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**EES1129H: Brownfields Redevelopment**  
**Fall 2021**

**COURSE OUTLINE**

**Starting September 15, 2021**

**OFFERED ONLINE VIA QUERCUS (online Meetings Wed. 7-8 pm - optional)**

**Course Instructor**

Dr. Kathy Wallace, P.Geo. [kathy.wallace@utoronto.ca](mailto:kathy.wallace@utoronto.ca)

Office hours: virtual drop in (link provided on Quercus) – Mondays 5 to 6pm or email instructor directly to book an appointment.

**Teaching Assistant**

Noelle Stratton : [noelle.stratton@mail.utoronto.ca](mailto:noelle.stratton@mail.utoronto.ca)

**EES1129H Brownfields Redevelopment**

*“Brownfield properties are potentially contaminated due to historical, industrial or commercial land use practices, and are underutilized, derelict or vacant..... While brownfield properties are more complex to develop than traditional greenfield properties, the benefits of redevelopment far outweigh the costs. In fact, in many cases, leaving these properties idle presents liability risks and financial losses, not to mention the potential impacts to the environment and human health.” (ON Municipal Affairs and Housing, 2007)*

*Brownfields Redevelopment* will introduce students to the professional practice of brownfields redevelopment in the Province of Ontario. Much of the concepts and technology presented in the course will be applicable to other jurisdictions. Although the brownfield redevelopment process can be a formidable one, this course will break down this process by reviewing the legislative framework, scientific skills, and professional practice skills required for brownfields practice today.

**COURSE OBJECTIVES:**

This course will present students with the tools and skills to participate in the practice of brownfields redevelopment in Ontario (under the direction of a Qualified Person) by following the requirements prescribed in the Ontario Environmental Protection Act and O.Reg. 153/04 Records of Site Condition. By the end of the course students should expect to have an understanding of the regulatory requirements and methodologies for conducting

Phase One and Two Environmental Site Assessments and an understanding of the general concepts of Contaminated Site Remediation and Environmental Risk Assessment.

### TEXTS AND READINGS

Although there is no required text for this course, there are 7 (seven) documents, produced by the Ontario Ministry of Environment, Conservation and Parks (MECP formerly MOE) posted on Quercus, that are **essential** references to brownfield redevelopment practice in Ontario. Additional helpful reference articles will be posted on Quercus for you as well. Students will be expected to have reviewed the applicable portions of the documents prior to the recommended group time to participate in class and group discussions.

### ASSIGNMENTS AND EVALUATION

A significant portion of the course evaluation will be based on practical real-world exercises where you will take on the role of an environmental practitioner. Course evaluation is summarized below. Specific details of each assignment will be posted on Quercus.

Evaluation will be carried out in accordance with the Graduate Grading and Evaluation Practices Policy (and how that policy is interpreted and applied in this Dept.)

<http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/grading.pdf>

	Evaluation	Due	Value
1	Group discussion worksheet – participation	Oct. 6, Nov 3, Dec. 1	(each 5%) 15%
2	Regulation Scavenger Hunt	Sept. 22	10%
3	Quizzes based on lectures (5)	Sept 29 Oct. 13 Nov. 10	(S29 & O13=4%@ N10=7%) T15%
4	Project Work – Assignment 1	Oct. 20	15%
4	Project Work – Assignment 2	November 17	20%
5	Final Project – take home exam	Dec. 8	25%
		<b>TOTAL</b>	<b>100%</b>

## IMPORTANT INFORMATION ABOUT THE COURSE:

### AccessAbility Services

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the **AccessAbility** Services Office as soon as possible. I will work with you and **AccessAbility** Services to ensure you can achieve your learning goals in this course. Inquiries are confidential. The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact The UTSC Accessibility Services as soon as possible: <http://www.utsc.utoronto.ca/~ability/>

We also suggest you also refer to the following University of Toronto Scarborough Library link: <http://utsc.library.utoronto.ca/services-persons-disabilities>

### Verification of Illness

Students who are absent from academic participation for **any reason** (e.g., COVID, cold, flu and other illness or injury, family situation) and who require consideration for missed academic work should report their absence through the online absence declaration. The declaration is available on **ACORN** under the **Profile and Settings** menu. Students should also advise their instructor of their absence.

You can formally declare an absence for one or multiple consecutive days using the Absence Declaration tool in ACORN. This tool is used to record any absences for courses you're taking during the current academic session.

- ACORN: <https://www.acorn.utoronto.ca/>
- To declare an absence  
<https://help.acorn.utoronto.ca/blog/ufaqs/how-do-i-declare-an-absence/>
- To edit an existing absence declaration  
<https://help.acorn.utoronto.ca/blog/ufaqs/how-do-i-edit-an-existing-absence-declaration/>

### Late or missed work

In fairness to all students who submit their work on time, assignments submitted late will be deducted 10% per day (weekends include). Unfortunately, late completion of an online quiz cannot be accommodated and failure to complete the quiz on-time will result in a grade of zero for the quiz. *However, if you are having personal issues that are affecting your ability to complete the course work please get in touch with your instructor prior to the due date so that we may be able to provide accommodation.* Otherwise appropriate documentation (required by the Department as noted above) must be submitted to prevent any late penalties.

## QUERCUS

### Logging in to your Quercus Course Website

This course uses Quercus for its course website, which can be accessed via <https://q.utoronto.ca>.

### Activating your UTORid and Password

If you need information on how to activate your UTORid and set your password for the first time, please go to <http://www.utorid.utoronto.ca>. Under the “First Time Users” area, click on “activate your UTORid” (if you are new to the university) or “create your UTORid” (if you are a returning student), then follow the instructions. If you have any issues, please contact the Student Help Desk at 416-978-HELP.

### Communication from Course Instructor

If we need to contact you about an important change in the course, we will do so via the Quercus system. We suggest you consider downloading the “Canvas Student” app to your device(s) or, at a minimum, ensure your utoronto email address is properly linked for forwarding to whatever email service you check.

### You are responsible for:

1. Ensuring you have a valid UofT email address that is properly entered in the ROSI/ACORN system.
2. Checking your UofT email account and/or Quercus communications on a regular basis as this is the primary means of professor-to-student communication outside of regular classroom hours.

### Equity at the University of Toronto

The University of Toronto is committed to equity, human rights, and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

### Online Courses and Recording

Notice of video recording and sharing (download permissible; re-use prohibited). This course, including your participation, will be recorded on video and will be available to students in the course for viewing remotely and after each session.

Course videos and materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation and are protected by copyright. In this

course, you are permitted to download session videos and materials for your own academic use, but you should not copy, share or use them for any other purpose without the explicit permission of the instructor.

## Attendance Policy

Although regular attendance and participation in the course is up to the individual student, it is highly recommended that you participate in the weekly online meetings when course content and assignments may be discussed.

## Plagiarism

The University of Toronto Code of Behaviour on Academic Matters states that *"it shall be an offense for a student knowingly: to represent as one's own any idea or expression of an idea or work of another in any academic examination or term test or in connection with any other form of academic work, i.e., to commit plagiarism."*

For accepted methods of standard documentation formats, including electronic citation of internet sources please see the U of T writing website at:

<http://www.writing.utoronto.ca/advice/using-sources/documentation>

The full Code of Behaviour regulations could be found from consulting

<http://www.sgs.utoronto.ca/facultyandstaff/Pages/Academic-Integrity.aspx>

## Writing and English Language

As well as the faculty writing support, please see English Language and writing support at University of Toronto: <http://www.sgs.utoronto.ca/currentstudents/Pages/English-Language-and-Writing-Support.aspx> Students have commented that they found this site extremely helpful for writing term papers.

The following are also useful:

Sylvan Barnett, *A Short Guide to Writing About Art*, 5-7th edition (New York: Harper-Collins, 1997)

William Strunk Jr., E.B. White. *The Elements of Style* (New York: MacMillan Publishing). Other information regarding writing support is provided on Blackboard.

## Emergency Planning

Students are advised to consult the university's preparedness site

(<http://www.preparedness.utoronto.ca>) for information and regular updates regarding procedures relating to emergency planning.

## Course Evaluation

I welcome your comments and concerns regarding the course or content directly by email or in person throughout the course. In addition, there is a formal procedure for submission of your comments regarding the course to the Department of Physical and Environmental Sciences at the completion of the course.

## COURSE SCHEDULE – EES1129 – Brownfields Redevelopment

Module	Date	Module Topics	“Relevant Source” Documents”
1	Sept. 15	<b>Introduction to the Course:</b> <ul style="list-style-type: none"> <li>What is a brownfield?</li> <li>Legislative framework</li> </ul>	-Ontario Environmental Protection Act (Document #1) -O.Reg. 153/04 (Document #2)
2	Sept. 22	<b>Phase One ESA (part 1)</b> <ul style="list-style-type: none"> <li>Introduction to Phase One’s</li> <li>Research &amp; Background review</li> </ul>	-O.Reg. 153/04 (Document #2) <ul style="list-style-type: none"> <li>Part VI and Part VII</li> <li>Schedule D</li> </ul> -Guide for Completing Phase One ESA (Document #3)
3	Sept. 29	<b>Phase One ESA (part 2)</b> <ul style="list-style-type: none"> <li>Review of information</li> <li>Report preparation</li> </ul>	-O.Reg. 153/04 (Document #2) <ul style="list-style-type: none"> <li>Part VI and Part VII</li> <li>Schedule D</li> </ul> -Guide for Completing Phase One ESA (Document #3)
4	Oct. 6	<b>Geoscience for Brownfields 101 ½</b> <ul style="list-style-type: none"> <li>Review of contaminant geoscience</li> <li>Monitoring methods</li> </ul>	-O.Reg. 153/04 (Document #2) <ul style="list-style-type: none"> <li>Part VI and Part VIII</li> <li>Schedule E</li> </ul> -Guide for Completing Phase Two ESA (Document #4)
5	Oct. 13	<b>Phase Two ESA (part 1)</b> <ul style="list-style-type: none"> <li>Introduction</li> <li>Planning the Phase Two</li> <li>Site Condition Standards</li> </ul>	-O.Reg. 153/04 (Document #2) <ul style="list-style-type: none"> <li>Part VI and Part VIII</li> <li>Schedule E</li> </ul> -Guide for Completing Phase Two ESA (Document #4) -Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the <i>Environmental Protection Act</i> (Document #5)
6	Oct. 20	<b>Phase Two ESA (part 2)</b> <ul style="list-style-type: none"> <li>Conducting the Phase Two</li> </ul>	-O.Reg. 153/04 (Document #2) <ul style="list-style-type: none"> <li>Part VI and Part VIII</li> <li>Schedule E</li> </ul> -Guide for Completing Phase Two ESA (Document #4)
7	Oct. 27	<b>Phase Two ESA (part 3)</b> <ul style="list-style-type: none"> <li>Review &amp; evaluation</li> <li>Analytical laboratories</li> <li>Interpreting results</li> </ul>	-O.Reg. 153/04 (Document #2) <ul style="list-style-type: none"> <li>Part VI and Part VIII</li> <li>Schedule E</li> </ul> -Guide for Completing Phase Two ESA (Document #4) -Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the <i>Environmental Protection Act</i> (Document #7)
8	Nov. 3	<b>Phase Two ESA (part 4)</b> <ul style="list-style-type: none"> <li>Reporting</li> <li>Next steps – after the report</li> </ul>	-O.Reg. 153/04 (Document #2) <ul style="list-style-type: none"> <li>Part VI and Part VIII</li> <li>Schedule E</li> </ul> -Guide for Completing Phase Two ESA (Document #4)
9	Nov. 10	<b>Introduction to Site Remediation</b> <ul style="list-style-type: none"> <li>Evaluation</li> <li>Methodologies</li> <li>Completion</li> </ul>	O.Reg. 153/04 (Document #2) <ul style="list-style-type: none"> <li>Schedule E</li> </ul> -Guide for Completing Phase Two ESA (Document #4)
10	Nov. 17	<b>Introduction to Risk Assessment</b> <ul style="list-style-type: none"> <li>the basics</li> <li>methodologies</li> </ul>	O.Reg. 153/04 (Document #2) <ul style="list-style-type: none"> <li>Part IX</li> <li>Schedule E</li> </ul> -Rationale for the Development of Soil and Ground Water Standards for use at Contaminated Sites in Ontario (Document #6)
11	Nov. 24	<b>Records of Site Condition</b> <ul style="list-style-type: none"> <li>Components and Filing</li> <li>The Registry</li> </ul> Soil Management at RSC Sites	O.Reg. 153/04 (Document #2) <ul style="list-style-type: none"> <li>Part XII</li> <li>Schedule F</li> </ul>
12	Dec. 1	<b>COURSE REVIEW</b>	