



## Independent Research Project - LEARNING CONTRACT

(ENVS\*4410, ENVS\*4420, ENVS\*4430)

Course-Coordinator: Dr. Thomas Graham (Bovey Rm. 2105, Ext. 54869) [tgraham@uoguelph.ca](mailto:tgraham@uoguelph.ca)

### Student Information

Student Name:	Course: ENVS*44XX
Project Title:	
Supervisor(s):	Second Reader <sup>1</sup> :

<sup>1</sup>The second readers must be a: faculty member, postdoctoral fellow, or senior graduate student. The second reader should be able to evaluate and provide constructive criticism of the student's final paper. The second reader is to be provided with a copy of the learning contract, at that time they should be notified when to expect the paper and due dates for submission of their grade.

### Semester Milestones and Deadlines (use one additional page, if necessary)

Milestones or Research Objectives <sup>2</sup>	Weight	Deadlines (if applicable)
Learning Contract signed and submitted	5%	End of week 2
Final presentation	10%	LAST WEEK OF SEMESTER
Enter remaining milestones and objectives below		

<sup>2</sup>For each Milestone/Research Objective include the expected output, e.g., draft of literature review, submission of data set, and an anticipated deadline (if applicable). Please enlarge area as needed to accommodate additional Milestones/Research Objectives.

### **IMPORTANT INFORMATION ON THE COURSES:**

- In these courses the student will undertake an independent research project of a practical nature that relates to environmental sciences and is conducted under the supervision of a faculty member.
- Students must make arrangements with both a faculty supervisor and the course coordinator **at least one semester in advance.**
- These courses introduce fourth year students to a research-intensive experience.
- Projects may be completed in a single semester (ENVS\*4410/20 or ENVS\*4430, depending on the desired credit and workload), or they may be completed over two semesters (ENVS\*4410 plus ENVS\*4420). Note that **a final paper and presentation are still required in each semester.**
- A **0.5 credit** course (ENVS\*4410; ENVS\*4420) requires, *on average*, approximately **10-12 hours** per week of contact with your supervisor plus independent work.
- A **1.0 credit** course (ENVS\*4430) requires, *on average*, approx. **20-24 hours** per week of contact with your supervisor plus independent work.

### **Important Dates and Grading Information:**

- The **Grading Summary** is presented at the end of this document. Note: The remainder of the grade will be outlined above and agreed upon (signed) by the student and advisor.
- For all independent research courses, the supervisor will grade the lab/field work and provide a grade out of **at least 20% by the 40<sup>th</sup> class day.** This will be based on, as examples, lab/field activities (10%) and a draft literature review/progress report (10%) **submitted by the 35<sup>th</sup> class day.**
- For ENVS\*4410, ENVS\* 4420, and ENVS\*4430 drafts of the written paper are to be graded by the Supervisor. Due dates for drafts of the presentation and final paper are to be determined between the student and Supervisor.
- The **grades for the final paper** for all independent research courses will be submitted **no later than the end of classes**, and graded by the Supervisor and 2<sup>nd</sup> Reader, which will be averaged to give a final grade for the paper.
- **Final presentations will be scheduled during the last week of classes in each semester.** Final presentations will be graded by the course coordinator combined with peer and advisor graded input. (Location TBD, 6-9 PM on TBD of last week of classes for the semester)
- Supervisors are to submit **final grades** for all course components to Dr. Thomas Graham [course coordinator] **one week prior to the end of the exam period.** This should be taken into account when determining a due date for the final paper to allow sufficient time for grading by you and the 2<sup>nd</sup> Reader.

### **Signatures:**

<b>Student:</b>	<b>Supervisor:</b>
<b>Date:</b>	<b>Date:</b>

Learning contract due: End of 2<sup>nd</sup> week of classes; Submit via CourseLink DropBox:

## Evaluation Schemes for ENVS Independent Research Course

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### Learning Contract (5%)

All courses (4410/20/30) – Submitted to DropBox folder on CourseLink

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### Suggested Graded Components

#### Final Presentations

Course	Event	Preparation (hrs)	% of Course	Length (min)
ENVS*4410	1 <sup>st</sup> Draft*	8-10	10%	12 +3
	Final	10	10%	12 +3
ENVS*4430	1 <sup>st</sup> Draft**	n/a	n/a	12-15
	Final	10	10	12-15

\* A 'draft' in the sense that it typically leads into the final presentation for 4420. The presentation itself is expected to be complete and standalone

\* 4430 'First draft' is an outline presented to the advisor. 'Final' is presented to all research students during final report/presentation session at the end of the semester.

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### Papers

**Papers will be written in journal format unless the faculty advisor approves an alternative format. All papers will be no more than 6000-8000 words and include no more than a combined total of eight graphs and tables.**

Course	Event	Preparation <sup>1</sup> (hrs)	% of Course (suggested)
ENVS*4410	1 <sup>st</sup> Draft*	35-40	30
	Final	35-40	30
ENVS*4430	1 <sup>st</sup> Draft**	35-40	10
	Final	35-40	30

\* A 'draft' in the sense that it typically leads into the final report for 4420. The report itself is expected to be complete and standalone

\* 4430 'First draft' is an outline presented to the advisor. 'Final' is a complete report on all the research conducted

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<sup>1</sup> Includes literature review, and statistical analysis (where appropriate i.e., 4420 & 4430)).