CHEE 310 Fundamentals of Engineering Innovation and Entrepreneurship

Academic Assistant – Fall 2018

Posted on August 20, 2018

Applications are now being accepted for CHEE310: Fundamentals of Engineering Innovation and Entrepreneurship Academic Assistant (AA) for Fall 2018. This course provides an introduction to innovation and entrepreneurship in a technical context, and an understanding of business model concepts, capital financing and financial metrics, management of intellectual property, and the process of innovation is essential. University graduates with a degree in any engineering and applied science discipline are welcome to apply, as are graduates with a degree in Commerce, or university graduates from other programs with relevant experience. Specific experience in chemical engineering would be advantageous.

This position is from September 6, 2018 to December 22, 2018 working an average of 6 hours per week (duties may not be spread out uniformly every week). Note that this position is not open to graduate or undergraduate students.

AA assignment duties include facilitating student tutorials (3-2-1 session in which venture groups present their venture progress), presenting and facilitating discussions of case studies, marking midterms, oral presentations and assignments and project reports, and mentoring student ventures associated with the course. Any necessary training will be included in the assignment.

Academic Assistants are governed by the Collective Agreement between the United Steelworkers and the University. Remuneration is $28.67/hour plus 7% in lieu of vacation and benefits, in accordance with the Collective Agreement. Collective Agreement details can be found at:


Please forward your applications to Tanya Ligthart (ligthart@queensu.ca) in the Department of Chemical Engineering by August 24, 2018.

Completed applications should include:

1. CV
2. A paragraph stating why the position is of interest to you and any relevant experience you may have for the position

The Department of Chemical Engineering thanks all applicants for their interest; however, only those candidates considered for the position will be contacted.
Calendar information for the course:

**CHEE 310   Fundamentals of Engineering Innovation and Entrepreneurship**

This is a course about innovation – distinctive ideas, of value, put to practice – and entrepreneurship – the process of putting to practice and sustaining the implementation of innovations – for societal benefit and wealth creation. Curiosity of the world around us is emphasized for identifying opportunities to have an impact and make a difference, to which a discipline is imposed - one that identifies who might be interested in or benefit from our product or service, and how we can bring an idea to fruition and provide the necessary resources (e.g., financial, intellectual) to provide it to society. Legal aspects (e.g., incorporation, partnerships), raising capital, and protecting the strategic advantage of intellectual property (e.g., patents, trade secrets) are discussed, together with the importance of having a social license to operate. The concept of a business model, summarized using the business model canvas methodology, is presented, together with the concept of a business plan describing how a venture will be operated over a time horizon. For-profit and not-for-profit ventures, and the elements of the business models for each, are studied and compared. Financial metrics for assessing the viability of ventures and guiding investment decisions are presented (e.g., IRR, NPV, EBITDA). Systems Thinking (recognizing the whole/parts and that which is common/distinct) is introduced. Design Thinking – a human-centered design emphasizing observation and experimentation gaining traction in engineering, business and social sciences – is presented. Working in groups, students identify a venture opportunity having a technological component, and propose a business model and plan as the major evaluation in the course.

For more information - [http://my.chemeng.queensu.ca/undergraduate-studies/curriculum/Course-Pages/chee310.html](http://my.chemeng.queensu.ca/undergraduate-studies/curriculum/Course-Pages/chee310.html)