

Group Name (that you will remember): _____

Movement disorder: _____

Motor Skill: _____

Date: _____

NAMES: PLEASE PRINT	
	Last Name, First Name, Student Number
1	
2	
SIGNATURES	
1	
2	

*** *By signing this form you are agreeing to work cooperatively with your partner to complete the assignment to the best of your abilities. You are also agreeing that you are both equally responsible for the integrity of all materials submitted for evaluation of this project Any disagreements must be sorted out within***

