Lectures: Mondays 6-9pm, starting Monday January 9, 2023

Location: Classes, Tutorials & Workshops will be held in-person at the Department of Computer Science Innovation Lab (DCSIL) located on the 2nd floor in the Gerstein Science Information Centre, 9 King's College Circle - SM Room 2360 - St. George Campus

COURSE DESCRIPTION & OBJECTIVES

This program introduces you to the nature, structure, and dynamics of the contemporary software industry. It focuses on the key factors involved in ideating, hypothesizing, validating, and executing a viable and investable/return driven business model to launch a sustainable, scalable and profitable tech-based (software and/or hardware) business venture as a company founder or as an employee of an established company. The course will be a team effort of four to five students per team. The scope of the course does not include not-for-profit or charity business models.

Program objectives include a meaningful understanding of:
- The high-technology business environment in general and the software industry in particular.
- The business concepts and principles behind creating and launching a successful innovation-driven tech venture.
- How to produce, present, and critique business proposals and plans for ventures, and how to develop business simulation and forecasting models in support of these plans.
- How to converse with and present to investors, executives, judging panels, incubators and accelerators.
- Upon successful completion of the course, you will have first-hand experience of the stages, processes, and challenges involved in transforming an idea into an investable and scalable business venture, and will be ideally positioned to begin launching your own tech venture.

In this program, you will learn techniques and methodologies that will give you a distinct career advantage after graduation, whether or not you intend to work in a tech field. It is designed to give you a true-to-life experience of the thought processes behind successful tech business ventures, which apply whether you are planning on creating your own startup or working for an established employer.

You and your team will devise a cool, innovative solution to a significant market problem. This will involve researching your customer base, forming and testing hypotheses, and producing a value proposition that will form the basis for your business model. You will investigate your customer base and market by identifying the key activities, resources and partners needed for fulfillment. This process culminates in a business model that both makes sense in a financial context and resonates with a venture capital (VC) or funding audience—the kind of audience who will eventually be visiting the class to critique your final product and business model.

This program sets very high standards for you because the business world demands nothing less. We have an obligation to ensure that your entrepreneurial education is thorough and demanding, and only students who are exceptionally dedicated and committed to developing mastery over the techniques and methodologies in this course will excel.

This program will involve guest speakers and panelists including entrepreneurs and investors that are currently active in the industry. Each will share their unique real-world experiences, insights, and perspectives on the future of software and software entrepreneurship.

Grade Breakdown & Assignment Due Dates Schedule

[Team grade 80%, individual grade 20%]
[Assignments 85%, Class participation 15%]

Due upon acceptance	**Assignment 1:** Individual Written Intros (Mandatory 5%)
January 29, 2023 10pm Quercus	**Assignment 2a:** Business Opportunity, Market Analysis, and Startup Team (10%)
January 30, 2023 In-class	**Assignment 2b:** Team Pitch (10%)
February 12, 2023 10pm Quercus	**Assignment 3:** Team Written Customer Segment (10%)
March 5, 2023 10pm Quercus	**Assignment 4a:** Team Written Value Proposition, Competition, Tech Know How (10%)
March 6, 2023 In-class	**Assignment 4b:** Team Pitch (10%)
March 19, 2023 10pm Quercus	**Assignment 5:** Financials & Risk (10%)
April 3, 2023 In-class	**Assignment 6b:** Team Pitch (10%)
April 9, 2023 10pm Quercus	**Assignment 6a:** Team Written Business Plan Report (10%)
	Class Participation: (15%)

Late Submissions
Five percent (5%) will be subtracted from the mark for an assignment for each twelve (12) hour period it is delivered late

COURSE SCHEDULE

PRE-SEMESTER PREPARATION

Winter 2023

Business of Software CSC454/2527

Assignment 1 (Individual Written Introduction) Issued – Due on as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

WEEK 1 – START OF FALL SEMESTER

Monday, January 9, 2023

Business of Software CSC454/2527

Students are expected to watch the recording of the mandatory Entrepreneurship Librarian's (Carey Toane) Workshop. The link to the recorded session is in Quercus announcements.

Lecture Topics (6:10 – 7:30pm)
- Course Introduction

7:30 – 9:00pm
- Industry Partner segment

Assignment 1 (Individual Written Introduction) Due as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Assignment 6a (Business Plan report) Issued – Due on Quercus as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Assignment 6b (Team Final Pitch) Issued – Due in-class as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Assignment 2a (Team Written: Business Opportunity, Market Analysis, and Startup Team) Issued – Due on Quercus as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Assignment 2b (Team Pitch: Business Opportunity, Market Analysis, and Startup Team) Issued - Due in class as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

WEEK 2

Monday, January 16, 2023

<u>Business of Software CSC454/2527</u>

Lecture Topics (7:10 – 9:00pm)
- Tech Industry Overview
- Framing the Commercialization Problem – The Self-Inflicted Wound

WEEK 3

Monday, January 23, 2022

<u>Business of Software CSC454/2527</u>

Lecture Topics (6:10 – 9:00pm)
- The First Asset
- Team Dynamics & Team Building
- Market Opportunity and Sizing (TAM, SAM, SOM)

WEEK 4

Monday, January 30, 2023

<u>Business of Software CSC454/2527</u>

Assignment 2a (Team Written: Industry Analysis + Market Opportunity) – Due yesterday on as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus Quercus at 10pm,

6:10 – 9:00 pm
Assignment 2b (Team Pitch: Industry Analysis + Market Opportunity) – Due in class as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Assignment 3 (Team Written: Customer Segment) Issued – Due on Quercus, as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

WEEK 5

Monday, February 6, 2023

Business of Software CSC454/2527

Lecture Topics (6:10 – 9:00pm)
- Business Model Canvas
- Value Proposition
- Customer Discovery
- Customer Validation

WEEK 6

Monday, February 13, 2022

Assignment 3 (Team Written: Customer Segment) – Due on Quercus, as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Business of Software CSC454/2527

Lecture Topics (6:10 – 9:00pm)
- Customer Acquisition/Creation
- Company Building
- Pricing Models
- Customer Lifetime Value & Acquisition Costs

Assignment 4a (Team Written: Value Proposition, Competition, Know-How) Issued – Due on Quercus as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Assignment 4b (Team Pitch: Value Proposition, Competition, Know-How) Issued – Due in class, as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Reading week – no classes February 20 - 24, 2023

WEEK 7

Monday, February 27, 2023

Business of Software CSC454/2527

Lecture Topics (6:10 – 9:00pm)
- Competition
- SWOT Analyses
- Infrastructure (Key Activities, Key Resources, Key Partners)
- Channels Types & Phases

WEEK 8

Monday, March 6, 2023

Assignment 4a (Team Written: Value Proposition, Competition, Know-How) - Due on Quercus as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Assignment 5 (Team Written: Financials & Risk) Issued – Due on Quercus as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Business of Software CSC454/2527

6:10 – 9:00pm
Assignment 4b (Team Pitch: Value Proposition, Competition, Know-How) – Due in class, as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

WEEK 9

Monday, March 13, 2023

Business of Software CSC454/2527

Lecture Topics (6:10 – 9:00pm)
- Introduction to Financial Statements
- Financial Modeling, Projections

WEEK 10

Monday, March 20, 2023

Assignment 5 (Team Written: Financials & Risk) – Due on Quercus as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Business of Software CSC454/2527

Guest Speaker Topics (6:10 – 9:00pm)

Assignment 6a (Team Written: Executive Business Brief) Issued – Due on Quercus as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Assignment 6b (Final Slide Deck Pitch) Issued - Due in class, as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

WEEK 11

Monday, March 27, 2023

Business of Software CSC454/2527

Lecture Topics (6:10 – 9:00pm)
- Funding & Investor Psychology
- Business Structures, Agreements & Business Partners
- Exit Strategies

WEEK 12

Monday, April 3, 2023

Business of Software CSC454/2527

(6:10 - 9pm)
PITCH DAY: Assignment 6b (Team Final Pitch) – Due in class, as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Assignment 6a (Team Written: Business Plan report) - Due as per the Grade Breakdown & Assignment Due Dates Schedule on page 2 of this syllabus

Companion Course (Optional but highly recommended)

CSC454/2527 - The Business of Software has an optional companion course titled;

CSC491/2600 - Capstone Design Course

You do not have to take CSC491/2600 course in order to take CSC454/2527 but you must take CSC454/2527 in order to take CSC491/2600 unless you have successfully taken CSC454/2527 in the past. Each course is a standalone for credit course which have separate instructors and syllabi. The syllabi of both courses have been coordinated to give you an authentic Customer Development driven experience of the Product Development side. Please refer to each syllabus for greater details of that course.

Lecture Material Delivery and Dissemination

This semester lectures will be delivered in-person at DCSIL as mentioned at the top of this syllabus. Announcements, lecture slides, assignments and course information will also be posted to Quercus. Have a laptop with you at all times that you are in class or working with the instructors and teaching assistants

Contact Policy

The default mode of contact with the teaching team is through Slack and your team channel. The exception to the default team channel is when wanting to take up a personal or sensitive matter that requires confidentiality. You can access the teaching team through a confidential Slack channel that only the teaching team will have access to. If you want a specific person to answer please name that person in the opening of the Slack message. Not following this policy will result in delays in responses. Again, Slack is the default mode of interactive communication. The teaching team will set up the Slack channels and make them available to you.

Team Member Termination Policy

As in real business and entrepreneurial environments we are giving teams the ability to dismiss team members for cause with the instructors' review of the documented facts and subsequent approval. If teammates are not pulling their share of the workload or not attending vital meetings and failing the team on their deliverables, we can address the issues with the underperforming member and attempt to rehabilitate the issue. If issues persist then more permanent remedies may be called for including separation from the group. The options upon dismissal are to join another team, persist on your own which is futile or withdraw from the course. I would strongly suggest that either before or immediately while contemplating who your team members might be you should all sit down and write out a Team Expectations Management document that you can all commit to and sign. The earlier you start talking about expectations among the founders, the better. If you neglect doing this, a mismatch in expectations often occurs. This can be detrimental to your venture, experience and grade. Most assume everything is aligned but nothing is farther from the truth so look into this matter now and see to it that it gets done. A large part of your grade depends on the team's execution. Choose your team members wisely, state your expectations and hold everyone accountable.

Program Teaching Personnel

Sayyed Nezhadi, Instructor CSC454/2527 – Business of Software
Team matters contact in Slack (default)
For private or highly sensitive matters requiring confidentiality use a private Slack channel to the teaching team
LinkedIn Profile: https://www.linkedin.com/in/sayyednezhadi/

Julian Nadeau, Instructor CSC491/2600 – Capstone Design
Team matters contact in Slack (default)
For private or highly sensitive matters requiring confidentiality use a private Slack channel to the teaching team
LinkedIn Profile: https://www.linkedin.com/in/juliannadeau/

Shashank Motepalli, Teaching Assistant CSC454/2527 – Business of Software
Team matters contact in Slack (default)
For private or highly sensitive matters requiring confidentiality use a private Slack channel to the teaching team
LinkedIn Profile https://www.linkedin.com/in/shashankmotepalli/

Tanya Mahajan, Teaching Assistant CSC454/2527 – Business of Software
Team matters contact in Slack (default)
For private or highly sensitive matters requiring confidentiality use a private Slack channel to the teaching team
LinkedIn Profile https://www.linkedin.com/in/tanya-mahajan28/

Program Administrative Personnel

If you are a Computer Science student there are two professionals in this department who are available to assist you with every aspect of your enrollment in the program. Please email them directly when essential and relevant. They will keep me in the loop as needed. Students from all other faculties and departments should please coordinate with your respective administrative professionals. They will advise you of the best course of action.

If you are a Computer Science graduate student your contacts is:
Pavi Chandrasegaram, *Graduate Program Manager*
Email: pavi@cs.toronto.edu

If you are a Computer Science undergraduate student your contacts is:
Emily Greenleaf, *Undergraduate Program Manager*
Email: emily.greenleaf@utoronto.ca

Course Readings & Materials
Readings and other materials for the course include the following sources, augmented with various additional online tools and materials.

Required Texts:
These books contain essential readings that will be referenced throughout the course lectures, tutorials, and assignments

Osterwalder, Alex and Yves Pigneur, *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*, John Wiley & Sons, 2010 (ISBN - 13: 978-0-470-87641-1 (paperback)

Steve Blank, Steven Gary, *The Four Steps to the Epiphany: Successful Strategies for Products that Win,* 2nd Ed., Published 2013 (ISBN: 0-9989200-5-07, Print), (ISBN: 978-0-9892005-2-3, ePub)

Rules and Regulations
Important University of Toronto rules and regulations can be found on the University of Toronto Arts & Science Registrar Office's website under "Rules & Regulations" https://artsci.calendar.utoronto.ca/rules-and-regulations It is the responsibility of professors and students to ensure Rules and Regulations are followed.

Academic Offenses
All group work you submit must be done by you and your group members only. Your work must not be submitted by someone else from another group. Plagiarism is academic fraud and is taken very seriously. Please read the Code of Student Conduct and the Code of Behaviour on Academic Matters

Citation and Formatting Guidelines

We will be adhering to the APA (American Psychological Association) formatting and style guidelines to produce all reports, research and class assignments. Grades will be deducted if this is not followed.

Intellectual Property

Who owns the intellectual property (IP) that is created in this course? You own the IP that you bring to class No one can lay claim to that. You share what you develop in class. Anything that you build is jointly owned by your team so pick your teammates wisely. If the team is using U of T resources or related technologies (example: research from one of the team members at U of T) we will check with the Innovations & Partnerships Office on a case-by-case basis to frame out a deal with the university.

Winter 2023 Important Dates

The dates listed at this link https://artsci.calendar.utoronto.ca/sessional-dates pertain to students registered in the Faculty of Arts & Science, St. George campus only (unless explicitly stated otherwise). Students must follow their own faculty/division's dates for registration (e.g., add/drop deadlines). Check with your faculty/divisional registrar's office for registration dates. The sessional dates below (e.g., beginning and ending of classes) apply to all students taking a Faculty of Arts & Science, St. George campus course.

Note that the academic drop deadline (i.e., last day to cancel a course without academic penalty) listed below is not the same as the financial refund deadline; see the Office of Student Accounts website for refund schedule and information.

Questions, Comments, Feedback, Errors & Omissions?

Questions regarding this course or syllabus can be directed to the instructor through the class wide Slack channel so that the entire class can derive the benefits of the interaction. This is the default mode.