

RFP: Researcher – Consultant - Understanding the current realities in engineering education

As of October 21, 2021

Bidder Questions

Q: How do the contracts work?

This would be a statement of work that would be clearly defined with deliverables and timelines. Upon being selected as the successful bidder, terms for payment can be established between the bidder and Engineers Canada. For this type of contract, we typically pay our consultants monthly or at the end of the contract period in one lump sum.

Q: Who do they work with?

This researcher would be working with the Education Task force that will comprise of educators and subject matter experts.

Q: Who oversees the work?

The work will be overseen the Program's Project Manager. The Education task force will also report to a Steering Committee on progress of this area of the program.

Q: Is it a good group to work with?

We are biased but I do believe this will be a great group to work with, with a unique opportunity for collaboration to gather findings and establish recommendations future opportunities in the realm of engineering education in Canada.

Q: In Section 3.1 Scope of Work, item #1, it indicates that the consultant would contribute to the planning of a workshop on January 17, 2021, participate in the workshop, and report on the proceedings of the workshop. Is Engineers Canada open to the Bidder participating in and reporting on this workshop remotely? If not, please indicate the proposed location of the workshop (to determine travel costs).

The workshop is currently being planned for in-person, to be held at a hotel venue near the Toronto Airport. Engineers Canada will cover the cost of any travel associated to this workshop on behalf of the Researcher. Should it not be possible to hold an in-person meeting, the workshop will be held virtually.

Q: In Section 3.1 Scope of Work, item #4, it indicates that the consultant would make a presentation of the key findings to stakeholders. Is Engineers Canada open to remote delivery of this presentation? If not, please indicate the proposed location of the presentation (to determine travel costs).

Yes, it would be possible for the consultant to delivery this presentation virtually.

Q: Is the \$25,000 budget for this Project inclusive of travel costs and HST?

Project budget of \$25,000 excludes travel costs and HST.

Q: Does the Task Force envision releasing the Report publicly? If so, is the consultant expected to produce a public-facing document with the appropriate formatting and design elements?

No, the document will not be released publicly, and we can take care of applying standard Engineers Canada formatting, style, etc.

Q: What format do you envision the workshop (i.e., in-person, virtual, hybrid)?

As of today, October 8, 2021, we are planning for the workshop to be held in person, in Toronto, Ontario. All costs will be paid by Engineers Canada for the consultant's travel expenses. However, due to the ongoing global pandemic, we are closely monitoring the situation and this event has the potential of being converted to a virtual event. A decision on format will be made by no later than November 17, 2021.

Q: How many workshop attendees are you expecting?

We are anticipating 35 participants for this workshop.

Q: Re: Deliverable 4: What format do you envision for the presentation (i.e., in-person or virtual)?

Virtual

Q: Please clarify what the expectations are in terms of further research beyond the Workshop? The Workshop is clearly a great opportunity to learn about issues in engineering education which should guide the investigation, but if the project is to deliver a report on the Workshop on the 7th of February and then a draft report on the 25th, with feedback from the Task Force in between, that does not leave a lot of time after the Workshop for additional research. On the other hand, the report is to include "sources that support any conclusions, such as information from Canadian undergraduate engineering

programs, engineering education research, and/or other research".

Please can you clarify your expectations for any post-Workshop research?

We expect the workshop to do two things:

- Suggest areas or types of changes that are relevant to accreditation (vs those that do not have a direct impact), and
- To outline the issues from the perspective of the attendees.

We would like the follow up research to confirm (or discredit) those perceptions, and to uncover and explain any other specific issues related to the types of changes highlighted by the workshop.

If you feel that the suggested timelines are too aggressive, please note this in your proposal and propose an alternative. We have some flexibility in our schedule and would prefer to extend our timelines if it means that we can increase the quality and value of the final report.

Q: What is Engineers Canada's likely preferred data sources for the review of current and future practices? For example, engineering education program websites & proceedings would provide highlights but could miss unpublished innovations. A follow-up email to programs might get a better response. A future source, that would require notice or permission, might be secondary use of accreditation reports.

Second, as of this stage, are you looking internationally or nationally?

We would expect the data sources to include published papers and proceedings about pedagogy in engineering education. Follow up by interview with identified authors or researchers would be a plus. We don't expect any references from unpublished or confidential information like accreditation reports.

For the scope, we would like to look both domestically and internationally for trends and new innovations in engineering education.

Q: In reviewing the RFP we found a few statements that could imply different scopes:

1. Statement of Purpose

Producing a report on the current state and future possibilities in engineering education

2.2 Background on the Project

... evolution beyond the traditional delivery method of lectures, laboratories, and tutorials towards more collaboration, project-based learning, flipped classrooms and other non-traditional methods.

... there is a need to understand both the current landscape and the future possibilities in engineering education

2.3 Definition of Terms

Current state: the methods and techniques in common use in the instruction ...

4.4.5 Proposal Evaluation

... working knowledge of the engineering education system and engineering post-secondary pedagogy.

Our question is whether the focus of the research as envisioned by Engineers Canada is scoped only at instructional techniques - usually by individual instructors in single courses - or more broadly at (e.g.) pedagogy, curriculum, programme structure, etc.? The examples given in the RFP include items that fall under traditionally construed notions of instruction (e.g., "lecture") and of pedagogy (e.g., "project-based learning") and do not include (e.g.) "3+2" or second-entry programmes.

The research should encompass both instructional techniques that are currently in use as well as broader trends impacting pedagogy, curriculum, and programme structure.

If the scoping is the narrower one of instruction, does Engineers Canada include (e.g.) assessment and evaluation; location (for example land-based or work-embedded pedagogy); timing (for example just-in-time delivery); or responsibility (e.g., peer instruction or self-directed learning) under the heading of instruction? A case could be made either way, and clarification of Engineers Canada's position will help us to scope and target more appropriately.

The research should encompass both instructional techniques that are currently in use as well as broader trends impacting pedagogy, curriculum, and programme structure.