

BEE/CSS 371 Business of technology syllabus Winter 2017

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Office hours	TBD and by appointment (I do not have an on-campus office.)
Lectures	Mondays and Wednesdays, 5:45 pm – 7:45 pm UW2 131

Organization

This course is about technology entrepreneurship. It's about how people create businesses and maybe even change the world. The learning objective is a basic understanding of the all the moving parts that come together in a successful new business (and something about what goes into the ones that fail.)

Here are some topics we'll cover, some in more depth than others.

1. Why people become entrepreneurs.
2. Ideas versus opportunities.
3. Competitive strategy, core competencies, barriers to entry and competitive advantages.
4. Marketing, the definition of a market, selling a new idea, early adopter versus mainstream markets, value proposition.
5. Intellectual property, patents, copyrights and trade secrets.
6. Basic accounting, balance sheets, income statements and ratios.
7. The business plan: How the business will work.
8. Time value of money. A dollar today is worth more than one tomorrow.
9. Negotiations. If you're going to be an entrepreneur, you're going to have to make deals and decide whether, when and how to cooperate with others or you'll fail.
10. Ethical behavior.

Course outcomes

These are things you should be able to do by the end of the course.

1. Describe and discuss the motivations and risks of entrepreneurship and the advice of well-known entrepreneurs and explain the difference between an idea and an opportunity.
2. Explain the concepts of a business model and a value proposition.
3. State and apply basic concepts in competitive strategy, including first mover vs. follower, barriers to entry, core competencies, competitive advantage, imitation and substitution.
4. State and apply basic concepts of marketing, including innovative vs. mature industries, the sailing ship phenomenon, the five values offered to a customer (product, price, access, service and experience), opportunities for differentiation along the consumption sequence and the importance of heavy users.
5. Understand and create basic accounting statements, balance sheets, income statements and the cash flow statements, and understand and apply basic accounting concepts, including historical costs, going concern, matching principle and depreciation.
6. Explain the basic concept of intellectual property and the differences between patents, copyrights and trade secrets.
7. Analyze time value of money problems, draw cash flow diagrams, derive the equations for present and future value, annuities, net present value, internal rate of return, then apply that to economic options.
8. Describe and apply basic concepts of negotiations, zero sum situations versus those where there are possibilities for joint gains, the best alternative to a negotiated agreement (BATNA), zone of agreement, reserve prices, the efficient frontier, factors that make a negotiation more difficult.
9. Describe and apply ethical considerations, e.g., duty to disclose, professional ethics.
10. Analyze and create a business plan for a simple startup.

Format

There's a pretty good chance this will be unlike any other engineering or computer science class you have ever experienced. We'll cover some topics, like time value of money and accounting, in a fairly traditional lecture format.

But fundamentally, this is a class about how businesses operate and the format will be more like you'd find in a business school, e.g., in a typical case-oriented MBA program.

What that means is that this class, more than most others, will be a discussion. When we discuss a case or video, I hope there will be some disagreements about what the company should do next or why it failed or did so well. If there isn't any disagreement, we're wasting our time because it couldn't have been an interesting question.

In a way, this is like real business anyway, where people get things done with a lot of talking to other people. You should expect that I might randomly call on anyone to help us start a discussion by reciting a few basic facts of a case. But more than recitation of basic facts, I'll be looking for you bring your own thoughts to the table. Be aware, I value quality over quantity. Bottom line is that a huge part of your grade will be your contribution in class.

We'll also do some just plain fun stuff, including some negotiation exercises, to see how people behave.

Teams of 4 or 5

You will be expected to work in teams of four or five. No exceptions. It is up to you to select your teammates. You should expect I'll generally assume equal contributions on team submissions and that you will usually all get the same grade. Choose carefully.

Each team should submit *only one* copy of any assignment but with all the names on it. I do not like discovering that I'm grading the same thing twice. If you find you have a teammate who is not doing his or her share, your options are to try to work it out or suck it up. I am not here to settle squabbles within a team.

Business plans

Though you will do other exercises together as a team, your main objective will be to come up with business plan, which you will pitch to the class at the end of the quarter.

You'll need to figure out how you'd start an actual business that could actually work, then explain that in your plan. You'll have complete freedom to choose any business opportunity you like. It does not have to be a technology business but you do have to produce a good solid plan. (One of the best so far was for a new microbrewery in Wallingford, Shark Brewing, "Beer with bite!")

Grading

I may adjust the grading somewhat between now and the end of the quarter, but here's roughly what you should expect. Your individual performance will include any individual written assignments and your performance on some negotiation games we'll play in class. The exams will be closed book, closed notes, no cellphones or computers, calculator only.

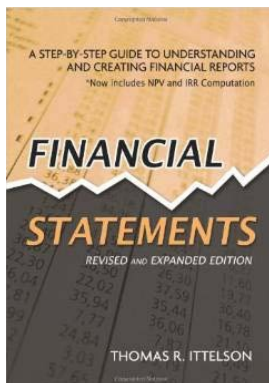
Class participation	10%
Individual assignments	20%
Group assignments	10%
Business plans	20%
Midterm	20%
Final	20%

Required texts

We will be using these two required texts. Both these books should be in the bookstore or easily available from Amazon and other sources.



Technology Ventures: From Idea to Enterprise, 4th edition
Thomas H. Bryers
Richard C. Dorf
Andrew J. Nelson
McGraw-Hill Education, 2015
ISBN 978-0-07-352342-2



Financial Statements: A Step-by-Step Guide to Understanding and Creating Financial Reports, Revised and expanded edition
Thomas R. Ittelson
The Career Press, Inc., 2009
ISBN 978-1-60163023-0

I'll base the course most heavily on the *Technology Ventures* text and I'll be using a lot of their slide material and cases. We'll also be watching and discussing some of their online videos at the [Stanford Entrepreneurship Corner](#).

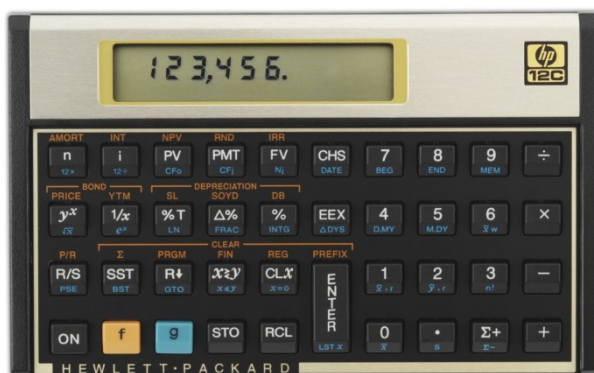
Technology Ventures reflects the experience of the [Stanford Technology Ventures Program](#) and is about the characteristics of successful entrepreneurs and the critical steps in building a technology business from startup to revenue of perhaps \$10M or more in five years or less, big stuff that attracts VCs. But most of the lessons apply to any startup business of any size in any industry. This is a brand-new edition. Most of the book is pretty similar to the previous edition but unfortunately, they changed all the cases at the end, which we'll be talking about in class.

I'll diverge from *Technology Ventures* near the end, where I find their discussion of the financial plan overweighted toward companies financed by VCs and headed toward an IPO, especially for an introductory course. Most small entrepreneurs will never need to know how you'd structure multiple financing rounds with a venture capitalist. Moreover, these are skills that can be acquired or hired if you ever actually do need them.

I think it makes more sense to learn how you'd create a successful small business before you worry about how you'd IPO a big one. So instead, we'll work on basic skills that every entrepreneur needs: negotiations, basic accounting and time value of money calculations. These skills also have the advantage of being useful for almost anyone, even in their personal financial lives.

I'll use *Financial Statements* in our discussion of accounting. It offers good generic explanations of accounting terms and how financial statements are constructed, it's quick to navigate and it's easy-to-read. I also liked that it's cheap. The rest of the material will be my own content or plucked from other resources.

Financial calculator



You will also need a financial calculator, at minimum for the exams, where I do not allow cellphones or computers.

A financial calculator makes time value of money calculations *much* easier. But also, this is your opportunity to learn how to use one, which I think you'll find is a useful life skill, like knowing how to type.

When you go to buy a financial calculator, there is really only one worth getting, the HP-12C. Even after 30+ years, this is still

the only financial calculator that anyone who does this for a living would buy. It's like Windows versus Mac without the Mac. Used, they can be had for as little as \$20 on eBay.

The older ones use 3 button cells. The new ones use a larger coin cell and are a bit faster. Otherwise, they work the same.

All the work must be your own

You may certainly compare notes with other students and other teams and of course I understand that you may do research using Google. But absolutely everything you turn in to me must be your own work.

Neither I nor anyone else will proctor your exams in this course. It is my experience that people either rise to your expectations or not at all. I will, however, ask you to copy the following statement on your exams in your own handwriting and to sign your name to it.

On my honor, I will neither accept nor give unauthorized aid on this exam.

If you misrepresent someone else's work as your own or if you try to deceive me in any of the myriad other ways that might seem attractive, and I discover it, you will get a zero on the assignment and I will report you for academic dishonesty. The one thing I've learned is that when you find someone has lied to you, all you really know for sure about them is that this isn't the first time. I do not give second chances. I report everything.

Disability

Access and Accommodations: Your experience in this class is important to me and to the University of Washington Bothell, where it is our policy and practice to create inclusive and accessible learning environments consistent with federal and state law.

If you experience barriers based on a temporary or permanent disability (including, but not limited to mental health, attention-related, learning, vision, hearing, physical or health impacts), please seek a meeting with [Disability Resources for Students \(DRS\)](#). They'll work with you and me and your other instructors to figure out some reasonable accommodations. The contact person is Rosa Lundborg at 425-352-5307 or email rlundborg@uwb.edu.

If you have already established accommodations with DRS, please tell me what they are so I can be sure to provide them.