OCC1 623 ASSISTIVE TECHNOLOGY

Credits: 3

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Access to the Instructor: Office hours by appointment.
Please email or call ahead to make appointment.

Course Description: Application of high and low-technology assistive devices to enhance performance and individual human needs, including alternative computer access, powered mobility, augmentative communication, telecommunication and environmental control, social and professional issues regarding technology service delivery.

Course Structure: The course consists of lectures, presentations by guest clinicians, case studies, a computer-access lab as well as self-directed learning activities.

Course Objective: To examine the current knowledge and evidence about product design, development, accessibility and 'fit' of assistive technology in relation to the client's occupational needs and the environmental context.

Student Learning Outcomes: At completion of this course, the student will be able to:

Expert

1. Recognize the functional uses of current high and low assistive technology devices, including computer access, computer mice, environmental controls, adapted keyboards, switches, and communication devices.
2. Explore and appraise the appropriate functional, adaptive, and contraindicated uses of current assistive technologies incorporating prior knowledge of various musculoskeletal, neurological, and/or developmental conditions.
3. Apply this knowledge to determine suitability for clients across the lifespan, meeting occupational performance, accessibility, budgetary, and environmental (physical, social, cultural, technical) needs, i.e. the best 'fit' between client, environment, activity and assistive technology.

Communicator

4. Communicate knowledge of current assistive technology with respect to occupational performance needs, environmental and accessibility considerations, and long-term planning objectives.

Collaborator

5. Identify the role of professional and commercial resources involved in the prescription and implementation of assistive technology in order to facilitate collaboration and appropriate referrals.

Scholarly Practitioner

6. Recognize the importance of keeping up to date with the rapidly changing trends in assistive technology.

Change Agent

7. Understand the role of assistive technology services, policies and funding sources in the delivery of assistive devices.

Course Content

- Augmentative communications
- Computer adaptation
- Environmental or EADL controls
- Specialized wheelchair controls
- Assistive technology in pediatrics
- iPad/tablet access and applications

Course Materials

Required readings: Lecture notes and handouts from lecturers will be posted before each class on WebCT.

Additional readings:

Cook, A.M. & Polgar, J.M. (Eds.) (2015). **Cook & Hussey's assistive technologies: principles and practice, 4th ed**. St. Louis, MO: Mosby (electronic copy available).

Copyright of course materials: Instructor generated course materials (e.g., handouts, notes, summaries, exam questions, etc.) are protected by law and may not be copied or distributed in any form or in any medium without explicit permission of the instructor. Note that infringements of copyright can be subject to follow up by the University under the Code of Student Conduct and Disciplinary Procedures.

Student Evaluation

Assignment 1: Computer access 15%

As a preparation for the first lecture on Computer access, students will be required to review a clinical case, experiment with the various accessibility options on their personal computer, then answer a series of questions related to the case. This assignment is due before the Computer access 1 class (maximum: 800 words).

Assignment 2: Tablet access 15%

This assignment will consist of developing an OT intervention linked to the use of assistive technology. Assignment criteria and requirements will be provided on myCourses. The assignment is due one hour before the start of the Tablets lecture.

Online Quizzes 10%

Two online quizzes will need to be completed on myCourses before the following lectures: "Technology for pediatrics" and "Specialized wheelchair controls". The quizzes will consist of 6-10 multiple-choice or short answer questions related to the readings and the cases provided for each lecture. One attempt of one hour will be given to answer each quiz. Each quiz will be available one week prior to the corresponding lecture and will each be worth 5% of the final mark.

Project: Written presentation 55%

This self-directed group project enables students to apply, analyze, and synthesize information about assistive technology to a specific case-based context, as they implement an independent research, evaluation, and documentation of devices and their uses. The written project will consist of a case report where students will justify their choice of specific assistive technology in the context of a treatment plan.

Project due date: TBA

Diversity Statement: The Occupational Therapy Program recognizes our responsibility to foster a learning environment where students and instructors can engage in dialogue and exchange ideas without being made to feel unwelcome or disrespected in view of their identity or beliefs. The Program intends that the instructional design of all courses minimize any barriers to participation, particularly barriers based on age, biological sex, disability, gender identity or expression, indigenous ancestry, linguistic and cultural background, race/ethnicity, religion, sexual orientation, political views/opinions/ideologies, and any other aspect integral to one's personhood. We therefore recognize our responsibility, both individual and collective, to strive to establish and maintain a respectful environment that is free from discrimination.

Plagiarism/Academic Integrity: McGill University and the Faculty of Medicine value academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the McGill University Code of Student Conduct and Disciplinary Procedures and the Faculty of Medicine Code of Conduct.

L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires.

Attendance: Students are required to attend all lectures and student project presentations.

Right to submit in English or French written work that is to be graded: In accord with McGill University's Charter of Students' Rights, students in this course have the right to submit in English or in French any written work that is to be graded, except in courses in which acquiring proficiency in a language is one of the objectives.

Conformément à la Charte des droits de l'étudiant de l'Université McGill, chaque étudiant a le droit de soumettre en français ou en anglais tout travail écrit devant être noté (sauf dans le cas des cours dont l'un des objets est la maîtrise d'une langue).

Consequences of not completing assignments as requested: The written project will be graded with respect to specific criteria. All late submissions of the project will result in an immediate deduction of 4 marks, plus 1 mark per day (including weekends). Failure to submit a part of the project will result in '0' for that portion (eg. omission of chart).

Disability: If you have a disability please contact the instructor to arrange a time to discuss your situation. It would be helpful if you contact the Office for Students with Disabilities at 514-398-6009 before you do this.

In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.