University of Waterloo
Department of Psychology
Psych 335: Developmental Neuropsychology
Winter 2015
Tuesdays & Thursdays, 1– 2:20 pm, RCH 105

Instructor and T.A. Information

Instructor: Tara McAuley
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Office Hours: Thursdays from 2:30-4:30 or by appointment
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Note: I will respond within 24 hours to e-mails and phone calls that are received during the weekday (Mon-Fri) only. I generally do not respond to e-mail and voice mail on the weekend (Sat-Sun).

T.A.	Martyn Gabel	Tammy Rosner	T.A. 3 Name	T.A. 4 Name
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Course Description

Developmental neuropsychology is a field in which brain-behaviour relationships are examined in the context of typical and atypical development. This course will focus on the structural development of the brain, the emergence of functional brain systems, and the neuropsychological underpinnings of childhood brain disorders. Emphasis will be placed on the integration of theoretical perspectives, empirical research, and clinical practice.

Course Goals and Learning Outcomes

Upon completion of this course, students should be able to:

A. Identify historical events that gave rise to the field of clinical neuropsychology in general and developmental neuropsychology in particular
B. Describe methods used in developmental neuropsychological research and practice
C. Identify the stages of brain development, major subdivisions of the brain, and specialized brain circuits that support neuropsychological functions
D. Identify the neural, cognitive, and behavioural sequelae of brain-based disorders of childhood
E. Understand the theoretical basis for different approaches to neuropsychological rehabilitation with a developing population

Required Text

Unfortunately, our field is lacking a textbook that provides a comprehensive foundation of brain-behaviour relationships during development and a description of how these relationships may be altered in brain-based disorders of childhood. Rather than require that students purchase multiple texts, which I believe would be prohibitively expensive, readings for this course have been selected from multiple sources and are compiled in a custom course pack. This course pack is available for purchase at the UW Book Store and is required for the course.

Course Requirements and Assessment

Your grade will be based on the points you accrue on 3 out of 4 tests, a final paper, and optional bonus credit. A large amount of information is presented in this course, which places heavy demands on rote memorization and higher-level critical thinking. As such, tests are scheduled approximately every 3 weeks to encourage students to stay on top of material and to reduce the amount of material covered on any one test. The break-down of grades is as follows:

Assessment	**Date of Evaluation**	**Weighting**
Test 1	Jan 27	25%
Test 2	Feb 24	25%
Test 3	March 17	25%
Test 4	April 2	25%
Final Paper	April 6	25%
Bonus Credit	N/A	4%
Total (based on 3 out of 4 test scores)		104% (100 max)

Tests

Tests will be based on assigned readings and lecture material and will consist of multiple choice and short answer questions. The questions will require knowledge of basic facts and the ability to apply this knowledge to real-world situations. Please note that only the 3 highest test scores are counted toward the final grade (i.e., your lowest test score is dropped). HOWEVER, this only applies to students who write all 4 tests. In other words, students who write only 3 tests do not have the option of dropping their lowest test score and all 3 tests will be factored into their final grade. For this reason, it is to the student's advantage to write all 4 tests. THERE ARE NO MAKE-UP DATES FOR MISSED TESTS IN THIS COURSE FOR ANY REASON.

Final Paper

In lieu of a final exam, a final paper will require students to integrate knowledge acquired throughout the course. This assignment should be uploaded to the Dropbox on Learn prior to midnight on April 6. Late assignments will only be accepted from students in extenuating circumstances and with appropriate documentation provided that they contact the instructor no later than 48 hours after the due date. If no contact is made, a mark of 0 will be given for the assignment. If a student anticipates being absent from class on the assignment due date, the student should submit his/her assignment to the Dropbox beforehand.

Plagiarism detection software (Turnitin) will be used to verify that use of all materials and sources is documented. Students who do not want to have their assignment screened by Turnitin may submit their assignment directly to the instructor along with hard copies of cited material in which cited information is highlighted. PLEASE ENSURE THAT YOU ARE AWARE OF WHAT PLAGIARISM IS AND HOW IT MAY BE AVOIDED IN YOUR WORK BY REFERRING TO THIS WEB SITE: http://subjectguides.uwaterloo.ca/plagiarism. Plagiarism is a serious academic offence. Assignments that are plagiarized may, at my discretion, receive a hefty penalty (e.g., a grade of 0) and may also be referred to the Dean.

Bonus Credit

Students may earn up to 4% in bonus credit, consisting of any combination of the following:

1. Syllabus Quiz. Prior to Test 1, students may take a syllabus quiz on Learn for 1% bonus. The purpose of this quiz is to encourage students to be familiar with the content of the syllabus. Students who take the syllabus quiz will receive the 1% bonus once they have answered all of the questions correctly.

2. Create Test Questions. Prior to each test, students may submit multiple-choice questions that are based on the readings to the Dropbox on Learn. Your question should identify the correct answer and the appropriate source (e.g., Joe Smith chapter, page 10, paragraph 2). Students will receive 1% bonus for each question that is used on a test, to a maximum of 2% bonus.

3. Post to the Discussion Board. Students may also accrue bonus credit by posting to the Discussion Board on Learn. This may include (a) posting a link to news items that are relevant to the content of the course and (b) commenting on news items directly or responding to the comments of myself and/or your peers. Students will receive 0.5% bonus for each news item that is offered or post (one per thread), to a maximum of 2% bonus.

Roles and Responsibilities

I will be available outside of class, either during office hours or at another mutually convenient time, to address questions that students may have about course content, course requirements, or their progress in the course. TAs will be available outside of class to review tests (this will typically be done the week after test grades have been posted to Learn) and to help students with the final written assignment. Specific TA hours will be posted on Learn. You can also contact TAs to meet at another mutually convenient time if their hours do not work for you.

Though attendance is not mandatory, it is strongly recommended that students attend lectures as they contain information that will not be covered in the readings. Slides will be posted to Learn before each class, but are intended to serve as a framework for note-taking (not as a substitute for attendance). Students are encouraged to ask questions when material is unclear – either by asking in class or by sending me an e-mail afterward. I will repost questions anonymously to the Discussion Board on Learn for the benefit of all students in the course (if you have a question, it is very likely that your peers do as well).

Electronic Device Policy

Research tells us that students are better able to retain information that is presented in lecture when they hand-write lecture notes and are not tempted by potential sources of distraction (e.g., the internet). For this reason, I believe that it is preferable to attend lectures without phones, notebooks, laptops, etc. However, I also appreciate that this is my preference and that most students will bring such devices to class. I do not mind students using these devices for things that have no bearing upon the lectures provided that they do not cause a distraction to me or to other students in the lecture hall. I also request that students turn cell phones off during lectures and avoid chatting with their neighbours, the latter of which is very noticeable – and distracting – from my vantage point at the front of the lecture hall.

Course Outline

Date	Topic	Readings
Jan 6	Course overview	
Jan 8	History of the field and methods	Johnson, M.H. (2011). Developmental cognitive neuroscience: An introduction (pp. 17-30).
Jan 13	Brain development I: Structural brain development	Anderson, A., Northam, E., Hendy, J., & Wrennall, J. (Eds.). (2001). Developmental neuropsychology: A clinical approach (pp.39 – 68).
Jan 15		
Jan 20	Brain development II: The specializing brain	Johnson, M. (2001). Functional brain development in humans. Nature Reviews Neuroscience, 2, 475-483.
Jan 22	Early brain insult and recovery	Anderson, A., Northam, E., Hendy, J., & Wrennall, J. (Eds.). (2001). Developmental neuropsychology: A clinical

Date	Topic	Readings
		approach (pp.103-124).
Jan 27	**TEST 1**	
Jan 29	Intelligence	
Feb 3	"What" and "Where" Visual Functions and Motor Control	Atkinson, J., & Nardini, M. (2008). The neuropsychology of visuospatial and visuomotor development. In J. Reed & J. Warner-Rodgers (Eds.), Child neuropsychology: Concepts, theory, and practice (pp.183-217).
Feb 5	Attention	Nelson, C.A., de Haan, M., & Thomas, K.M. (Eds.). (2006). Neuroscience of cognitive development: The role of experience and the developing brain (pp. 154-158).
Feb 10	Memory	Nelson, C.A., de Haan, M., & Thomas, K.M. (Eds.). (2006). Neuroscience of cognitive development: The role of experience and the developing brain (pp. 71-91).
Feb 12	Language	Hoover, J.R., Sterling, A.M., & Storkel, H.L. (2011). Past, present, and future of pediatric neuropsychology. In A. Davis (Ed.), Handbook of pediatric neuropsychology (pp.71-78).
Feb 17	**READING WEEK**	
Feb 19	**READING WEEK**	
Feb 24	**TEST 2**	
Feb 26	Social Cognition	Cadinu, M.R., & Kiesner, J. (2000). Children's development of a theory of mind. European Journal of Psychology of Education, 15(2), 93-111.
Mar 3	Executive Functions	Zelazo, P.D., & Muller, R. (2011). Executive function in typical and atypical development. In U. Goswami (Ed.), The Wiley-Blackwell handbook of childhood cognitive development, Second edition (pp.574-603).
Mar 5	Feotal Alcohol Exposure	Mattson, S.N, & Vaurio, L. (2010). Fetal alcohol spectrum disorders. In K.O. Yeates, M.D. Ris, H.G. Taylor, & B.F. Pennington. (Eds.). Pediatric neuropsychology: Research, theory, and practice (pp.265-293).
Mar 10	Congenital Hypothyroidism	Rovet, J., & Brown, R. (2007). Congenital hypothyroidism: Genetic and biochemical influences on brain developmental and neuropsychological functioning. In M.M. Mazzucco & J.L. Ross (Eds.). Neurogenetic developmental disorders: Variation of manifestation in childhood (pp.265-295).
Mar 12	Phenylketonuria	Welsh, M., & Pennington, B. (2000). Phenylketonuria. In K.O. Yeates, M.D. Ris, & H.G. Taylor. (Eds.). Pediatric neuropsychology: Research, theory, and practice (pp.112-146).
Mar 17	**TEST 3**	
Mar 19	Autism	Bade-White, P.A., Obrzut, J.E., & Randall, P.P. (2009). Neuropsychological aspects of pervasive developmental

Date	Topic	Readings
Mar 23		and autism spectrum disorders. In C.R. Reynolds & E. Fletcher-Janzen (Eds.). Handbook of clinical child neuropsychology (pp. 765-781).
Mar 26	Traumatic Brain Injury	Yeates, K.O. (2010). Traumatic brain injury. In K.O. Yeates, M.D. Ris, H.G. Taylor, & B.F. Pennington. (Eds.). Pediatric neuropsychology: Research, theory, and practice (pp.112-146).
Mar 31	Neuropsychological Interventions	Teeter, P.A. (2009). Neurocognitive interventions for childhood and adolescent disorders: A transactional model. In C.R. Reynolds & E. Fletcher-Janzen (Eds.). Handbook of clinical child neuropsychology (pp. 427-458).
Apr 2	**TEST 4**	

Cross-listed course
Please note that a cross-listed course will count in all respective averages no matter under which rubric it has been taken. For example, a PHIL/PSCI cross-list will count in a Philosophy major average, even if the course was taken under the Political Science rubric.

Academic Integrity
In order to maintain a culture of academic integrity, members of the University of Waterloo are expected to promote honesty, trust, fairness, respect and responsibility. See Academic integrity (Arts) Academic Integrity Office.

Discipline: A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offenses and types of penalties, students should refer to Policy 71 - Student Discipline.

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4.

Appeals: A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals.

Accommodation for Students with Disabilities
The AccessAbility Services office, located in Needles Hall Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the AS office at the beginning of each academic term.