



# CREATE ReDeveLoP



Collaborative Research and Training Experience in the  
Responsible Development of Low-Permeability Hydrocarbon Resources



NewsLetter  
2019  
January

[ucalgary.ca/science/redeveloP](http://ucalgary.ca/science/redeveloP)

## What is CREATE ReDeveLoP?

ReDeveLoP provides professional skills training to graduate students from the disciplines of geoscience, engineering and public policy. It enhances academic degree programs by delivering *soft skills* training in communication, leadership, project management, Indigenous relations, virtual team dynamics and public perception from media outputs that are valued by today's energy-sector employers. The University of Calgary obtained government funding for 5 years to partner with [11 researchers](#) from the universities of Alberta, Toronto, Waterloo and Western Ontario to facilitate job-readiness training opportunities for graduate students. Students may receive ReDeveLoP **scholarships** for 1 or 2 years.

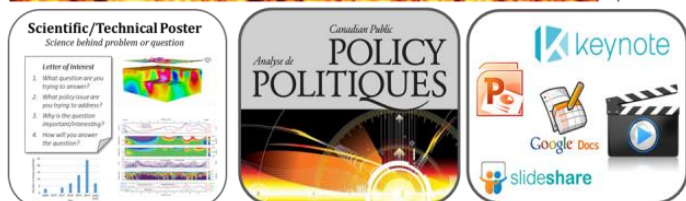


Geoscience, Engineering, Public Policy

## How does the Year 1 training work?

Known as *The ReDeveLoP Challenge*, [year 1 students](#) form inter-disciplinary, distributed teams, elect a project manager, conduct and document weekly virtual meetings and engage with industry champions to address energy-sector problems or questions. Teams have 5 months to complete the 4 milestones of the *Challenge*, including: a scientific/technical poster, a policy paper, a 90-second video and a 15-minute presentation, which are showcased at our annual conference in *Dragon's Den* format.

**May 27 – 28, 2019** Hilton Garden Inn  
711 4<sup>th</sup> St. SE, Calgary



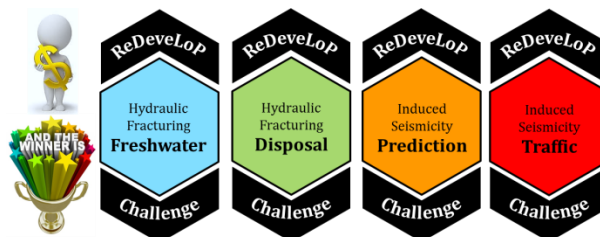
As they work through the milestones, students attend workshops in [ITP Metrics](#) industrial-occupational psychology and [Indigenous Relations](#). Students learn about the *Ways of Being, Ways of Knowing, Ways of Doing and Ways of Connecting* in Indigenous culture. They also receive coaching

on information transfer (i.e., oral, written, pictorial and media) to a wide range of audiences on topics with scientific, political and Indigenous relevance in Canada.

### ITP Metrics



**Deliverables.** We achieved a successful program launch, with 6 teams (or 28 students) completing the *Challenge* in 2018 by addressing the topics: Hydraulic Fracturing, Pipeline versus Rail, Fugitive Gas Emissions, Induced Seismicity, Orphan Wells and LNG for Remote Communities. The *Dragons*, Melanie Popp (CSUR/ GeoLogic Systems), Mike Johnson (NEB) and Jérôme Marty (CCA), named LNG the winning team (mentored by Colin Nikiforuk). Wikipedia pages for the general public and videos for high school outreach are the resultant deliverables from 2018, along with publication potential for several of the policy papers. In 2019, CREATE ReDeveLoP is providing training to 4 teams of *Challengers* (or 16 students). Following a recent afternoon of *speed-dating with industry* hosted by GeoLogic Systems, this year's teams have selected the focus of their projects for the *Dragon's Den*.



The **Freshwater** team will focus on the question of minimizing or eliminating freshwater use in hydraulic fracturing by exploring alternative fluid sources, while the **Disposal** team will look at quality, disposal and recycling of frack water. The **Prediction** team will focus on evaluation of geological susceptibility of a formation or region to seismic hazards and mitigation strategies after an event, while the **Traffic** team will consider the feasibility of ground acceleration in the traffic light system for controlling induced seismicity. Industry champions are invited to provide data or mentoring.

## Year 2 Internships, exchanges and outreach.

[Returning students](#) are eligible for professional skills training in the areas of internships, exchanges, outreach and mentorship in their second year of the program.

Scholarships are also available to returning students who work as ambassadors to expand and improve the ReDeveLoP program. In 2019, we have more than 50% of the 2018 cohort returning for a second year of training. ReDeveLoP facilitated two exchanges in 2018. A 5-day short course in Passive Seismic Methods was taught by Dr. David Eaton at the University of Calgary in Aug.2018, which included a tour of Trican's R&D lab.



A 3-day Immersive Shale Workshop and Field Tour was hosted by Dr. Tom Murphy at the Penn State MCOR in Nov.2018. We are currently planning next year's trip with Penn State and hereby **extend this opportunity to our industry partners** for a nominal fee. Looking ahead, a 5-day Geomechanics short course will be offered by Dr. Giovanni Grasselli at the University of Toronto this summer, and Dr. Karlis Muehlenbachs is putting together a lab tour at the University of Alberta.

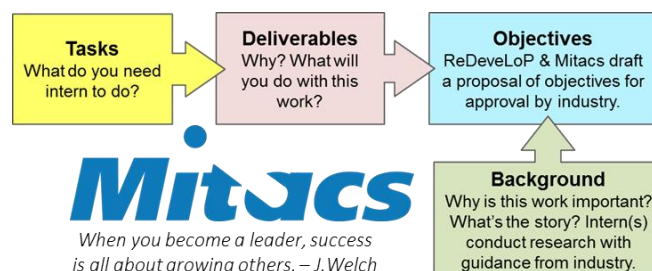


For many students, ReDeveLoP facilitates their first introduction to **Indigenous history and culture**. We are currently developing an outreach program with the Indian Resource Council, Mount Royal University and the University of Calgary Native Centre. The focus of our outreach is: to recruit Indigenous students into STEM programs at the graduate and undergraduate levels and to provide academic and mentorship support to those students. Visits to schools in Indigenous communities in Alberta and a Youth Energy Summit are being organized for 2019. ReDeveLoP is **accepting applications now** for two paid summer internships for Indigenous students

currently enrolled in a STEM program at the undergraduate level. Interested students, communities and industry champions are invited to contact the [ReDeveLoP Program Manager](#) with any questions.





CREATE ReDeveLoP is currently recruiting industry sponsors for summer internship positions. [Mitacs](#) is a non-profit organization that facilitates projects between universities and industry to promote innovation. They provide support funding and help navigate legal and logistical challenges. CREATE ReDeveLoP and Mitacs have streamlined the funding application process using several theme-based blanket proposals, and an example is attached to this Newsletter. In short, companies pay ReDeveLoP student interns a salary of **\$7500** per semester and this amount is **matched by Mitacs**.

**Here's how it works ...** The industry sponsor makes a list of the **tasks** and **deliverables**. ReDeveLoP ([Celia Kennedy](#)) and Mitacs ([Oba Harding](#)) then frame the **objectives** and write a proposal paragraph to fit into one of our blanket themes. While this is occurring, a ReDeveLoP student, who is a good fit for the sponsor, will be tasked with writing up the **background** section of the proposal. Approval rating is >90% and turn-around time is 4-8 weeks.



### Annual Conference: May 27 – 31, 2019.

**Attendance is free, so mark your calendars!** You are invited to rent an **information table** in the networking foyer, and also attend our Thursday **workshops** and/or the geology **field trips** on Wednesday and Friday.

	Mon.May 27, 2019	Tues.May 28, 2019
8:00	Breakfast, Guest Speakers	Breakfast, Guest Speakers
10:00		Dragon's Den 
12:00	Networking Appetizers, Cash Bar	<b>A draw will take place in April to determine the order of presentations.</b>
1:00	Poster session Video previews 	
2:00		Testimonials from grads
3:00	Speed Dating with Industry 	Networking & Awards Appetizers, Cash Bar
4:00		