Faculty of Science Course Syllabus
Department of Earth and Environmental Sciences

ERTH4520 GIS Applications to Environmental and Geological Sciences (Winter 2023)

Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.

We acknowledge the histories, contributions, and legacies of the African Nova Scotian people and communities who have been here for over 400 years.

Course Instructor:	Dr. Christopher Greene (Chris.Greene@dal.ca) Office Hours (Virtual via Bookings) – Wednesdays 2:00 to 4:00 pm
Teaching Assistants:	Bay Berry (Bay.Berry@dal.ca) Esther Bushuev (esther.bushuev@dal.ca)
Marker / Demonstrator	Beau Ahrens (BeauAhrens@dal.ca)
Asynchronous Online Lectures:	Approximately 2-3 Recorded Lectures Per Week.
In-Person Lecture / Tutorials:	Tuesdays (see course structure) & Thursdays: 8:35 am to 9:55 am in LSC-8007 (Milligan Room). Complemented by a remote contingency option.
Weekly In Person Laboratories:	Mondays or Tuesdays: 2:35 pm to 5:25 pm in the Elizabeth May Geomatics Computer Centre: LSC 2012, complemented by a remote contingency option.
Testing:	Tentatively scheduled in LSC-2055 depending on enrollment.

All times listed are in the Atlantic Time Zone. Scheduling of Office Hours may be modified to improve effectiveness if the Teaching Team identifies conflicts or low demand early in the semester.

Course Description

Geographic information systems (GIS) provide a rich set of new tools to the geologist and environmental scientist, not only to solve conventional problems, but also to explore questions not readily answered by other means. This course builds on the fundamentals of GIS taught in ERTH 3500.03 to explore analytical tools that aid in decision-making processes encountered in mineral exploration, hydrogeology, site selection, environmental assessment, and global change analysis. The course concentrates on case studies and problem solving, including those requiring multi-criteria and multi-objective decision-making processes.

Course Prerequisites

PREREQUISITES: GEOG 3500, ENVS 3500, ERTH 3500; ERTH 5600, or SCIE 3600; STAT 1060

CROSS-LISTING: GEOG 4520.03, ERTH 5520.03

Course Exclusion

EXCLUSIONS: Credit will only be given for one of ERTH 4520.03, ERTH 5520.03, GEOG 4520.03

Course Structure

The Tuesday Scheduled Class:

- Reserved (generally) as time to independently complete recorded lectures with a few exceptions (no in-person).
- Exception 1 – the first class of the semester
  - Tuesday, January 10th, 2023
- Exception 2 – the week of a scheduled term test this time slot will be used for in-person review
  - Tuesday, February 3rd, 2023
  - Tuesday, March 7th, 2023
  - Tuesday, April 4th, 202.
- Exception 3 – if there is a class cancellation this time slot may be used to catch up on material missed.

The Thursday Scheduled Class:

- Will be regularly held. Reserved for in-person activities, ad hoc module related exercises, term tests, etc.

Learning Objectives

With successful completion of the course, students will be able to:

- recognize and describe how spatial data differs from aspatial data;
- explain why these differences create a need for new methods that explicitly consider the importance of location;
- compare and contrast different categories of spatial analysis and recognize how fundamental Geographic Information Science topics influence analytical choices;
- conduct advanced spatial analysis using GIS software; and
- compare and contrast how geographic information systems can be used to aid in advanced decision-making across several disciplines.

Course Materials

Recommended Textbooks:

Lloyd, C. (2010). *Spatial Data Analysis: An Introduction for GIS Users*. Toronto, ON: Oxford University Press.

Burrough, P.A., McDonnell, R.A., & Lloyd, C.D. (2015). *Principles of Geographical Information Systems*. New York, NY: Oxford University Press.

Software:

Access to ArcGIS Pro™ 2.9.5 and GeoDa 1.18+ (most current is 1.20) is required. Both pieces of software are installed on all Dalhousie campus machines (e.g., the Elizabeth May Teaching Lab, the Wallace McCain Learning Common, Killam Library). The software may also be available to you on your own computer through two alternative methods[1]:

[1] If using either of these options, students are responsible for ensuring they have either an appropriate Windows capable machine at home and / or a stable broadband internet connection.

1) The first method for accessing the software is by **downloading ArcGIS Pro™** through the Dalhousie Software resources (https://software.library.dal.ca/) to run on a Windows Operating System. It is important to double-check the hardware requirements for the software if using this option (https://bit.ly/3jGbk4k). This option requires the Dalhousie Virtual Private Network to be installed and active while running ArcGIS Pro™. **Do NOT upgrade to ArcGIS Pro™ 3.0 as the projects are not backwards compatible** to ArcGIS Pro™ 2.9.5.

2) The second method for accessing the software off campus is through **a strong, stable broadband connection in a virtual lab environment** (https://apps.vlab.dal.ca/, use: ARCGIS) or a **remote desktop connection**. This method can be used by Windows or Mac operating systems through a downloadable client, or through the browser. The first week's lab provides an example of using the virtual lab environment.

3) **GeoDa** is open source and can be downloaded for direct install, and will also be available on the remote platforms (https://geodacenter.github.io/download.html).

For **those connecting to online resources from outside Canada, note that you are responsible for ensuring awareness and compliance with any applicable laws in the country from which you are connecting**. Because ESRI is an American Company, any countries embargoed by the United States are prohibited from accessing the ArcGIS™ platform.

Brightspace Learning Management System (LMS): Narrated lectures, assignment instructions, data delivery, assignment submission, important course announcements, and discussion forums are delivered through the Brightspace Learning Management System.

Lectures are scheduled to be about 50% asynchronous remote, and 50% in-person. In addition to the in-person delivery, a streaming option for the lecture will be provided to accommodate anyone isolating due to a COVID infection or exposure. Meeting links will be posted to the LMS and are not to be shared with other students. Please ensure your username is not a nickname or alias or you may not be permitted to join the class session from the waiting room.

Weekly Labs are scheduled to be in-person and held in the Elizabeth May Geomatics Computer Centre: Life Sciences Centre Room 2012 (Earth and Bio Wing). Students unable to attend an in-person session (e.g., COVID isolation) will be able to participate and communicate with the Lab Instructor via MS-Teams during their scheduled lab period if they have a computer with Windows 10+ operating system and can successfully install or access one of the appropriate software platforms.

Virtual Office Hours: For the Fall semester, office hours will be virtual and by appointment only. Appointment times can be self-selected through the MS-BOOKINGS interface (https://bit.ly/3CKb2RB).

Applied Help is available through several mechanisms outside of the scheduled weekly lab sections. Questions can be posted to the Discussion Boards, asked during the lecture, discussed during a scheduled meeting with the Course Instructor, or can be brought to the Dalhousie GIS Centre for assistance (virtual appointment, limited drop-ins; refer to https://libraries.dal.ca/hours-locations/gis-centre.html).

Semester Tests: The three term tests are delivered as in-person tests and are being held during the scheduled synchronous class time (Thursday time slot). Not the location of the test may differ from the assigned classroom depending on enrollment. Students will be allowed to use a standard scientific calculator and reference sheet (guidelines to be determined) for the tests.

Course Assessment

Undergraduate (ERTH4520 / GEOG 4520)

Category	Component	Weight	Date
Applied	Workshops [a]	**50**	1-2 per Module Throughout Semester
	Lab Project 1	**200**	February 27th, 2023 @2:30 pm
	Lab Project 2	**200**	April 10th, 2022 @2:30 pm
Theoretical	Module Related Exercises [b]	**100**	1-2 per Module Throughout Semester
	Term Test 1	**150**	February 2nd, 2023 @8:30 am
	Term Test 2	**150**	March 9th, 2023 @8:30 am
	Term Test 3	**150**	April 6th, 2023 @8:30 am
Total		**1000**	

[a] Structured Workshops (SWS) are due 72 hours from the delivery date. For example, if your scheduled lab is on Monday from 2:35 pm to 5:25 pm, then your deliverable is due Thursday at 5:25 pm.

[b] Module Related Exercises will be delivered during the synchronous session throughout the semester on an ad hoc basis. Many (but not all) will be due during the class they are introduced / discussed.

Graduate (ERTH5520)

Category	Component	Weight GRAD (% of Final Grade)	Date
Applied	Workshops [a]	**100**	1-2 per Module Throughout Semester
	Individual Project	**400**	Proposal: February 27th, 2023 Final Report: April 10th, 2023
Theoretical	Module Related Exercises [b]	**50**	1-2 per Module Throughout Semester
	Term Test 1	**150**	February 2nd, 2023 @8:30 am
	Term Test 2	**150**	March 9th, 2023 @8:30 am
	Term Test 3	**150**	April 6th, 2023 @8:30 am
Total		**1000**	

[a] Structured Workshops (SWS) are due 72 hours from the delivery date. For example, if your scheduled lab is on Monday from 2:35 pm to 5:25 pm, then your deliverable is due Thursday at 5:25 pm.

[b] Module Related Exercises will be delivered during the synchronous session throughout the semester on an ad hoc basis. Many (but not all) will be due during the class they are introduced / discussed.

Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale

Grade	Range	Definition and Expectations
A+ **A** **A-**	90-100 85-89 80-84	**Excellent:** Considerable evidence of original thinking; demonstrated outstanding capacity to analyze and synthesize; outstanding grasp of subject matter; evidence of extensive knowledge base.
B+ **B** **B-**	77-79 73-76 70-72	**Good:** Evidence of grasp of subject matter, some evidence of critical capacity and analytical ability; reasonable understanding of relevant issues; evidence of familiarity with the literature.
C+ **C** **C-**	65-69 60-64 55-59	**Satisfactory:** Evidence of some understanding of the subject matter; ability to develop solutions to simple problems; benefitting from his/her university experience.
D	50-54	**Marginal Pass:** Evidence of minimally acceptable familiarity with subject matter, critical and analytical skills (except in programs where a minimum grade of 'C' is required).
F	<50	**Inadequate:** Insufficient evidence of understanding of the subject matter; weakness in critical and analytical skills; limited or irrelevant use of the literature.

Important Dates

Last Day to Change / Add Courses:	January 20, 2023
Last Day to Drop without "W":	February 6, 2023
Last Day to Drop with "W":	March 13, 2023
Munro Day - University closed:	Friday, February 3rd, 2023
NS Heritage Day - University Closed:	Monday, February 20th, 2023
Winter Break:	Monday, February 20th to Friday, February 24th, 2023
Good Friday - University Closed:	Friday, April 7th, 2023
Classes end, Winter and Multi Term:	Tuesday, April 11th, 2023
Break before exams:	Wednesday, April 12th, 2023
Examinations begin:	Thursday, April 13th, 2023
Examinations end:	Tuesday, April 26th, 2023

Course Policies

COVID-19 Safety and the GIS Teaching Lab

In accordance with Dalhousie Policy, **masks are required in all instructional spaces, including the Milligan Room and the Elizabeth May Geomatics Computer Centre**. Regardless of your current understanding about the effectiveness of wearing of masks, everyone is governed by Dalhousie Policy under the Student Code of Conduct and required to wear a mask in all instructional spaces. The masking policy is in place to provide students with expected conditions for learning and, thus, to help students manage their individual level of risk. Your classmates do not owe you any explanation of their vulnerabilities, and they should not expect you to explain yours. I am operating under the expectation that we have vulnerable students, or students with vulnerable family members in the class.

Moreover, as a computer lab the Elizabeth May GIS Teaching Lab has more restrictive policies in place generally students should be aware of (e.g., no food or drink in the lab; access restricted to students scheduled in the lab

section; keeping noise low to minimize distraction). An updated policy document will be made available to students through the Learning Management System.

Audits

As per section 10 of the Undergraduate calendar, audits of this course are only permitted if permission to audit the course is given by the course instructor and a plan of what constitutes the planned audit is agreed upon by the instructor and student.

10. AUDIT OF COURSES

Students who have been admitted to a faculty may audit many of the courses offered with the permission of the instructor. Registration for an audit is available from the first day of courses until the last day to add a course. Students auditing courses will not be eligible to write examinations in the audited course and will not in any circumstance be granted credit for it. Fees are payable as indicated under **Fees**. A course may not be changed from credit to audit or from audit to credit status after the last date for dropping courses without 'W' (see the schedule of **Academic Course Add/Drop Dates**).

Social Media

It can be disheartening to see your instructor posting material to social media that negatively discusses their students, even when those posts do not identify individuals. As students in this class, you have my promise that I will not publicly post anything negative about participants in this class.

Course Completion

To successfully complete the course, **students must receive 50% of the total possible points or higher for both the theoretical and applied portions of the course.** Not meeting this minimum threshold will result in a grade of F for the course, even if an overall score of 50% or greater is achieved.

Contingency Plans

This class has been offered as an online-only delivery in past courses. In most cases we can provide remote access to the software and allow for completion of structured workshops should you need to self-isolate, if there are campus interruptions, or if the university is required to transition again to an online delivery model.

In-Person Synchronous Sessions

While attendance is not mandatory for the in-person sessions, there are graded exercises that are delivered in these sessions that will receive a zero if you are not present to complete. Moreover, these sessions are intended to provide a forum to ask clarification questions about lecture content, lab projects, and upcoming tests or exams. Material covered in the synchronous session may not be replicated in other media. Students are responsible for any information missed in the synchronous sessions. Because these sessions have a strong component of question and answer from students, the synchronous sessions are not recorded to minimize potential privacy concerns. **An important reminder: the three term tests are scheduled to be delivered in-person during the synchronous session of the course.**

Communications

Students are required to use discussion boards in the Learning Management System for a large proportion of communications, especially if related to course management and assessments that have applicability to the class. If the Instructor or Teaching Assistants receive an email and feel the question should go to the discussion boards, they will ask the student to replicate their question there for a full response or to ask the question in the next scheduled synchronous session.

Discussion boards will be set to allow anonymous posting to increase the comfort level of students posting publicly. Please note that **even with anonymous posting the moderator (i.e., the teaching staff) will know the identity of the user posting**. Please endeavour to be courteous in all communications, including discussion boards.

Due to the volume of emails received during the semester, I am unable to guarantee immediate responses to email enquiries. Typically, students should expect an average of one business day for turnaround of responses to emailed questions. A rough decision tree to assist students in what communications tools to employ has been provided at the end of Section A of the Syllabus.

Course Variations

The course will be taught as close to the listed schedule as possible; however, some deviation from this schedule may be required as the term progresses. Content in the coarse schedule below are broad descriptors and do not provide the number or name of individual lectures as these are being edited as the course progresses.

Learning Management System (LMS)

Important information is posted to the LMS daily. It is the responsibility of each student to check the LMS and their Dalhousie email on a regular basis to ensure they are not missing any important materials, updates, announcements, etc.

Materials posted to the Learning Management System are for personal use only and are not to be shared (see Copyright Disclaimer in the LMS Course Shell). Sharing class materials with other students (registered in the class, not in the class, or outside the institution) is not permitted. Posting class materials to course sharing sites is also not permitted and could be considered both a copyright issue as well as a breach of academic integrity.

Student Absence Declaration

This course has opted into the student declaration of absence in lieu of sick notes. Please refer to https://bit.ly/2NJS8jw for specific details about the use of the Student Declaration of Absence. This mechanism is meant to substitute for sick notes from a doctor related to short absences (less than three days) and does not provide an automatic exemption from any missed assessments. Accommodating the absence whether by exemption or makeup assessment is at the discretion of the course instructor. The SDA process can only be used twice in the course.

The Saving Throw: Extensions for Applied Work not Covered by Policy

In addition to accommodations provided by the SDA policy and long-term absence policy, each student begins the semester with three “Saving Throw” cards they may use on any applied assessment (workshop or lab project). Students may choose to use a “Saving Throw” card to buy a +24-hour extension on that assessment for any reason not covered by standard accommodation policies, with no questions asked. One, two, or all “Saving Throw” cards may be applied to the same assessment for a maximum total of +72-hr extension.

Please note, the **teaching staff must be informed prior to the deadline (see Communications Decision Tree)** for the assessment passing to use the "Saving Throw" for it to apply. You can use a saving throw after the deadline, however half damage (i.e., half the late penalty) will be applied for that saving throw. Additional saving throws fort the same assessment requested prior to the deadline are treated independently.

These Saving Throws are **in addition to applicable policies such as the SDA, and not a replacement for** these existing policies. If you are sick, have accommodations that include extensions, are in bereavement, then the policies that govern those conditions (SDA, Accessibility, etc.).

Missed Small Deliverables (Module-Related Exercises and Structured Workshops)

For both the module related exercises and the structured workshops, the lowest individual item for each will be dropped from the total score. If a student does not submit an item, that item is assigned a 0 and will count as the lowest score item.

Missed Term Tests

If a term test is missed for valid reasons, the weight of that test will be added to the other two term tests. If more than one test is missed for valid reasons, a makeup exam or alternate assessment (e.g., term paper) will be considered after consultation (to inform instructor decision) with the student. The instructor reserves the right to adjust this policy and consider other alternatives on a case-by-base basis after consultation with the student.

Submission of Work

To reduce the carbon footprint related to class delivery, most work will be submitted and graded electronically in the Brightspace LMS to reduce paper use. All written work will be subject to evaluation using a plagiarism detection service (see Academic Integrity Policy for further detail).

Late penalties for written work without accommodation from the instructor are -20% per calendar day. Late penalties begin to accrue after the time of the deadline has been reached. For example, if an assignment is due on September 4th at 12:00 pm, submissions past that time (plus a brief "grace period") are subject to the first application of a -20% late penalty.

All students are responsible for ensuring the product they submit to the LMS is the one they intended to submit. There has been an emerging trend of "I submitted the wrong draft" as a justification for high similarity in originality detection, or as an effort to buy time to avoid late penalties from submitting after the scheduled due date. If a resubmission is permitted, that submission will be subject to a grade penalty unless there is timely notification from the student to the instructor that the wrong draft was submitted.

Unless otherwise noted by the instructor, independent work is required for each student. General discussion and peer tutoring are acceptable and encouraged; however, assessments with highly similar structure and flow of ideas is not acceptable and could be submitted to the faculty academic integrity officer for review.

Course Structure and Assessment Schedule

Week	Start	End	Module	Theory	Applied	Assessment
1	09-Jan-23	15-Jan-23	0	Course Overview, Review	SWS-0: Hello Again, ArcPro!	
2	16-Jan-23	22-Jan-23	1	Review, Aspatial Stats	SWS-1: Common Geographic Frame	
3	23-Jan-23	29-Jan-23	1	Non-Stationarity, Spatial Effects	SWS-2: Inference	
4	30-Jan-23	05-Feb-23	2	Spatial Autocorrelation	SWS-3: Spatial Non-Stationarity	Term Test 1
5	06-Feb-23	12-Feb-23	2	Analyzing Spatial Patterns	LP-1: Working Week	
6	13-Feb-23	19-Feb-23	3	Surface Analysis	LP-1: Working Week	
7	20-Feb-23	26-Feb-23	**Reading Week**			
8	27-Feb-23	05-Mar-23	3	Advanced Overlay	SWS-4: Modelling a Proposed Mine	Lab Project 1 Grad Proposal
9	06-Mar-23	12-Mar-23	4	Interpolation I, II, III	SWS-5: Surface Analysis	Term Test 2
10	13-Mar-23	19-Mar-23	4	Interpolation IV, V, VI	SWS-6: Interpolation	
11	20-Mar-23	26-Mar-23	5	Spatial Regression	SWS-7 Least Cost Path	
12	27-Mar-23	02-Apr-23	5	Network Analysis	LP-2: Working Week	
13	03-Apr-23	09-Apr-23	6	TBD, Wrap	LP-2 Working Week	Term Test 3
14	10-Apr-23	11-Apr-23	-	-	-	Lab Project 2 Grad Report

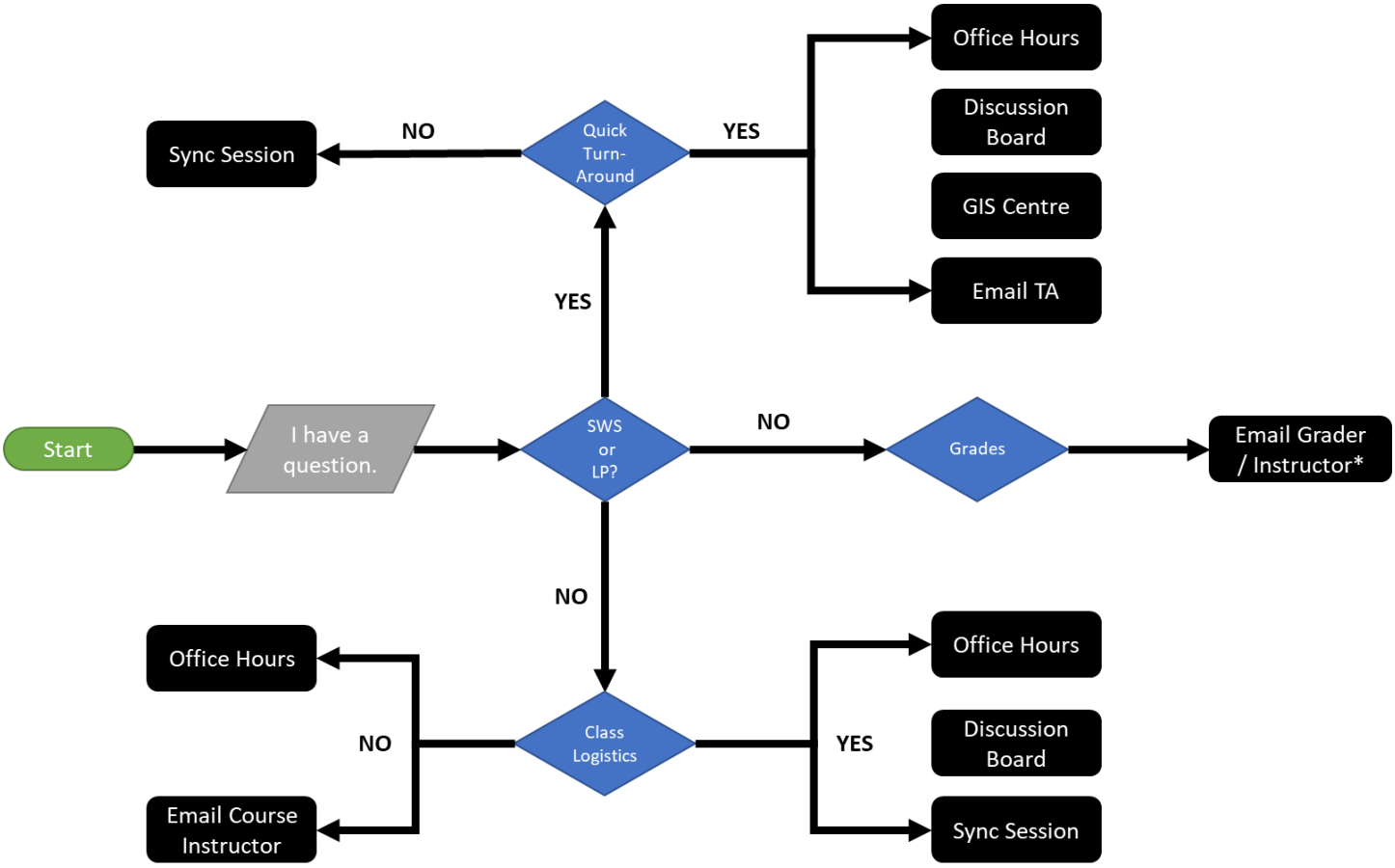
[1] As noted earlier in the course syllabus, Structured Workshop deliverables are due with +72 hours of the completion of your scheduled lab.
[2] Lab Project deadlines are a common deadline for all lab sections, regardless of which day your lab section has been scheduled.

Topic List

Module	Lecture	Reference
1	1-1 Review of Concepts I	ERTH3500, Burroughs Ch. 2
	1-2 Review of Concepts II	ERTH3500, Burroughs Ch. 2
	1-3: Aspatial Descriptive Statistics	Burroughs Ch. 6 (6.1 to 6.2); Lloyd Ch. 3
	1-4: Aspatial Inferential Statistics I	Burroughs Ch. 6 (6.2 to 6.3); Lloyd Ch. 3
	1-5: Aspatial Inferential Statistics II	Burroughs Ch. 6 (6.2 to 6.3); Lloyd Ch. 3
	1-6: Spatial Effects	-
2	2-1: Spatial Autocorrelation	Burroughs Ch. 6 (6.4 to 6.5);
	2-2: Spatial Autocorrelation in Practice	Greene et al., 2017
	2-3: Analyzing Spatial Patterns I	Burroughs Ch. 6; Lloyd Ch. 7
	2-4: Analyzing Spatial Patterns II	Frazier et al., 2013
	2-5: Analyzing Spatial Patterns III	Burroughs Ch. 6, Lloyd Ch. 7
3	3-1: Surface Analysis I	Burroughs Ch. 11; Lloyd Ch. 10
	3-2: Surface Analysis II	Burroughs Ch. 11; Lloyd Ch. 10
	3-3: Surface Analysis IIII	Burroughs Ch. 11; Lloyd Ch. 10
	3-4: Advanced Overlay I	Lloyd Ch. 5
	3-5: Advanced Overlay II	-
4	4-1: Spatial Interpolation I	Burroughs Ch. 8; Lloyd Ch. 7
	4-2: Spatial Interpolation II	Burroughs Ch. 8; Lloyd Ch. 7
	4-3: Spatial Interpolation III	Burroughs Ch. 8; Lloyd Ch. 7
	4-4: Spatial Interpolation IV	Burroughs Ch. 9; Lloyd Ch. 7
	4-5: Spatial Interpolation V	Burroughs Ch. 9; Lloyd Ch. 7
5	5-1: Spatial Regression I	-
	5-2: Spatial Regression II	-
	5-3: Spatial Regression III	Burroughs Ch. 6 (6.6); Lloyd Ch. 8
	5-4: Network Analysis I	Lloyd Ch. 6
	5-5: Network Analysis II	Lloyd Ch. 6
6	TBD	-
	TBD	-
	TBD	-

**The timing of these topics is approximate. Some shifting of topics will occur depending on total timing of narrated lectures. Names of narrated lectures will be longer and more refined than provided in this coarse overview. **

Communications Decision Tree



General Email Guidance: Who is Responsible for What?

- General course management questions – **Course Instructor**
- Missed assessments and Student Declaration of Absence questions – **Course Instructor**
- Help questions about structured workshops and Lab Projects – **Teaching Assistants**
- SDAs, Extensions, Use of the "Saving Throw" –**Course Instructor**
- Clarification question about grade just posted – **Marker / Demonstrator / Grader** with **Course Instructor** copied
- Clarification about Late penalties applied – **person responsible for grading** with **Course Instructor** copied

Faculty of Science Course Syllabus (Section B)

University Policies and Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

Information: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

Information: https://www.dal.ca/campus_life/academic-support/accessibility.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

Code: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

Statement: http://www.dal.ca/cultureofrespect.html

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit or e-mail the Indigenous Student Centre (1321 Edward St) (elders@dal.ca).

Information: https://www.dal.ca/campus_life/communities/indigenous.html

Important Dates in the Academic Year (including add/drop dates)

https://academiccalendar.dal.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=117&chapterid=-1&topicgroupid=31821&loaduseredits=False

University Grading Practices

https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html

Faculty of Science Course Syllabus (Section C)

Student Resources and Support

Advising

General Advising https://www.dal.ca/campus_life/academic-support/advising.html

Science Program Advisors: https://www.dal.ca/faculty/science/current-students/undergrad-students/degree-planning.html

Indigenous Student Centre: https://www.dal.ca/campus_life/communities/indigenous.html

Black Students Advising Centre: https://www.dal.ca/campus_life/communities/black-student-advising.html

International Centre: https://www.dal.ca/campus_life/international-centre/current-students.html

Academic supports

Library: https://libraries.dal.ca/

Writing Centre: https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html

Studying for Success: https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html

Copyright Office: https://libraries.dal.ca/services/copyright-office.html

Fair Dealing Guidelines https://libraries.dal.ca/services/copyright-office/fair-dealing.html

Other supports and services

Student Health & Wellness Centre: https://www.dal.ca/campus_life/health-and-wellness.html

Student Advocacy: https://dsu.ca/dsas

Ombudsperson: https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html

Safety

Biosafety: https://www.dal.ca/dept/safety/programs-services/biosafety.html

Chemical Safety: https://www.dal.ca/dept/safety/programs-services/chemical-safety.html

Radiation Safety: https://www.dal.ca/dept/safety/programs-services/radiation-safety.html

Scent-Free Program: https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html

Dalhousie COVID-19 information and updates: https://www.dal.ca/covid-19-information-and-updates.html