

## Western University - Faculty of Engineering

### ENGSCI 9702 – Entrepreneurship and Innovation Experiential - Technology Commercialization Course Outline – 2016/17

#### Objectives:

The objectives of this course are to develop the business skills that are required to be a successful Technology Entrepreneur on the world stage. Students will learn the requisite skills to do a proper worldwide “market map”, determine their unique and sustainable technology advantage, how to value their innovation, how to protect their innovation, how to approach strategic partners for mutual success, and how to capitalize these activities when you have no money.

Students will need to demonstrate these skills through the development of a Worldwide Business/Go-to-Market 12 month Operating. Should you find that upon detailed examination that the proposed product/service should not be brought to market, you will be expected to present a detailed Business Opportunity Assessment on the market, the players, the trends, and why you feel that you should not proceed with full product commercialization and rollout.

#### Topics:

The following list details some of the specific aspects to be covered:

1. **Introduction: What is Technology Commercialization:** Introduction to the phases of technology commercialization and the implications/traps in each phase.
2. **Base Principles of Technology Commercialization:** Introduction and detailed discussion about the “Technology Adoption Curve”, “the 80% / 20% Rules” and Technology Partnering. Implications for your product in the market will be deeply discussed here.
3. **Detailed Review on Each Phase of Technology Commercialization:**
  - a. **“Science Experiment” and IP Formation Phase.** Top-down vs. Bottom up analysis on tech formation. Market sizing exercise. IP and Patent protection examination. When to leave the “Bench “review
  - b. **Market Validation Phase.** How to measure market validation. Strategic partners analysis. Product Verification and Certification discussion.
  - c. **Company Formation Phase.** Initial company formation options and funding alternatives examination.
  - d. **Market Acceleration and Leadership Phase.** What is Market Acceleration and Leadership? How to become the “defacto” standard in a market. How to create market tension between major players. Intellectual Property acceleration examination. Funding options discussion.
  - e. **Market Exit Phase.** “Canadian History” and timing discussion. Strategic options review. Valuation consideration.

#### Prerequisite:

This course is open to any PhD student at any stage of the program.

**Corequisite:**

None

**Antirequisite:**

None

**Instructor:**

Albert Behr

**Contact Hours:**

**Course Materials:**

No textbooks are required for this course although the following books are strongly suggested reading materials.

- 1) Geoffrey A. Moore, *Crossing The Chasm, 3rd Edition: Marketing and Selling Disruptive Products to Mainstream Customers*. HarperCollins Publishers, 2014
- 2) Peter Thiel, *Zero to One: Notes on Startups, or How to Build the Future*. Crown Business, 2014
- 3) Eric Ries, *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*. Crown Business, 2011
- 4) Bill Aulet, *Disciplined Entrepreneurship: 24 Steps to a Successful Startup*. John Wiley & Sons, 2013

As an Experiential Learning course, students are expected to take their innovative ideas and apply to this their own real-life and career experiences, and that of their team and classmates, to create viable solutions.

**Evaluation:**

The final course mark will be determined as a Pass/Fail. Full and prepared contribution to each session will result in a Pass. Non-attendance without significant extenuating circumstances will result in a failure, as will poor preparation, disruptive behaviour or other counterproductive activity.

**Scholastic Offences:**

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

[http://www.uwo.ca/univsec/handbook/appeals/scholastic\\_discipline\\_grad.pdf](http://www.uwo.ca/univsec/handbook/appeals/scholastic_discipline_grad.pdf).

**Plagiarism:**

University policy states that plagiarism, defined as the “act or an instance of copying or stealing another’s words or ideas and attributing them as one’s own.” (excerpted from Black’s Law Dictionary, West Group, 1999, 7th ed., p. 1170) is a scholastic offence. In submitting any written work as part of the coursework requirements for this course students must ensure that this work is written in their own words. Whenever students take an idea or a passage of text from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted for

such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

A student who is found guilty of plagiarism in respect of any written work submitted as part of the coursework requirements for this course will be given a grade of zero for the submitted work. Repeated acts of plagiarism, either in this course or any other course subsequent to a first offence, will result in the student being given a failing grade for the course in which the subsequent offence occurs, and may also incur further penalties such as requiring the student to withdraw from the program in which they are enrolled in.

**Attendance:**

Any student who, in the opinion of the instructor, is absent too frequently from class, laboratory, or tutorial periods will be reported to the Dean (after due warning has been given). On the recommendation of the Department concerned, and with the permission of the Dean, the student will be debarred from taking the regular final examination in the course.

**Accessibility:**

Please contact the course instructor if you require material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x 82147 for any specific question regarding an accommodation.

**Conduct:**

Students are expected to arrive at lectures on time, and to conduct themselves during class in a professional and respectful manner that is not disruptive to others. Late comers may be asked to wait outside the classroom until being invited in by the Instructor. Please turn off your cell phone before coming to a class, tutorial, quiz or exam.

On the premises of the University or at a University-sponsored program, students must abide by the Student Code of Conduct: <http://www.uwo.ca/univsec/board/code.pdf>.

**Sickness and Other Problems:**

Students should immediately consult with the Instructor or Department Chair if they have any problems that could affect their performance in the course. Where appropriate, the problems should be documented (see attached). The student should seek advice from the Instructor or Department Chair regarding how best to deal with the problem. Failure to notify the Instructor or Department Chair immediately (or as soon as possible thereafter) will have a negative effect on any appeal.

For more information concerning medical accommodations, please see:  
[http://www.uwo.ca/univsec/handbook/appeals/accommodation\\_medical.pdf](http://www.uwo.ca/univsec/handbook/appeals/accommodation_medical.pdf).

**Notice:**

Students are responsible for regularly checking their email, and the course OWL site for new notices related to the course.