

# Business Strategy and Intrapreneurship

## Course: [APS1061H](#), Summer 2026

**Instructor:** Professor [Steve Treiber](#)

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Course in Dual Mode: In-person from WB219 and simultaneously on ZOOM from the classroom

Blended classes: May 4-8, May 19-22, May 29, 2026, 6pm-9pm.

Meetings with Professor Treiber to be scheduled on request.

### COURSE DESCRIPTION

#### Overview:

[APS1061H](#) is designed for engineering students interested in discovering if they have the aptitude and appetite to lead a large business. Every successful business executive and entrepreneur will encounter complex business problems they urgently must solve. The short course format simulates the speed with which such real-world problems can arise and the speed with which they must be solved. Covid19, the 2008 financial crash, and 9/11 are examples of extreme events that can destroy a business quickly. Leveraging some of the problem-solving skills, you have learned during your engineering education, this course teaches how to define, solve, communicate, and sell the solution to a complex business problem using an engineering approach.

#### Challenge Business Problem:

Students will work in groups of up to 4 students and all groups will develop a solution to the challenge business problem. The groups will be given a package of materials that identifies the problem in the first session and all groups will come up with their own definition and solution during the course. This year the challenge business problem will be: [OpenAI](#) was founded as a not for profit company by Sam Altman, Elon Musk, Ilya Sutskevker and others using Elon Musk's \$30 million seed money. The release of [ChatGPT](#) in November of 2022 has created a sensation and massive technology upheaval in the technology sector. Since the release of ChatGPT hundreds of competitors have appeared in the space created by OpenAI and while OpenAI's market penetration has grown dramatically it is [bleeding funds](#), at last estimate of \$4 Billion/month. [Elon Musk has sued OpenAi](#) claiming that they owe him \$134 Billion and misused his funding. Our objective is to develop a business strategy and plan that will make this business successful.

The core tool that we will use for expressing the business problem, solution and plan is the [Business Model Canvas](#) of Alex Osterwalder with a focus on how this methodology aligns with existing engineering problem solving skills. The tool kit, including the [Value Proposition Canvas](#), and [The Pitch Canvas](#) are, defined in the course notes developed by entrepreneurial engineers during their careers developing their own successful technology start-ups.

The Business Model Canvas tool will be supplemented by a student developed cash flow projection to complete the course project report as a summary business plan.

### GUEST SPEAKERS

Invited industry speakers are experts in their field who are currently working to solve elements of the

challenge problem for their companies. They will speak from the point of view of the disruptors and the disrupted.

### **Taking Notes:**

All of the lecture notes used in live sessions are available to you on your Quercus course website. We provide the entire lecture series' notes and handouts used so that you will not need to take detailed notes. Lectures and guest speaker sessions will be recorded and available to students enrolled in the course after they are given live. Live sessions give students the opportunity to collaborate with the Professor, guest speakers and each other on the subject at hand.

### **Recommended Reading:**

[Open AI](#) White Paper

[\*Hurdle: The Book of Business Planning\*](#)

Tim Berry, Palo Alto Software, ISBN 0-9712185-0-1

### **Details**

The course is on Quercus, so you should sign in as soon as possible and read the handouts. We will post on Quercus all handouts as the course unfolds on the dates shown in this document so visit often.

## **Individual Student Assignment**

### **Watch the Video Quick Quiz**

All course lectures are pre-recorded. The quick quiz will test your understanding of the lecture material in lectures 1,2,4,5,& 6. Each quiz is true/false and worth one(1%) mark.

### **Business Press Review(BPR)**

As part of your live-sessions participation mark each student is expected to read an appropriate article from a reliable business publication (Globe and Mail ROB, National Post – Financial Section, Financial Times, Canadian Business, etc.) and submit a written *half page* report. A number of relevant articles are posted in Quercus in the Module named “Challenge Problem Market Research Material”.

Submit your report by midnight of the day *before the scheduled live-sessions on which it is due*.

Submit on Quercus and do not forget put your name in the document and to reference the article you are reporting on.

Your report should be about economic, political or personal issues *affecting our subject businesses*. These may be: a drop (or rise) in interest rates; recently released trade figures; import/export news; currency issues; government actions; approvals of financing; bankruptcies; tax matters, entrepreneurs, success stories, etc., etc. We expect you to write a thoughtful report on what you learned from reading the article, not a précis of the article.

Each Business Press Review Assignment is worth 2%. At the start of each class after a BRP was due three or four students will be called upon to talk about their BPR. If you are called upon and are not present you will get zero(0) for the assignment.

*These reports are the start of your **Market Research** that will feed into your Value Proposition Canvas and Final Business Plan assignments..*

## Student Team Assignments

All work associated with developing the business plan will be done in teams. Students will be organized into teams of up to four students during the first, organizing class and week. All team assignments will be marked as a team mark.

### Value Proposition Canvas Assignment

The Value proposition tool will help you focus your attention on two key parts of your market research of any successful business, the customer segment being served and the value proposition that you offer to them. This assignment is a step toward the completion of the market research assignment and the Business Model Canvas assignment.

### The Business Model Canvas & Final Business Plan

The business canvas is a tool that will help you define your business problem and its business model. We want to define a business model and how your business solution creates value for the customers and for the business. During this course you will have the unique opportunity to develop the different sections of the canvas and use them as the building blocks to create your final Business Plan. The term project is a Business Plan and it is intended to give you "hands on" experience in developing a document that is absolutely essential if you ever get into business for yourself.

The creation of your business plan will be an organic process once you have completed all the elements of your business model canvas. The comments you receive on your Progress Reports will guide you to validate your hypothesis and value proposition. There is also a lot of help available on the Internet, so please feel free to use any/all such assistance – but make sure you give credit by citing your sources. In addition to the canvas a financial cash flow projection for the business plan is required.

#### ASSIGNMENT DUE DATES

	<b>Report or Assignment</b>	<b>Due</b>
1.	Value Proposition Canvas Report+Presentation	May 16
2.	Final Business Plan Report + Presentation	May 28

Please respect the fact that these dates are firm. There will be a 40% discount on the mark if an assignment is handed in late, but we will not accept assignments handed in after we have returned that marked assignment to the class and you will get ZERO for that assignment.

## MARKING SCHEME

Class Participation (5 Business Press reviews, 2% each) – 10%

Watch the Video Quiz – 5%

Value Proposition Report+Presentation –45%

Final Business Plan Report+Presentation – 45%

## WHY TAKE THIS COURSE

APS1061H is designed to let engineering students learn the necessary skills for success in business and discover if they have the appetite to become successful business leader. This [video will](#) explain the core of the problem we will tackle in this course.

In today's economy the most successful people are those who have entrepreneurial skills. In fact, today organizations actively search for intrapreneurs (an entrepreneurial individual who prefers to work within a larger firm rather than start their own). In order to succeed in entrepreneurial/intrapreneurial endeavor it is important to understand what differentiates entrepreneurs from all others.

All but two key entrepreneurial skills for success can be learned and we teach those here. The two skills that cannot be learned are accepting unavoidable RISK and PASSION for what you do. The difference between successful entrepreneurs and intrapreneurs is that entrepreneurs have more willingness to accept RISK than intrapreneurs. This course will help students assess their own aptitude for these skills.

Our approach to teaching this course is based on real-life business experiences and years of successful practice of "what we preach." The course contains very little theoretical material or academic approaches. It is designed to familiarize you with the kinds of opportunities (problems) likely to be encountered in an entrepreneurial career.

# 2024 SUMMER SCHEDULE

## APS1061H

<u>Week</u>	<u>Date</u>	<u>Text-Chapter</u>	<u>Topics</u> <u>Milestones</u>	<u>Assignments &amp; Project</u>
1	May 4		Organizational session, group formation	
2	May 5	1 + 2 handouts	<b>The Business Model Canvas</b> <b>Business Planning and the Business Model Canvas</b>  - Introduction - The Business Model Canvas – its role and value <b>Guest Speaker</b>	
3	May 6	5	<b>Business Plan and the Challenge Business Problem</b> - Business Canvas/Plan - Business Idea Brainstorming - Business Challenge Idea <b>Guest Speaker</b>	
4	May 7	6 +notes	<b>Market Research</b> - How to define a business problem <i>Market Research Assignment handed out</i> <b>Guest Speaker</b>	
5	May 8		<b>The Value Proposition Canvas</b> Defining the Challenge problem opportunity	
	<b>ONE WEEK</b>	<b>BREAK</b>		
6	May 19	7 and 8	<b>Sales &amp; Marketing Strategies</b> <i>Market Research</i> - Value Proposition & the Value Chain <b>Value Proposition Canvas Presentations</b>  <b>Guest Speaker</b>	
7	May 20	7 and 8	<b>Financial Analysis</b> - What you need for a business plan  <b>Guest Speaker</b>	
8	May 21	A13, 14	<b>Business Model Canvas Workshop</b>	
9	May 22		<b>The BMC and BP Assignment</b>	
	<b>ONE WK BRK</b>			
10	May 29		<b>Business Plan Presentation/Business Canvas</b> <b>Financial Plan</b>	

# Resumé

## Steven Treiber, Ph.D., P.Eng

Steve Treiber was born in a refugee camp in post-world war II Europe and emmigrated to Canada as a child with his parents. His background gave him a perspective on success that is common to recent immigrants to Canada and provided a unique advantage in entrepreneurial endeavour. He brings that experience and point of view to teaching.

Steve has always had an interest in business. He spent most of his under-graduate years at McGill Engineering working in his father's corner grocery store after class. Although he started out working for others, he always had an eye on "doing his own thing" – and he did that after just 7 years in the corporate world. So, in 1984, after an engineering career in the pulp and paper and oil industries with Scott Paper and Shell Oil, respectively, he started his own software and engineering firm in Toronto and later Houston, TX. Treiber Controls Inc. developed process control and real-time optimisation software and applications for the oil, petrochemical, pulp and paper and other process industries. In 1998 he sold his company to a NASDAQ listed competitor, Aspen Technologies, and served in various senior management roles.

He left Aspen in 2002 to launch a new business start-up – the entrepreneurial drive was still there. He continues to work with technology start-up companies to apply his knowledge and experience in engineering and business. He is now President of [Manufacturing Technology Network, Inc.](#)

After receiving a Bachelor of Engineering from McGill University he volunteered to work as a high school teacher in Uganda from 1969-1971. He also holds a Master of Applied Science from the University of Toronto, and a PhD from McGill University, all in Chemical Engineering. He has published over 40 papers in the fields of process control and optimisation, and is an author of 6 patents in the same field. See his profile on [linkedin](#).