GEOG 201 – Fall 2017
Introductory Geo-information Science

Wed/Fri 1:05pm – 2:25pm Strathcona Anatomy & Dentistry 2/36	**Instructors** Dr. Margaret Kalacska (MK) **and** Dr. Raja Sengupta (RS) **Emails:** margaret.kalacska@mcgill.ca (MK); raja.sengupta@mcgill.ca (RS)
Laboratory sections: Tue: 2:35PM-5:25PM Wed: 8:35AM-11:25AM Thu: 2:35PM-5:25PM **OR** Fri: 8:35AM-11:25AM	**Office:** Burnside Hall 412 (RS) / 622 (MK) **Office hours:** Th 2-3 pm (RS)/Fri 3-4 pm (MK)

Course Overview

This course will explore the structure, design, science, and applications of digital geospatial information and geospatial technologies. These include Geographic Information Systems (GIS), Global Positioning Systems (GPS) and Remote. Students will learn how to store, retrieve, manipulate, analyze, and display spatial data derived from various sources. This course will use the most popular programs, including ArcGIS, ENVI, Quantum GIS (Open Source) and Google Earth.

Teaching Assistants (office hours TBA)

- Mira Anand
- Xi (Luci) Lu
- Madeleine Pawlowski
- Florence Tan

Required Textbook
Longley, P., Goodchild, M.F., Maguire, D., and Rhind, D., 2015. Geographic Information Science and Systems, 4th Edition. http://www.amazon.ca/Geographic-Information-Science-Systems-4th-ebook/dp/B00V8QE1E6/ref=tmm_kin_swatch_0?_encoding=UTF8&sr=1-3&qid=1436993690. Wiley and Sons. Two copies of this textbook will be available on reserve at McLennan Library. Additional required readings throughout the term will be presented in the lectures and posted on MyCourses. *You will also need to purchase a USB Key (at least 8GB) for this course*.

Recommended Textbook:
Jensen, J., and Jensen, R., 2013. Introductory Geographic Information Systems. Pearson. Available at Schulich Science & Engineering (Call no. G70.2 J63 2013)

Evaluation
Lab Assignments: 30% (Six (6) laboratory assignments worth 5% each)
Midterm: 30%
Take home Exam: 40%

Electronic Resources
Supplemental readings will also be posted on MyCourses. The material in these readings will not be directly examined but is intended as a resource for further study or clarification through examples.

Course policies
Regular attendance is expected at both lectures and laboratories. Laboratories will begin the week of September 20th.

Students are required to sign-up for one of the four laboratory sections. Students who choose not to attend the scheduled lab sessions must complete the assignments on their own and hand in the completed assignments by the due date specified on the assignment for the section for they are signed up on Minerva.

Late assignments will be penalized by 10% cumulative per 24 hr period unless permission to miss the deadline has been received in writing from the instructor. Lab assignments will be handed in via MyCourses. Any assignment not uploaded by the due date **and** time (EST) is considered late.

Excuses for a missed midterm exam will only be accepted in cases of medical necessity (physician's note required) or personal emergency. The midterm exam will be held during regular lecture hours, room(s) TBD.

We **strongly encourage** office hour visits in lieu of email for questions regarding course material. For questions pertaining to laboratory material, your first point of contact is your TA during their stated office hours and not by email.

Mobile computing and communications devices are permitted in class under the following condition(s):

- *When the "No technology time" is not in effect (e.g. not permitted during exams, unless otherwise stated)*
- *Only for the specified use; e.g. note taking, consulting online resources*
- *Personal activities such as updating social networking sites (e.g. Facebook, GTalk, Jabber, ICQ, IRC, AIM, MSN, LinkedIn, etc) phone text messaging, online shopping, emailing, etc., etc., are strictly prohibited during class.*

Schedule

Date	Topic	Laboratory
Sept. 6	Introduction (MK/RS)	
Sept. 8	Data collection (MK)	
Sept. 13	Spatial data models (MK)	Lab 1. Getting to know the tools
Sept. 15	Levels of Measurement (MK)	
Sept. 20	GPS (MK)	
Sept. 22	Guest Lecture on Open Source GIS	
Sept. 27	Database Management (RS)	Lab 2. GPS
Sept. 29	Database Management: Database Design (RS)	
Oct. 4	Projections I (MK)	
Oct. 6	Projections II (MK)	
Oct. 11	Vector Analysis I (RS)	Lab 3. Database
Oct. 13	Vector Analysis II (RS)	
Oct. 18	Cartography and Visualization (RS)	
Oct. 20	**Midterm**	
Oct. 25	Raster I (MK)	Lab 4. Mapping and projections
Oct. 27	Raster II (MK)	
Nov. 1	Remote Sensing (MK)	
Nov. 3	Cartographic Modelling (MK)	
Nov. 8	Data quality (RS)	Lab 5. Vector
Nov. 10	WebGIS I(RS)	
Nov. 15	**GIS Data (No class)**	
Nov. 17	WebGIS II (RS)	
Nov. 22	GIS Customization (RS)	Lab 6. Raster
Nov. 24	GIS Customization (RS)	
Nov. 29	Review (RS)	
Dec. 1	Integration (MK/RS)	

NOTE: This outline may change based on class progress and the availability of speakers for presentations

McGill University values academic integrity. Therefore all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.mcgill.ca/students/srr/honest/ for more information).

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 (pour de plus amples renseignements, veuillez consulter le site www.mcgill.ca/students/srr/honest/).

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.

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.