SFU OFFICE OF THE VICE-PRESIDENT, ACADEMIC AND PROVOST

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MEMORANDUM

ATTENTION	Senate	**DATE**	October 8, 2014
FROM	Jon Driver, Vice-President, Academic and Provost, and Chair, SCUP	**PAGES**	1/1
RE:	Beedie School of Business: Full Program Proposal for a Graduate Certificate in Science & Technology Commercialization (SCUP 14-21)		

At its July 16, 2014 meeting, SCUP reviewed and approved the Full Program Proposal for a Graduate Certificate in Science & Technology Commercialization within the Beedie School of Business, effective Fall 2015.

Motion:

That Senate approve and recommend to the Board of Governors the Full Program Proposal for a Graduate Certificate in Science & Technology Commercialization within the Beedie School of Business, effective Fall 2015.

c: A. Gemino
S. Lubik
E. Maine

SFU Dean of Graduate Studies

Maggie Benston Student Services Centre 1100
8888 University Drive
Burnaby, BC
Canada V5A 1S6

TEL 778.782.3042
FAX 778.782.3080

report-dgs@sfu.ca
www.sfu.ca/Dean-GradStudies

MEMORANDUM

ATTENTION	SCUP	DATE	3 July 2014
FROM	Wade Parkhouse, Dean of Graduate Studies	No.	GS2014.17
RE:	Proposal for a Graduate Certificate in Science and Technology Commercialization		

At its meeting 9 June 2014, SGSC approved the proposal for a Graduate Certificate in Science and Technology Commercialization and is recommending it to SCUP.

Effective Date: Spring 2015

Beedie School of Business

Motion:
That SCUP approve and recommend to Senate the proposal for a Graduate Certificate in Science and Technology Commercialization

SFU

BEEDIE SCHOOL OF BUSINESS

Memo

To: Wade Parkhouse, Dean of Graduate Studies

From: Ian McCarthy, Associate Dean, Segal Graduate School

Date: September 26th, 2014

Re: New Program Proposal: Graduate Certificate in Science & Technology Commercialization

---

The Beedie School of Business would like to propose the creation of a Graduate Certificate in Science & Technology Commercialization (see attached proposal)

The Beedie School of Business would like to make the following additions to the Academic Calendar for the purpose of introducing the Graduate Certificate in Science & Technology Commercialization:

CALENDAR ENTRY to be worded as follows:

> "GRADUATE CERTIFICATE IN SCIENCE & TECHNOLOGY COMMERCIALIZATION
>
> This program provides commercialization knowledge for research scientists during their PhD programs in order to commercialize their work and prepare them to work as agents of commercialization in industry.
>
> Applicants should also refer to the program website located at www.beedie.sfu.ca/gcstc
>
> Students study part-time over three semesters. The program consists of three part-time semesters.
>
> Admission Requirements
>
> Admission is based on the following criteria:
>
> - either a current graduate student, post- doc, or faculty member at SFU or UBC, or a recent graduate of SFU and UBC graduate programs in science, engineering, health or environmental sciences.

- a letter of reference from their supervisor or someone on their supervisory committee. In the case of a faculty member, a letter of reference from a colleague is fine
- resume
- official grad student transcripts
- brief description of experience in research and development
- interview (short listed candidates only)

Program Requirements

Students in the GCSTC program must maintain a 2.5 grade point average and are required to complete the following courses:

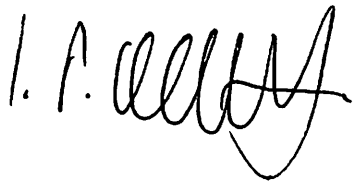
BUS 790 Lab to Market (2)
BUS 791 Opportunity Identification and Assessment (2)
BUS 792 Financial Literacy for Entrepreneurs (2)
BUS 793 Business Models (2)
BUS 794 Leadership and Managing Teams (2)
BUS 795 Financing the New Venture (2)
BUS 796 Business Plan I (2)
BUS 797 Business Plan II (2)

Academic Requirements within the Graduate General Regulations

All graduate students must satisfy the academic requirements that are specified in the graduate general regulations (residence, course work, academic progress, supervision, research competence requirement, completion time, and degree completion), as well as the specific requirements for the program in which they are enrolled, as shown above."

If you have any further questions or concerns, please do not hesitate to contact me.

Sincerely,



Dr. Ian McCarthy
Associate Dean, Segal Graduate School
Beedie School of Business
Simon Fraser University
778-782-5298

September 10th, 2014

Proposal for a

Graduate Certificate in Science & Technology Commercialization
Beedie School of Business, Simon Fraser University

1. CREDENTIAL TO BE AWARDED

   Graduate Certificate in Science & Technology Commercialization (GCSTC)

2. LOCATION OF PROGRAM

   The program will be offered one evening a week at the Segal Graduate School of Business, downtown.

3. FACULTY OFFERING THE PROGRAM

   Beedie School of Business

4. ANTICIPATED START DATE

   September 2015

5. DESCRIPTION OF PROGRAM

Summary

The proposed graduate certificate builds on the Beedie School of Business' expertise in management of technology, innovation management, and entrepreneurship. The Beedie School has offered an MBA in Management of Technology since 1999 and an undergraduate concentration in innovation and entrepreneurship since 2006. Commercialization of technology is a priority for Canada, British Columbia and metropolitan Vancouver as source of economic growth, jobs, and competitive advantage at the firm level.

Education in commercialization for graduate science and engineering students will enhance the probability of successful commercialization of science and technology discoveries from research labs at SFU. Students will benefit directly from the experience as they become potentially successful entrepreneurs in their own right, or as commercialization agents in private sector firms and public organizations. The proposed certificate is designed for Graduate students (and recent SFU and UBC alumni) in Science, Health Sciences, Applied Science, Computer Science and Environmental Science who are interested in careers that are related to applied research and design and development of products. The program is an academic credential, the Graduate Certificate in Science & Technology Commercialization.

Unlike an MBA or workshops and bootcamps, the certificate provides a rigourous blend of experiential and applied learning with theory focussed on bringing products from bench to business. Incorporating guest lectures from successful scientist entrepreneurs, entrepreneurship frameworks and fundamentals will be taught by Beedie MBA professors. Where appropriate, Lean Startup principles will be demonstrated as part of entrepreneurial strategy.

We have created a certificate that includes 8 half courses (16 units) spanning aspects of technology commercialization. We have also integrated the students into the New Venture BC entrepreneurship competition, by synchronizing our course deliverables with the competition timeline. Students will bring a potential project from their lab and will spend the program developing the business elements required for commercialization through to a full business plan that can become the basis for a start-up venture: such ventures can be considered for further support in one of the SFU commercialization incubators. Students will also pitch their business model to a panel of applied judges. They will have the opportunity to submit their concept to the New Ventures BC competition and if successful in that process, they will have the opportunity for additional mentoring and other support. The Certificate can provide a meaningful source of differentiation for SFU PhD programs.

Background

Entrepreneurship and commercialization are recognized sub-disciplines in the field of business administration. Commercialization is the application of entrepreneurial and business processes specifically for new products and services. Many schools teach commercialization as a specialization in an MBA program (e.g. U Alberta), as a stand-alone program (U Waterloo MBET Master of Business, Entrepreneurship and Technology, 9 course, three terms; Boston University Online Graduate Certificate in Entrepreneurship (four required courses in 8 months, Graduate Diploma in Entrepreneurial Management, a four month face to face program with 7 courses). Applied learning leading to a business plan for a new venture is the most common outcome of these programs.

Purpose of the Graduate Certificate

The purpose of the GCSTC is to provide commercialization socialization and knowledge for research scientists during or directly after their Graduate programs in order to commercialize their work and prepare them to work as agents of commercialization in industry. As most science and Engineering PhD graduates do not work in academia, it is even more vital that they graduate with an understanding of the industrial relevance of their research. This certificate will enable students to examine the commercialization potential of their own research first by learning relevant theories and frameworks, then by exploring and selecting markets in order to

build customer value earlier into their product development work, lead teams that are more effective in this effort and build valuation strategies for the intellectual property created.

Increased value to the community

Commercialization of science through entrepreneurship is a fundamental engine of innovation and ultimately economic growth through the creation of new ventures and/or the licencing of intellectual property to create new products and customer value for existing firms. Entrepreneurship turns knowledge into economic potential, clearly an important contribution to the local and ultimately the global economy. New ventures are an important vehicle for commercializing technology. As new ventures seek to commercialize technology, they evolve value creation strategies to better link fundamental scientific advance with the creation of value for users and investors. Hence successful new ventures require the development of 3 skills: understanding 1) the technology, 2) customer markets, and 3) financial markets. Value is derived for the student, SFU, and the community.

By studying for this Graduate Certificate, the student develops skills that are transferable to a career in industry or as a research scientist engaged in commercialization. In addition, this certificate could act as a bridge between faculties and campuses – of benefit to students, faculty and the university as a whole. The certificate would link students and faculty in the Faculties of Science, Applied Science, Health Sciences, SIAT and Environmental Science with faculty in the Beedie School of Business as well as the broader technology development ecosystem in the Lower Mainland. The aim is to create a network of individuals and organizations that can collaborate on commercialization opportunities beyond those undertaken by the students in the certificate program.

Requirements for Graduation

The minimum University requirements for admission to a graduate certificate program are set out in GGR 1.3.2a.

The GCSTC will be comprised of eight, 2 unit, Beedie School of Business graduate courses:

Term One - Fall

1. BUS 790 (2): Lab to Market
    - Scientist-Entrepreneurs: strengths and weaknesses
    - Unlocking value (value proposition: viability analysis)
    - Innovation management (technology road map: production scale-up decisions)
    - IP strategy, licencing, markets for technology

Potential Instructors: Elicia Maine or Sarah Lubik

2. BUS 791 (2): Opportunity Identification and Assessment
    - Customer Discovery – technology/market matching; vision to market; segments; co-creators, adoption and diffusion
    - Value propositions; problems solved; minimum viable product/concept; early validation
    - Product development
    - Product/service pricing

Potential Instructors: Colleen Collins, Sarah Lubik or Brent McFerran

Term Two – Spring

3. BUS 792 (2): Financial Literacy for Entrepreneurs
    - Introduction to financial calculations (i.e. NPV, DCF)
    - Introduction to financial statements (Income statements, Cash Flow, Balance Sheet)

Potential Instructors: Ian Hand or Jan Simon

4. BUS 793 (2): Business Models
    - Business models, capturing value, pivoting, positioning
    - Cost structure, key activities, key resources
    - Competitor analysis
    - Key partners, channels
    - Validating the market and the business model, prototype development
    - Create an entrepreneurial pitch

Potential Instructors: Sarah Lubik, Jan Kietzmann or Terry Beech

5.BUS 796 (2): Business Plan I
    - Integrate frameworks and content of courses-to-date into a coherent and compelling business plan
    - Customize business plan to each student's particular invention/product or service idea
    - Allow for detailed analysis of the commercialization potential of science and engineering research in university labs
    - Integration across faculties and development of commercialization mentors for the student entrepreneurs

Potential Instructors: Sarah Lubik, Elicia Maine, Colleen Collins, Paul Terry or Ian Hand

Term Three – Summer

6.BUS 794 (2): Leadership and Managing Teams

- Managing yourself and others
- Hiring a team
- Human resources evolution

Potential Instructors: David Hannah, Carolyn Egri, Paul Terry or Gary Wagenheim

7. BUS 795 (2): Financing the New Venture
   - Sources of capital
   - Deal structure
   - Revenue forecast (creating the financials for your business plan)
   - VC pitch

   Potential Instructors: Jan Simon, Ian Hand or Malcolm Kendall

8. BUS 797 (2): Business Plan II
   - Integrate frameworks and content of courses-to-date into a coherent and compelling business plan
   - Customize business plan to each student's particular invention/product or service idea
   - Work one-on-one with a faculty supervisor to create a polished business plan for the venture commercializing the students product/service

   Potential Instructors: Sarah Lubik, Elicia Maine, Colleen Collins, Paul Terry or Ian Hand

The courses will offered in a cohort model without electives. Students will progress through the courses in sequence, taking them from ideation to validation to start-up. They will work through the process of commercialization – bringing intellectual property from their own research to develop a start-up roadmap – a business plan for an entrepreneurial venture. Where appropriate, Lean Startup principles of iterating and pivoting will be incorporated. Students will present their business pitches to a panel of entrepreneurs, academics and investors.

Learning outcomes:

- Develop business model and entrepreneurial pitch (3 minute video)
- Validate business model – test and retest business model assumptions/hypotheses
- Create a polished business plan for commercialization of novel product/service
- Develop network within regional technology ecosystem
- Participation in New Ventures BC entrepreneurship competition

Teaching methods and estimated completion time

The courses in the program are primarily taught through weekly face-to-face seminars and an ongoing action learning project. The courses are designed to allow for students to participate in discussion of issues associated with the content and its application to their project, and to receive feedback on written assignments related to their commercialization project from faculty mentors. Notably, the action learning project will be ongoing throughout the certificate program. It will be some intellectual property (product or service) from the students' own research or that of their lab that is within three years of being ready for market. This action learning project will customize the entrepreneurship learning to a student's research interests and expertise.

In addition, the project will provide the vehicle for students to participate in the BCIC- New Ventures BC Competition, which runs from April through September (depending on whether the project successfully moves from one stage of the competition to the next). "The BCIC-New Ventures competition gives early-stage B.C. innovators and entrepreneurs access to technology leaders, business education and $300,000 in prizes." (http://www.newventuresbc.com/). The competition is open to all. However, it is hoped that the knowledge, experience and mentorship gained in the Certificate, along with the timing of certificate deliverables, will enable the participants to gain significant advantage in the competition. Success in the competition is not a requirement of the certificate, but the financial and mentorship resources provide a large incentive to participate in it.

Students may also apply to participate in an SFU venture incubator or for extra mentorship (TIME center, Venture Labs, Venture Connection, Radius, Ignition Workshop Series or others). Mentors from these centres will also be involved in judging student presentations. These certificate courses may be used to apply for advanced standing in the Management of Technology MBA program (specially the finance and marketing courses).

Work experience/work term is not required for degree completion.

Enrollment plan and fees

Students will be able to complete the certificate in three semesters of continuous enrollment. The program will be operated under a cost recovery model similar to other

graduate programs in the Beedie School of Business. Tuition would be comparable to the Management of Technology MBA program at $604.00 per unit.

Target number of students

15-20 students per year.

Resources availableSTE to implement the program

- Scholarships, or grant money, to fund tuition for some of the PhD students admitted to the program. These students could be recognized as SFU Commercialization Scholars.
- Access to bibliographic databases provided by the SFU library
- Classroom space at the Segal Campus (once a week in the evening)
- Access to an SFU-supported learning management system
- Access to an SFU venture incubator (TIME, Venture Labs, Venture Connection, Radius)
- 8 Faculty (12.5% of their teaching load)/ 1 Staff (1/4 of their time)

Resources reduced or eliminated when the new program is introduced
Faculty and staff time as listed above.

Faculty
Courses will be mostly taught by instructors in the Beedie School of Business who hold a PhD or Masters' degree in Innovation, Entrepreneurship or other Business Discipline. Visiting faculty may be included who have particular experience in the area of commercialization.

SFU faculty members specializing in innovation and entrepreneurship who may be drawn upon to teach courses in the program include:

Name	Rank	Specialization
Elicia Maine	Associate Professor	Technology and Operations Management
Sarah Lubik	Lecturer	Innovation and Entrepreneurship
Ian Hand	Visiting/Innovation Office	Finance
Colleen Collins	Associate Professor	Marketing
Brent McFerran	Assistant Professor	Marketing

Jan Kietzmann	Assistant Professor	MIS/ Innovation and Entrepreneurship
Carolyn Egri	Professor	Management and Organization Studies
Gary Wagenheim	Adjunct Faculty	Leadership
David Hannah	Associate Professor	Management and Organization Studies
Malcolm Kendall	Adjunct Faculty	Finance
Jan Simon	Senior Lecturer	Finance
Ian McCarthy	Professor	Technology & Operations Management/Strategy
Blaize Reich	Professor	Technology and Innovation
Eric Gedajlovic	Professor	Strategy and Entrepreneurship
Stephanie Bertels	Assistant Professor	Technology and Operations Management/Innovation & Entrepreneurship
Pek-Hooi Soh	Associate Professor	Strategy/Technology & Operations Management
Terry Beech	Adjunct Faculty	Entrepreneurship
Paul Terry	Adjunct Faculty/ Venture Connection	Technology Entrepreneurship and New Product Development

Student Evaluation

Each course will have the following breakdown for evaluation:
20% Participation
20% Group Assignment
60% Individual Project

The grade basis for each course will be graded, with the exception of the two Business Plan courses which will be IP/CO.

Rubric for Class Participation

A+ grade	Elevates the class with their comments, examples, and questions. Demonstrates full competency with the course material, applying learning from earlier classes to later discussions
A grade	You definitely notice when they aren't there. Strong contributor to class discussions, engaged with the material and demonstrating strong competency with it. Contributes examples from their own experience in a helpful manner for their peers
A- grade	Solid contributor to class discussions. Makes comments which demonstrate competency with course material. Evidence of reading all pre-readings, completes assignments

B+ grade	Evidence of reading all pre- readings, completes assignments, either makes occasional very good comments or regularly makes comments which are connected to the course material
B grade	Evidence of reading all pre readings, completes assignments, makes occasional comments in class which are connected to the course material
B- grade	Misses class without informing the prof or a valid reason, evidence of not always reading required pre-readings, and/or lack of participation in class discussions
C+ grade	Misses multiple classes without informing prof or a valid reason, frequently has not done the pre-readings, cannot demonstrate understanding of course material and/or lack of participation in class discussions
C grade	More extreme than C (and rather than or)
D grade	Does not attend classes

Program Assessment
An assessment will be conducted after 3 years.

Student Market Interest and Labour Demand

The following SFU faculty have been consulted with on the development of the certificate, are supportive and recognize a need in the market for the program:

Mario Pinto, VP Research
Claire Cupples, Dean, Faculty of Science
Nimal Rajapakse, Dean, Faculty of Applied Science
Fred Popowich, Professor, Computing Sciences
George Agnes, Associate Dean of Academics, Faculty of Science
Peter Rubin, Associate Dean
Richard Smith, Professor, Faculty of Communications
Erik Kjeang, Assistant Professor, School of Mechatronic System Engineering

Elicia Maine has also consulted with various other faculty members.

Budget
Please see attached proposed budget (and simplified version below):

Commercialization Certificate Based on a Calendar year						
	FINANCIAL SUMMARY	Year 1 2015	Year 2 2016	Year 3 2017	Total	
	Enrolment	15	18	20		
	Tuition 1st year	148,968	182,337	206,649	537,954	
	Beedie Share	68%	68%	68%	68%	
	Tuition Revenue	**101,298**	**123,989**	**140,521**	**365,809**	
	VP Research / Dean's Contribution for 3 year trial	50,000	50,000	50,000		
	Total Revenue	**151,298**	**173,989**	**190,521**	**515,809**	
	Potential for External Scholarships (MITACS/Industry Canada/WED)					
	***2-3 year pilot**					
Expenses						
Program Salaries						
5216	Academic Salaries:					
	Total Academic Salaries	98,293	101,293	103,293		
Travel						
6111	Travel Employee Expenses:	0	0	0		
	Total Travel	0	0	0		
Operations Cost						
	Total Operations	5,350	5,850	5,850		
	TOTAL OPERATING EXPENSES	5,350	5,850	5,850		
	TOTAL EXPENSES	**103,643**	**107,143**	**109,143**		
	REVENUE- EXPENSES	**47,655**	**66,846**	**81,378**		
Direct Overhead						
5216	Direct Salary Expenses Across all Programs	35,882	28,276	28,276	1/4 of regular overhead for a part time program	
	Fixed Expenses Across all Programs	7,050	7,050	7,050		
6134	Recruitment Expenses	1,000	1,000	1,000		
	Total Direct Overhead	**43,932**	**36,326**	**36,326**		
	Total Expenses	**147,575**	**143,469**	**145,469**		
	REVENUE - EXPENSES	**3,723**	**30,521**	**45,053**		

Dean Daniel Shapiro has confirmed $50,000.00 seed funding from Dr. Jonathan Driver, VP Academic (see attached memo). Beedie is also submitting a proposal for UPF funding for innovation and entrepreneurship which would incorporate this certificate.

Department Support/Approval

Please see attached email correspondence.

Additional Notes:

Level of support and recognition from other post-secondary institutions (including plans for admissions and transfer within the British Columbia post-secondary education system) and relevant regulatory or professional bodies, where applicable – Not Applicable

Related programs at SFU or other British Columbia post-secondary institutions – None

Institutional Contact Person:

Elicia Maine, Ph.D.,

September 10th, 2014

Academic Director, Management of Technology MBA, Associate Professor, Technology Management & Strategy, Beedie School of Business, Simon Fraser University, emaine@sfu.ca 778-782-5260

Dr. Sarah Lubik
Director, Technology Entrepreneurship @ SFU
Lecturer, Entrepreneurship & Innovation
Beedie School of Business
Simon Fraser University
sarah_lubik@sfu.ca
778.782.9664
http://beedie.sfu.ca/profiles/SarahLubik
http://www.sfu.ca/techentrepreneurship.html

Attachments:
Beedie School of Business Memo
Confirmation of funding from Jon Driver
Email documentation of department approval
Survey of student interest
Course outlines for all courses in the program
New Course Forms

SFU OFFICE OF THE VICE-PRESIDENT, ACADEMIC AND PROVOST

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MEMORANDUM

ATTENTION	Daniel Shapiro, Dean, Beedie School of Business	**DATE**	July 30, 2014
FROM	Jon Driver, Vice-President, Academic and Provost	**PAGES**	1/1
RE:	Graduate Certificate in Science & Technology Commercialization – Seed Funding Request		

This memo is in response to Elicia Maine's June 16, 2014 email requesting $50K in one-time funding support for the Graduate Certificate in Science and Technology Commercialization. My initial response to Elicia's email noted that I was interested in supporting this initiative however I first needed to review the proposed budget. I could then better evaluate the request.

Based on my review of the budget, I suggest that Beedie submit a multi-year UPF request for this initiative. In the event that the UPF submission is not successful, I agree to transfer, from my VPA SIF, $50K in one-time funding towards the Graduate Certificate in Science and Technology Commercialization.

Thank you.

cc: Gord Myers, Associate Vice-President Academic
Ian McCarthy, Associate Dean, Graduate Programs
Elicia Maine, Associate Professor, Technology and Operations
Sarah Lubik, Lecturer, Entrepreneurship and Innovation
Wendy Unger, Director, Finance and Administration
Anita Stepan, Director, Finance and Budget
Bal Basi, Coordinator, UCIL

Sharan Minhas

Subject: FW: Graduate Certificate in Science and Technology Commercialization

-----Original Message-----
From: Jan Simon [mailto:simon@sfu.ca]
Sent: April-16-14 3:52 PM
To: Elicia Maine
Cc: David Hannah; Mark Wexler
Subject: Re: Graduate Certificate in Science and Technology Commercialization

Hi Elicia,

I think this is a fine proposal and support it fully.

Jan

----- Original Message -----
From: "Elicia Maine" <emaine@sfu.ca>
To: "Mark Wexler" <wexler@sfu.ca>
Cc: "Jan Simon" <simon@sfu.ca>, "David Hannah" <drhannah@sfu.ca>
Sent: Wednesday, April 16, 2014 3:46:36 PM
Subject: Graduate Certificate in Science and Technology Commercialization

Hello Mark, Jan and Dave,

As per our earlier discussions, in meetings of the committee of the MBAs, we are submitting our package for the proposed Graduate Certificate in Science and Technology Commercialization. This will go next to the Senate Graduate Studies Committee. Attached is the revised proposal.

Could you please confirm receipt and approval that we proceed to present this at the Senate Graduate Studies Committee meeting in May?

Regards,

Elicia

Elicia Maine, Ph.D.,

Academic Director, Management of Technology MBA,

Associate Professor, Technology Management & Strategy,

Beedie School of Business, Simon Fraser University,

Segal Building, 500 Granville Street, Vancouver, BC,

Canada, V6C 1W6

http://business.sfu.ca/mot/

http://www.advancedmaterialscommercialization.com

http://sfubionano.wordpress.com/

Sharan Minhas

Subject: FW: Graduate Certificate in Science and Technology Commercialization

From: David Hannah [mailto:drhannah@sfu.ca]
Sent: April-16-14 3:52 PM
To: Elicia Maine; 'Mark Wexler'
Cc: 'Jan Simon'
Subject: Re: Graduate Certificate in Science and Technology Commercialization

Looks fine to me, Elicia.

Dave

On 2014-04-16, 3:46 PM, Elicia Maine wrote:

> Hello Mark, Jan and Dave,
>
> As per our earlier discussions, in meetings of the committee of the MBAs, we are submitting our package for the proposed Graduate Certificate in Science and Technology Commercialization. This will go next to the Senate Graduate Studies Committee. Attached is the revised proposal.
>
> Could you please confirm receipt and approval that we proceed to present this at the Senate Graduate Studies Committee meeting in May?
>
> Regards,
> Elicia
>
> Elicia Maine, Ph.D.,
> Academic Director, Management of Technology MBA,
> Associate Professor, Technology Management & Strategy,
> Beedie School of Business, Simon Fraser University,
> Segal Building, 500 Granville Street, Vancouver, BC,
> Canada, V6C 1W6
> http://business.sfu.ca/mot/
> http://www.advancedmaterialscommercialization.com
> http://sfubionano.wordpress.com/

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Associate Professor of Management
Academic Chair, MBA Program
Beedie School of Business
Simon Fraser University
500 Granville Street, Vancouver, B.C.
Phone: 778-782-7827
Fax: 778-782-5122

Sharan Minhas

Subject: FW: Congratulations. The certificate looks very exciting and I'm sure the students will find it stimulating/ Wexler

From: Mark Wexler [mailto:wexler@sfu.ca]
Sent: April-16-14 3:56 PM
To: 'Elicia Maine'
Cc: 'Jan Simon'; 'David Hannah'
Subject: Congratulations. The certificate looks very exciting and I'm sure the students will find it stimulating/ Wexler

Dear Elicia,
Thank you for your email message (see below). I have both received and approved the proposed Graduate Certificate in Science and Technology Commercialization.

Congratulations. The certificate looks very exciting and I'm sure the students will find it stimulating.

Please call me, even after I leave my post, in case you have need of my assistance.

All the best.
Mark...

Mark N. Wexler PhD
Associate Dean Graduate Programs
University Professor of Business Ethics & Management
Beedie School of Business/Simon Fraser University
500 Granville Street, Office 3520
Vancouver, British Columbia
Canada V6C 1W6

From: Elicia Maine [mailto:emaine@sfu.ca]
Sent: April-16-14 3:47 PM
To: 'Mark Wexler'
Cc: 'Jan Simon'; 'David Hannah'
Subject: Graduate Certificate in Science and Technology Commercialization

Hello Mark, Jan and Dave,

As per our earlier discussions, in meetings of the committee of the MBAs, we are submitting our package for the proposed Graduate Certificate in Science and Technology Commercialization. This will go next to the Senate Graduate Studies Committee. Attached is the revised proposal.

Could you please confirm receipt and approval that we proceed to present this at the Senate Graduate Studies Committee meeting in May?

Regards,
Elicia

Elicia Maine, Ph.D.,
Academic Director, Management of Technology MBA,
Associate Professor, Technology Management & Strategy,
Beedie School of Business, Simon Fraser University,
Segal Building, 500 Granville Street, Vancouver, BC,
Canada, V6C 1W6
http://business.sfu.ca/mot/
http://www.advancedmaterialscommercialization.com
http://sfubionano.wordpress.com/

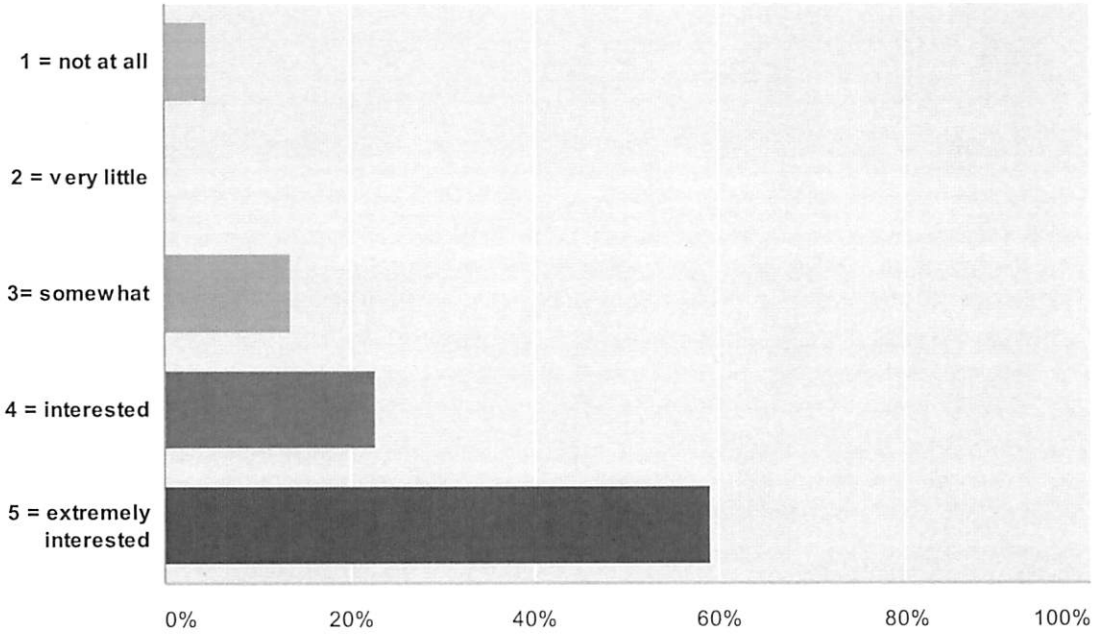
Q1 Please indicate your faculty and program of study.

Answered: 22 Skipped: 1

#	Responses	Date
1	M.Sc. Compuer Science	2/23/2014 7:31 PM
2	Master of Computing Science	2/23/2014 3:49 PM
3	Computing Science, Computer Science	2/23/2014 11:42 AM
4	Chemistry - MSc	2/22/2014 9:43 PM
5	Faculty of Applied Science - Computing Science	2/22/2014 4:08 PM
6	M.Sc. in Computer Science School of Computing Science	2/21/2014 10:45 PM
7	Ph.D. in Mechatronic Systems Engineering Faculty of Applied Sciences	2/21/2014 9:15 PM
8	Applied Science - MSE	2/21/2014 6:10 PM
9	Applied Science, Computing Science	2/21/2014 5:25 PM
10	Computing Science at SFU	2/21/2014 5:01 PM
11	School of Computing Science, PhD	2/21/2014 5:00 PM
12	Computing Science	2/21/2014 4:36 PM
13	School of Computer Science, PHD	2/21/2014 4:36 PM
14	Computing Science. Thesised-based Master	2/21/2014 4:31 PM
15	computer science	2/21/2014 4:04 PM
16	Computing Science	2/21/2014 3:49 PM
17	mechatronics	2/21/2014 3:46 PM
18	MSE	2/21/2014 3:40 PM
19	Computing Science - M.Sc	2/21/2014 3:34 PM
20	applied sciences, computing science	2/21/2014 3:14 PM
21	FAS. Master of Science in Computing Science. Course-based program.	2/21/2014 2:41 PM
22	Applied Sciences MSc Computing Science	2/21/2014 2:39 PM

Q2 Are you interested in learning more about how to take science and technology inventions from the lab to the marketplace?

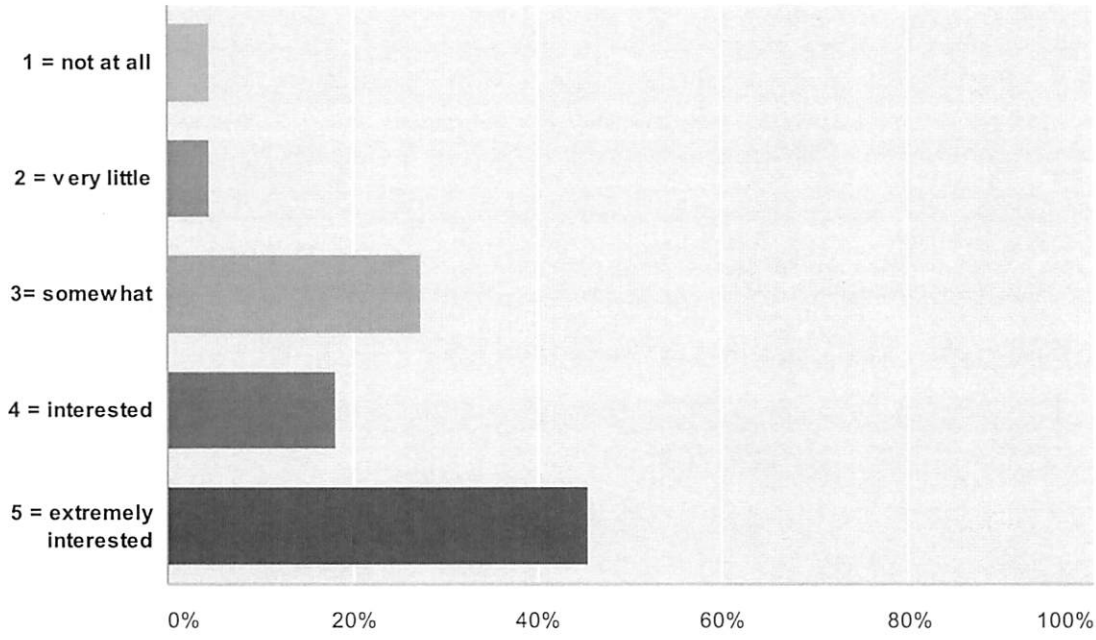
Answered: 22 Skipped: 1



Answer Choices	Responses	
1 = not at all	4.55%	1
2 = very little	0%	0
3= somewhat	13.64%	3
4 = interested	22.73%	5
5 = extremely interested	59.09%	13
Total		22

Q3 Once you have finished all coursework required for your graduate degree, would you be interested in taking a 4 course graduate certificate in technology commercialization offered part-time over one year? The assignments for the courses in this graduate certificate would involve the opportunity assessment, business model development, and marketing around taking a technology from your lab to the marketplace, either through licensing or product development.

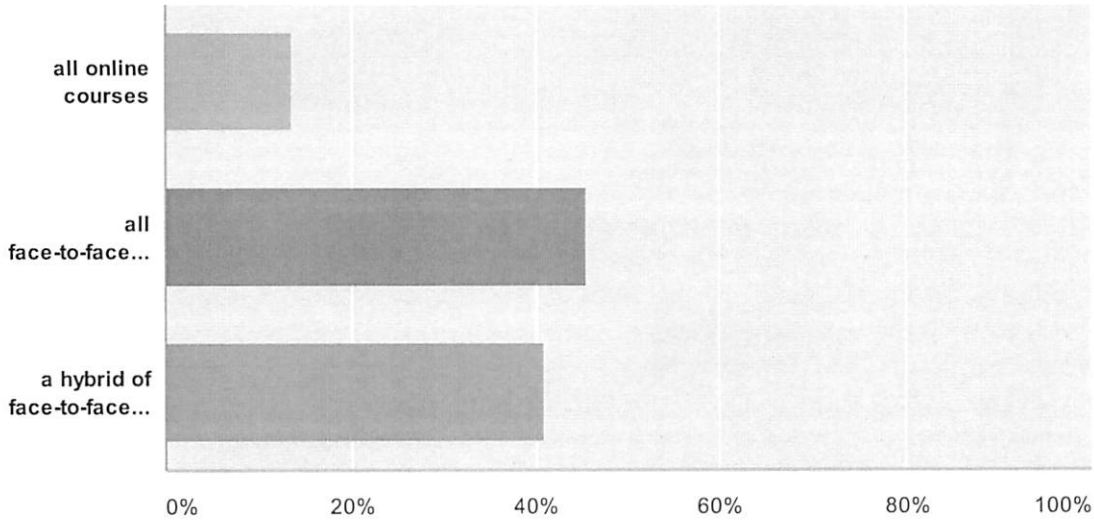
Answered: 22 Skipped: 1



Answer Choices	Responses	
1 = not at all	4.55%	1
2 = very little	4.55%	1
3= somewhat	27.27%	6
4 = interested	18.18%	4
5 = extremely interested	45.45%	10
Total		22

Q4 Would you prefer face-to-face courses at the SFU Graduate School of Business (500 Granville Street, Vancouver), online courses, or a hybrid of face-to-face and online courses?

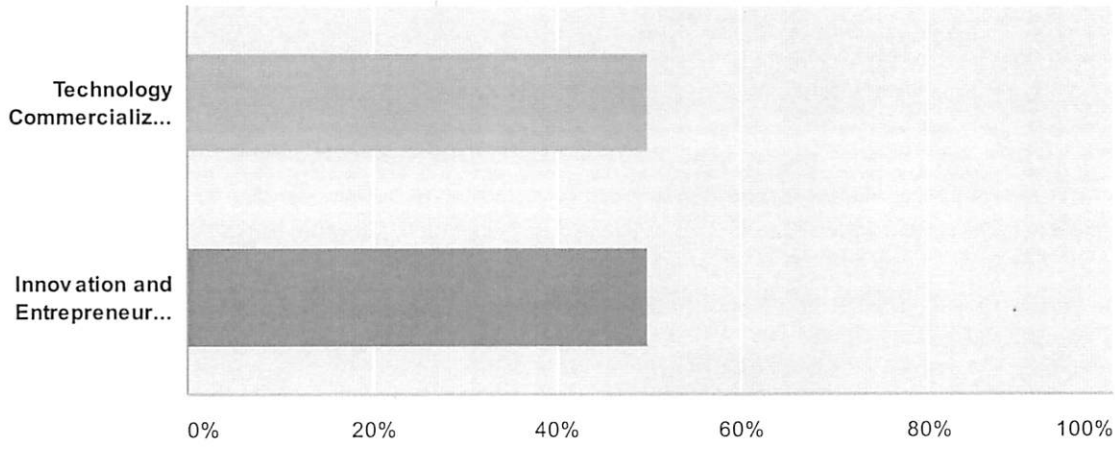
Answered: 22 Skipped: 1



Answer Choices	Responses	
all online courses	13.64%	3
all face-to-face courses	45.45%	10
a hybrid of face-to-face and online courses	40.91%	9
Total		22

Q5 Would you prefer the title of the certificate (to be shown on your transcript) to be Graduate Certificate in Technology Commercialization or Graduate Certificate in Innovation and Entrepreneurship?

Answered: 22 Skipped: 1



Answer Choices	Responses	
Technology Commercialization	50%	11
Innovation and Entrepreneurship	50%	11
Total		22

Q6 Additional comments:

Answered: 5 Skipped: 18

#	Responses	Date
1	Tuition fees for the proposed program should be affordable to graduate students, given that most of them have low income and are having some sort of financial support through research and teaching assistantships.	2/22/2014 4:08 PM
2	This is wonderful initiative, I fully support it. The certificate program will have a greater impact if a business-practicum course can also be included to complement the 2 classroom courses. Also, visits to some local technology start-ups could be included.	2/21/2014 9:15 PM
3	Such a great idea. I graduated from computing science in 2012 and started my business. I wish I could take the course :) Please let me know if I can help with the program. Maryam Sadeghi, Digital Health Hub, SFU	2/21/2014 5:01 PM
4	I don't have a strong preference between the face-to-face or hybrid option.	2/21/2014 4:36 PM
5	I prefer face to face over online courses, because of the value of educational interactions with professors. For me, taking online courses to me would be like reading a book on the subject, which would be less interesting for me.	2/21/2014 4:04 PM

SFU | BEEDIE SCHOOL OF BUSINESS
SIMON FRASER UNIVERSITY

Graduate Certificate in Science & Technology Commercialization

BUS 790: LAB TO MARKET

Instructor: Elicia Maine
Office Phone: 778-782-5260
Email: emaine@sfu.ca

Semester: Spring 2015
LMS: TBA

COURSE DESCRIPTION

This course outlines challenges and opportunities in the commercialization of science. Innovation management frameworks are introduced and applied to articulate value propositions, assess viability, and manage resources in the commercialization of science. The students will apply these frameworks to an invention within their own lab or a related interest.

OBJECTIVES

- Define a value proposition
- Assess the viability of an invention
- Create a technology roadmap, mapping technology objectives to market opportunities
- Assess the advantages and disadvantages of the market for technology versus the product market
- Recognize disruptive technology opportunities

BOOK AND MATERIALS

Maine, E.M.A. and Ashby, M.F. (2002), "Succeeding with New Materials"

Cases TBA

LEARNING AND ASSESSMENT

Assessment summary

Evaluation in the course will be based on a combination of group and individual work.

Individual	Participation	20%
	Final Project	60%
Group	Group Project	20%
	Total	100%

Academic Honesty

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- Translating a work from one language to another without complete and proper citation.
- Cheating
- Impersonation (having someone else write your exam)
- Submitting false records or information (forged medical notes)
- Stealing or destroying the work of another student
- Unauthorized or inappropriate use of computers, calculators and other forms of technology in course work, assignments or examinations.

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For more information you will find the SFU policy on Academic Honesty at:
http://www.sfu.ca/policies/gazette/student.html

About the course instructor

Elicia Maine's research interests are in technological innovation and science & technology entrepreneurship. She is most interested in understanding the formation and growth of science-based businesses. Specifically, she studies the commercialization strategy, business models, entrepreneurial decision-making, and knowledge integration practices of entrepreneurs and ventures in the advanced materials, nanomaterials, fuel cell, biotechnology, and nano-biotechnology sectors. Along with her international group of collaborators, Dr. Maine is active in the Advanced Materials Commercialization Research Collaboration and the Global Bio-Nano research group.

Dr. Maine has published in leading technology management journals, such as *Research Policy, R&D Management, and Technovation*. To reach scientist-entrepreneurs on their own turf, she also publishes her technology innovation research in top science and technology journals, including *Nature Nanotechnology* and *Materials & Design*. Dr. Maine has presented her research at the American Association for the Advancement of Science (AAAS) and at the Academy of Management (AOM). She has also developed an investment methodology for materials, a strategic tool used to assist seed capital firms in assessing early stage material innovations, and co-authored a manual on this topic: Succeeding with New Materials, a Comprehensive Guide for Assessing Market Potential.

Before academia, Elicia worked in industry as a strategic consultant in Canada, the United States, and Austria.

SFU | BEEDIE SCHOOL OF BUSINESS
SIMON FRASER UNIVERSITY

Graduate Certificate in Science & Technology Commercialization

BUS 791: OPPORTUNITY IDENTIFICATION & ASSESSMENT

Instructor: Collin Collins/Sarah Lubik
Office Phone:
Email:

Semester: Spring 2015
LMS: TBA

COURSE DESCRIPTION

This course outlines the process for opportunity identification and assessment for a scientific invention. Students will learn frameworks for identifying customers, prioritizing target markets, customer segmentation, technology adoption, product development and product/service pricing. Students will define value propositions for an invention within their own lab or a related interest and will apply these marketing frameworks to commercialize their technology.

OBJECTIVES

- Understanding your potential customers
- Determining market prioritization
- Market segmentation
- Analysing co-creators, adoption and diffusion
- Defining the value proposition (problems solved; minimum viable product/concept; early validation)
- Determining product development process
- Deciding on product/service pricing

BOOK AND MATERIALS

Cases TBA

LEARNING AND ASSESSMENT

Assessment summary

Evaluation in the course will be based on a combination of group and individual work.

Individual	Participation	20%
	Final Project	60%
Group	Group Project	20%
	Total	100%

Academic Honesty

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http://www.sfu.ca/policies/gazette/student.html

About the course instructors

An Associate Professor of Marketing and former Associate Dean, Dr. Colleen Collins is interested in how customers and firms make product decisions – especially for new products and technology. Her research examines the influence of brand names and entrepreneurial marketing efforts on high tech product purchases and exporting decisions.

Dr. Collins teaches Marketing of High Tech Goods and Services in the MOT MBA, Consumer Behaviour and Marketing Research Methods. The recipient of a 1999 TD Canada Trust Excellence in Teaching Award, Colleen always aspired to be a teacher and completed her PhD at the University of Alberta. Prior to that, she was (former) Alberta Premier Peter Lougheed's research assistant.

Sarah Lubik is currently focused on stimulating and supporting university-based entrepreneurship with a focus on interdisciplinary entrepreneurship and innovation. In her research, she is particularly interested in early-stage strategy formation, partnerships, market selection, innovation ecosystems and incubation.

Prior to joining the Beedie School of Business, Dr. Lubik worked in the Centre for Strategy and Performance at the Institute for Manufacturing at the University of Cambridge. She has also worked as a business coach, specializing in market analysis, and project manager and coordinator on a number of

international European projects aimed at supporting start-up firms through incubation. She is also actively involved in entrepreneurship, as the Marketing Director of Lungfish Dive Systems.

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SIMON FRASER UNIVERSITY

Graduate Certificate in Science & Technology Commercialization

BUS 792: Financial Literacy for Entrepreneurs

Instructor: Ian Hand/Jan Simon	Semester: Summer 2015
Office Phone:	LMS: TBA
Email:	

COURSE DESCRIPTION

This course will allow students to develop proficiency in performing financial calculations and in reading and interpreting financial statements. Students will choose a public corporation of interest and will interpret the information found in their annual financial statements.

OBJECTIVES

- Proficiency in key financial calculations, including net present value, discounted case flow, and terminal value
- Proficiency in reading and interpreting financial statements, including the balance sheet, income statement and cash flow.
- Ability to glean strategic information and trends from corporate annual reports

BOOK AND MATERIALS

Cases TBA

LEARNING AND ASSESSMENT

Assessment summary

Evaluation in the course will be based on a combination of group and individual work.

Individual	Participation	20%
	Final Project	60%
Group	Group Project	20%
	Total	100%

Academic Honesty

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About the course instructors

Ian Hand is the managing director for the VentureLabs® multi-institutional technology accelerator partnership, associate director of Simon Fraser University's Innovation Office and a champion for innovation, entrepreneurship and business incubation in BC. As a repeat entrepreneur, investor, director and advisor to technology businesses, Ian has worked with technology firms around the world in the communications, digital media, health technologies, advanced materials and energy sectors.

He served as a managing partner at two private investment firms with responsibilities for investments, mergers and acquisitions, and divestitures, structuring more than $750 million in equity and debt financings. As an adjunct professor, Ian teaches entrepreneurship, corporate and applied finance and other topics at leading Universities across BC, Canada and internationally. He is a member of the Chartered Professional Accountants of BC, the Institute of Corporate Directors, the Canadian Association of Business Incubation and the National Business Incubator Association.

Jan Simon is a Senior Lecturer at Beedie School of Business at Simon Fraser University and has been an Assistant Professor at IESE Business School. In 2008 Jan held a Visiting Scholarship at the London School

of Economics and Political Science.

He teaches Investments, Capital Markets, Corporate Finance, Mergers and Acquisitions, Ethics and Finance, Financial Management, Markets and Managers, Entrepreneurial Finance and Entrepreneurship at graduate level (MBA, EMBA, GEMBA, AMP and MOT). Jan also teaches senior executives in custom programs, this has included Anglo American, BMW, DNV, IFF, Rabobank, Santander, and Teleflex; as well as open enrollment programs such as Finance for Non-Specialists and Global Finance and Strategy for Senior Executives. Jan has taught executive level courses at ESCP-UAP, CEIBS, IESE, INALDE, INSEAD, IPADE, Lagos Business School, Nile University, Reykjavik University, SFU-Beedie, Thunderbird Management School, UCLA-Anderson and Vlerick. At Canada's Directors Education Program he delivers the module on Shareholder Engagement. He delivers courses in English, Spanish, Dutch and French.

From 2006-2011 he was a member of IESE's MBA committee and an Academic Director of the MBA Program. Jan has also been Academic Director for several custom programs. He is on the Dean's Roll for Excellence in Teaching.

Before joining IESE, Jan worked in investment banking. He was an Executive Director for Goldman Sachs, heading the pan-European continental sales trading desk. Prior to that, he was Vice-President and co-head of Salomon Brother's emerging markets trading desk. He also served as a Director of Merrill Lynch's hedge funds advisors group.

Jan earned his LLB and LLM from the Katholieke Universiteit of Leuven, Belgium and his MBA from IESE Business School. He holds a postgraduate degree in investment advice from EHSAL, Belgium, and has a Ph.D. (Finance) from the University of Essex, U.K. His research covers networks in the investment world and their influence on systemic risk.

He served the first battalion Para-Commando as well as NATO's Special Intervention Forces. He holds both Commando A and Parachutist A military certificates

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SIMON FRASER UNIVERSITY

Graduate Certificate in Science & Technology Commercialization

BUS 793: Business Models

Instructor: Sarah Lubik / Jan Kietzmann / Terry Beech Office Phone: Email:	Semester: Summer 2015 LMS: TBA

COURSE DESCRIPTION

This course will introduce students to alternative business models and commercialization strategies. Students will develop alternate business models for commercializing their inventions or a related technology. By the end of the course they will be able to recognize the key aspects and considerations of a business model, including the value proposition, positioning, cost structure, partnership strategies and method of value capture. They will also discuss the advantages and constraints around pivoting.

OBJECTIVES

- Discussion and analysis of business model frameworks and existing science and technology business models
- Introduction to method of capturing value, positioning, and pivoting
- Application of business model frameworks to students' own invention / technology interests
- Analysis of key resources, key activities , and cost structure of proposed venture
- Competitor analysis
- Understanding the role of key partners and channels
- Understanding the function and trade-offs of various types of prototype development
- Validation of the market and the business model for each student's commercialization idea

BOOK AND MATERIALS

Cases TBA

LEARNING AND ASSESSMENT

Assessment summary

Evaluation in the course will be based on a combination of group and individual work.

Individual	Participation	20%
	Final Project	60%
Group	Group Project	20%
	Total	100%

Academic Honesty

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About the course instructors

Sarah Lubik is currently focused on stimulating and supporting university-based entrepreneurship with a focus on interdisciplinary entrepreneurship and innovation. In her research, she is particularly interested in early-stage strategy formation, partnerships, market selection, innovation ecosystems and incubation.

Prior to joining the Beedie School of Business, Dr. Lubik worked in the Centre for Strategy and Performance at the Institute for Manufacturing at the University of Cambridge. She has also worked as a business coach, specializing in market analysis, and project manager and coordinator on a number of international European projects aimed at supporting start-up firms through incubation. She is also actively involved in entrepreneurship, as the Marketing Director of Lungfish Dive Systems.

Jan Kietzmann received his PhD in 2007 from the London School of Economics and joined the Beedie School of Business at SFU in 2008.

Jan's research interests involve the intersection of mobility of work and wireless computing. Of particular interest are "smart" technologies such as mobile Radio-Frequency Identification (RFID) that

surpass the basic affordances of mobile telephony.

As objects gain an increasingly loud and clear voice in organizational information flows, Jan aims to understand the changing "role of the artifact" as well as the transformation of the individual and the relationships of the mobile worker, his or her colleagues, superiors and customers.

Jan further studies the participatory innovation processes that connect organizations with the mobile communities that form their future target audiences, both users and customers.

Jan, who has a passionate interest in teaching, now teaches Innovation and Entrepreneurship at the Surrey campus, where he likes to incorporate emerging technological inventions and innovations into the classroom experience.

Terry Beech (BBA '06 Business & Economics) is currently CEO of Hiretheworld.com. Terry combines his passion for business and education by teaching Entrepreneurship at SFU and co-wrote a national strategy for High Growth Entrepreneurship in Canada. An active community volunteer and a past Action Canada fellow, he has been named a top 30 under 30 Canadian Leader by Maclean's Magazine and is a recipient of the SFU Alumni Association's Outstanding Student Leadership Award and a Volunteer Vancouver award. He has lived in Asia and Europe, and was Canada's youngest ever elected representative at the age of 18. Terry holds an MBA from Oxford University and an Economics and Business Degree from SFU.

SFU | BEEDIE SCHOOL OF BUSINESS
SIMON FRASER UNIVERSITY

Graduate Certificate in Science & Technology Commercialization

BUS 794: LEADERSHIP & MANAGING TEAMS

Instructor: Gary Wagenheim
Office Phone:
Email: wagenhei@sfu.ca

Semester: Fall 2015
LMS: TBA

COURSE DESCRIPTION & OBJECTIVES

Students will be provided an opportunity to develop and improve their managerial competencies for effectively organizing, motivating and leading organizations. The major goal of the course is to assist students in developing and balancing critical management competencies at the individual, interpersonal, team, and organizational level. The basic learning objectives are to assist students in developing:

- self-awareness and the ability to evaluate their management competencies
- an understanding of fundamental management concepts and roles
- insights into the dilemmas, issues, and problems involved in management
- the ability to apply their managerial competencies in "real world" organizations
  a reflection-in-action and life-long learning practice

A variety of learning methodologies including lecture, self-assessment instruments, role-plays, experiential activities, and small group work will be incorporated into the class. Bandura's Social Learning Theory and Kolb's Experiential Learning model will be utilized providing an opportunity for students to assess their current management skills level, learn guiding concepts and theories, develop critical analysis skills, practice management skills, apply skills in a life-setting, and develop a reflection-in-action practice to ensure lifelong learning.

Since this course is a management skills practicum you will be expected to be involved. Participation is critical to your learning and the overall success of the class. Be prepared to speak up, get involved, and engage in learning activities. *This is an intensive course with little extra time between sessions so please read all assigned material and prepare self-assessments prior to the course.* Then come to class prepared to discuss, question, and disagree. The professor and fellow students will challenge you.

Self-assessments: Please consult the schedule below to determine when each self-assessment in the Whetten and Cameron text will be addressed. Please prepare self-assessments ahead of time and bring your results to class. You can't learn if you are not here; attendance is mandatory. Students are expected to comply with all Simon Fraser University regulations regarding student code of honor and conduct.

BOOK AND MATERIALS

Course Texts: Whetten, D. & Cameron, K. (2011). *Developing Management Skills* (8th edition). Prentice Hall, Upper Saddle River, NJ.

Goleman, D. (1996). "What makes a leader?"
"Bob Knowlton" case
"Donna Dubinsky and Apple Computer (A)"

LEARNING AND ASSESSMENT

Assessment summary

Evaluation in the course will be based on a combination of group and individual work.

Individual	Individual Leadership Paper	70%
Group	Group Assignment	30%
	Total	100%

COURSE SCHEDULE

Class 1 Sept. 4 (pm) Leadership, Self-Awareness and Stress Management

Skill Assessments: *(complete these before the readings; bring results of self-assessments to class):*
PAMS (W&C, pp. 24-28; Step 1: self-assessment only; *you do not have to complete Step 2 with associates*
Emotional intelligence assessment (W&C, pp. 47-48)
Locus of control scale (W&C, pp. 52-54)
Tolerance of ambiguity (W&C, pp. 54-55)
Stress management assessment (W&C, pp. 106-107)
Time management (W&C, pp. 107-108)
Type A personality inventory (W&C, pp. 108-109)
Social readjustment rating scale (W&C, pp. 109-111)
Sources of personal stress (W&C, p. 111)

Readings: W&C. Introduction (pp. 1-23)
W&C. Ch. 1. Developing Self-Awareness (pp. 44-83)
W&C. Ch. 2. Managing Personal Stress (pp. 105-146)
Goleman, D. (1996). "What makes a leader?" [Binder]

Class 2 Sept. 5 (am) Conflict

Skill Assessments:
Managing Interpersonal Conflict (W&C, pp. 374-375)
Strategies for Handling Conflict (W&C, pp. 375)

Readings: W&C, Ch. 7. Managing Conflict (pp. 373-404)
"Bob Knowlton" case [Binder]

Delegating and Empowering

Skill Assessments:
Effective Empowerment and Delegation (W&C, pp. 440-441)

Readings: W&C, Ch. 8. Empowering and Delegating (pp. 439-473)

Class 3 Sept. 5 (pm) Communication

Skill Assessments:
Communicating supportively (W&C, pp. 234-235)
Communicating styles (W&C, pp. 235-237)

Readings: W&C Ch. 4. Building relationships by communicating supportively (pp.232-265)

Skill Analysis: "Find Somebody Else" (W&C, pp. 266-267)

Class 4 Sept 6 (am) Teams and Teamwork

Skill Assessments:
Team Development Behaviors (W&C, pp. 490-491)
Diagnosing the Need for Team Building (W&C, pp. 491-492)

Readings: W&C Ch. 9. Building Effective Teams and Teamwork (pp. 489-518)

Class 5 Sept 6 (pm) Power and Influence

Skill Assessments:
Gaining Power and Influence (W&C, pp. 280-281)
Using Influence Strategies (W&C, pp. 281-282)

Readings: W&C Ch. 5. Gaining Power and Influence (pp. 279-309)
"Donna Dubinsky at Apple Computer (A)"

COMPREHENSIVE LEADERSHIP PAPER (70%)

This assignment consists of an individual paper relating your experiences in the class, experiential exercises, self-assessment instruments, and teams. This paper is an opportunity to develop a leadership style that is correct for you. You should delineate and discuss why certain concepts and theories are important to you regarding: self-awareness and personal growth, leadership, interpersonal skills, and group skills. This paper should relate why certain theories, methods, and behaviors are effective, by using personal class experiences, selected readings from the text and articles, and personal life/work experiences. Please limit examples from outside the classroom since I do not know the circumstances and was not able to observe your behavior.

While your statement of significant personal learning may be somewhat general and abstract, I expect you to support it with concrete examples from class and your study group. You may find it valuable to limit your paper to two or three themes as identified by course topics. Possibly stating your learning experience as a theory then building a case, e.g., my role in the group, my hidden agenda, my learning edge in this course, my feelings toward other members and how it affects my productivity, how I communicate, my group/class contribution, or analysis of feedback I received. Please do not simply recount various experiential exercises or classes and how they were conducted -- rather find a common theme from your reactions, feelings, or behaviors, which will help you gain insight about your leadership. Clarifying and applying your learning will help develop your understanding and contribute to your personal growth. Integration of theory to what is personally effective will help you gain the knowledge necessary to analyze work situations and be an effective leader.

Use this opportunity to crystallize your ideas about leadership. Please be honest and creative in taking a serious look at yourself. Allow yourself the opportunity to grow by formulating a work and life leadership philosophy.

Papers should be 10-page minimum and 15-page maximum (double-spaced, 1" margins, 12-point Times New Roman font).

Papers will be graded according to how thoroughly it addresses the student's personal leadership style. I will adhere to strict confidentiality regarding the content of students' papers.

TEAM ASSIGNMENT (30%)

This group assignment is an opportunity to analyze and evaluate your MOT study team's experience using the theories, concepts and models learned thus far in the course. By applying and integrating theory to what is personally important and effective, you will gain the knowledge necessary to analyze work situations and be an effective team leader.

In your analysis, please use specific examples from personal experiences in the retreat team exercises, class sessions, and exercises as well as team meetings to illustrate key points. Your analysis should address the following questions:

1. What stage of development is our team at? (forming—conforming—storming—performing)
2. What roles have different people assumed in the team? Does this vary depending on what we are doing?
3. How are we doing in terms of balanced participation?
    a. Who are the high participators? Who are the low participators?
    b. Who talks to whom? Who responds to whom? Are there interaction patterns that consistently exclude certain people?
    c. Have there been any shifts in nature of participation? (e.g., high to low, low to high) If yes, why have these happened?
    d. How are silent people treated? Is their silence taken by others to mean consent? Disagreement? Disinterest? Why have people been silent?
4. How do we deal with conflict?
    a. What issues generate conflict?
    b. How do we resolve conflicts?
5. How effective are we as a team?
    a. What is contributing to our team's effectiveness?
    b. What is impairing our team's effectiveness?
6. What changes are needed to improve the effectiveness of our team? Develop an Action Plan for Becoming a High Performing Team

This group assignment is worth 30% of your final grade for Bus 761. Assignments will be graded using the following criteria:

- Quality and thoroughness of analysis.
- Identification of relevant team development, team roles, and team leadership issues.
- Creative and original thinking, and synthesis of ideas
- Accurate and effective integration of theory and practice.
- Clear focus, organization, writing, and presentation.

Papers are to be typed in Times Roman 12-point font double-spaced with 1" borders with a 10-page maximum limit.

Academic Honesty

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About the course instructor

Gary Wagenheim is an adjunct professor in management and organization studies. He has extensive experience teaching international courses in organizational behaviour, leadership, and interpersonal skills. He has taught throughout the US, Canada, Singapore, Brazil, China, Germany, Taiwan, India, and Finland. Gary teaches Leadership.

SFU | BEEDIE SCHOOL OF BUSINESS
SIMON FRASER UNIVERSITY

Graduate Certificate in Science & Technology Commercialization

BUS 795: FINANCING THE NEW VENTURE

Instructor: Jan Simon / Ian Hand / Malcolm Kendall	Semester: Fall 2015
Office Phone:	LMS: TBA
Email:	

COURSE DESCRIPTION

This course will introduce students to the sources of capital available to them for taking their invention to market, including angel investors, venture capital, non-dilutive financing, and public markets. Students will learn the benefits and pitfalls of various types of deal structure. Students will create financial statements for their own technology commercialization, and will "pitch" their ideas at the end of the course.

OBJECTIVES

- Discussion and examples of using different sources of capital for financing a venture
- Understanding of the key aspects of financing deal structure
- Students will become proficient at creating financial statements to translate their commercialization strategy into an initial business plan
- Developing the ability and confidence to pitch technology commercialization plan to investors

BOOK AND MATERIALS

Cases TBA

LEARNING AND ASSESSMENT

Assessment summary

Evaluation in the course will be based on a combination of group and individual work.

Individual	Participation	20%
	Final Project	60%
Group	Group Project	20%
	Total	100%

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About the course instructors

Jan Simon is a Senior Lecturer at Beedie School of Business at Simon Fraser University and has been an Assistant Professor at IESE Business School. In 2008 Jan held a Visiting Scholarship at the London School of Economics and Political Science.

He teaches Investments, Capital Markets, Corporate Finance, Mergers and Acquisitions, Ethics and Finance, Financial Management, Markets and Managers, Entrepreneurial Finance and Entrepreneurship at graduate level (MBA, EMBA, GEMBA, AMP and MOT). Jan also teaches senior executives in custom programs, this has included Anglo American, BMW, DNV, IFF, Rabobank, Santander, and Teleflex; as well as open enrollment programs such as Finance for Non-Specialists and Global Finance and Strategy for Senior Executives. Jan has taught executive level courses at ESCP-UAP, CEIBS, IESE, INALDE, INSEAD, IPADE, Lagos Business School, Nile University, Reykjavik University, SFU-Beedie, Thunderbird Management School, UCLA-Anderson and Vlerick. At Canada's Directors Education Program he delivers the module on Shareholder Engagement. He delivers courses in English, Spanish, Dutch and French.

From 2006-2011 he was a member of IESE's MBA committee and an Academic Director of the MBA Program. Jan has also been Academic Director for several custom programs. He is on the Dean's Roll for Excellence in Teaching.

Before joining IESE, Jan worked in investment banking. He was an Executive Director for Goldman Sachs, heading the pan-European continental sales trading desk. Prior to that, he was Vice-President and co-head of Salomon Brother's emerging markets trading desk. He also served as a Director of Merrill Lynch's hedge funds advisors group.

Jan earned his LLB and LLM from the Katholieke Universiteit of Leuven, Belgium and his MBA from IESE Business School. He holds a postgraduate degree in investment advice from EHSAL, Belgium, and has a Ph.D. (Finance) from the University of Essex, U.K. His research covers networks in the investment world and their influence on systemic risk.

He served the first battalion Para-Commando as well as NATO's Special Intervention Forces. He holds both Commando A and Parachutist A military certificates.

Ian Hand is the managing director for the VentureLabs® multi-institutional technology accelerator partnership, associate director of Simon Fraser University's Innovation Office and a champion for innovation, entrepreneurship and business incubation in BC. As a repeat entrepreneur, investor, director and advisor to technology businesses, Ian has worked with technology firms around the world in the communications, digital media, health technologies, advanced materials and energy sectors.

He served as a managing partner at two private investment firms with responsibilities for investments, mergers and acquisitions, and divestitures, structuring more than $750 million in equity and debt financings. As an adjunct professor, Ian teaches entrepreneurship, corporate and applied finance and other topics at leading Universities across BC, Canada and internationally. He is a member of the Chartered Professional Accountants of BC, the Institute of Corporate Directors, the Canadian Association of Business Incubation and the National Business Incubator Association.

Malcolm Kendall has over 25 years of operational management, entrepreneurial, venture capital investment and leadership experience, the majority of which has been focused on company creation and building value in technology and biotechnology companies. He is currently the CEO of Indel Therapeutics. Formerly a life science venture capitalist with MDS Capital and Intersouth Partners, he also lectures at the Segal Graduate School of business, Simon Fraser University.

SFU | BEEDIE SCHOOL OF BUSINESS
SIMON FRASER UNIVERSITY

Graduate Certificate in Science & Technology Commercialization

BUS 796: Business Plan I

Instructor: Sarah Lubik / Elicia Maine / Colleen Collins / Paul Terry / Ian Hand
Office Phone:
Email:

Semester: Summer 2015
LMS: TBA

COURSE DESCRIPTION

This course will integrate the frameworks and content of the certificate courses. Students will work one-on-one with a faculty advisor in drawing together: opportunity identification, value proposition, value creation, industry attractiveness, competitor analysis, and commercialization strategy. This is the first part of a two part course.

OBJECTIVES

- Integrate frameworks and content of courses-to-date into a coherent and compelling business plan
- Customize business plan to each student's particular invention/product or service idea
- Allow for detailed analysis of the commercialization potential of science and engineering research in university labs
- Integration across faculties and development of commercialization mentors for the student entrepreneurs

BOOK AND MATERIALS

Relevant business plans and reference material TBA

LEARNING AND ASSESSMENT

Assessment summary

Evaluation in the course will be in progress/complete assessed by the faculty instructor on the content of the business plan. For the first part of the course, emphasis will be on opportunity identification and assessment, market selection, value proposition, competitor analysis, and industry attractiveness.

Academic Honesty

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About the course instructors

Elicia Maine's research interests are in technological innovation and science & technology entrepreneurship. She is most interested in understanding the formation and growth of science-based businesses. Specifically, she studies the commercialization strategy, business models, entrepreneurial decision-making, and knowledge integration practices of entrepreneurs and ventures in the advanced materials, nanomaterials, fuel cell, biotechnology, and nano-biotechnology sectors. Along with her international group of collaborators, Dr. Maine is active in the Advanced Materials Commercialization Research Collaboration and the Global Bio-Nano research group.

Dr. Maine has published in leading technology management journals, such as *Research Policy*, *R&D Management, and Technovation*. To reach scientist-entrepreneurs on their own turf, she also publishes her technology innovation research in top science and technology journals, including *Nature Nanotechnology* and *Materials & Design*. Dr. Maine has presented her research at the American Association for the Advancement of Science (AAAS) and at the Academy of Management (AOM). She has also developed an investment methodology for materials, a strategic tool used to assist seed capital firms

in assessing early stage material innovations, and co-authored a manual on this topic: Succeeding with New Materials, a Comprehensive Guide for Assessing Market Potential.

Before academia, Elicia worked in industry as a strategic consultant in Canada, the United States, and Austria.

An Associate Professor of Marketing and former Associate Dean, Dr. Colleen Collins is interested in how customers and firms make product decisions – especially for new products and technology. Her research examines the influence of brand names and entrepreneurial marketing efforts on high tech product purchases and exporting decisions.

Dr. Collins teaches Marketing of High Tech Goods and Services in the MOT MBA, Consumer Behaviour and Marketing Research Methods. The recipient of a 1999 TD Canada Trust Excellence in Teaching Award, Colleen always aspired to be a teacher and completed her PhD at the University of Alberta. Prior to that, she was (former) Alberta Premier Peter Lougheed's research assistant.

Sarah Lubik is currently focused on stimulating and supporting university-based entrepreneurship with a focus on interdisciplinary entrepreneurship and innovation. In her research, she is particularly interested in early-stage strategy formation, partnerships, market selection, innovation ecosystems and incubation.

Prior to joining the Beedie School of Business, Dr. Lubik worked in the Centre for Strategy and Performance at the Institute for Manufacturing at the University of Cambridge. She has also worked as a business coach, specializing in market analysis, and project manager and coordinator on a number of international European projects aimed at supporting start-up firms through incubation. She is also actively involved in entrepreneurship, as the Marketing Director of Lungfish Dive Systems.

Ian Hand is the managing director for the VentureLabs® multi-institutional technology accelerator partnership, associate director of Simon Fraser University's Innovation Office and a champion for innovation, entrepreneurship and business incubation in BC. As a repeat entrepreneur, investor, director and advisor to technology businesses, Ian has worked with technology firms around the world in the communications, digital media, health technologies, advanced materials and energy sectors.

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research support agency. He was recently one of the Entrepreneurs-in-Residence at SFU Venture Labs and is currently a Partner with Magellan Angel Partners. Prior to his experience in health care and venture capital, Paul was the Chief Technical Officer and cofounder of OctigaBay Systems – a pioneer in high performance computing – which was acquired by Cray Inc, the world leader in supercomputing. He was also the cofounder and CTO of Abatis Systems, which was acquired by Redback Networks in one of the largest technology acquisitions in Canadian history. Paul's early career included senior roles at Newbridge Networks and at technology companies in the UK. Paul was awarded Canada's "Top 40 Under 40" award in 2000. He holds an MBA from the Cranfield School of Management, a marketing diploma from the Chartered Institute of Marketing, a PhD in Electrical Engineering and an honors Bachelor's degree from the University of Liverpool.

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SIMON FRASER UNIVERSITY

Graduate Certificate in Science & Technology Commercialization

BUS 797: Business Plan II

Instructor: Sarah Lubik / Elicia Maine / Colleen Collins / Paul Terry / Ian Hand	**Semester:** Fall 2015
Office Phone:	**LMS:** TBA
Email:	

COURSE DESCRIPTION

This course will integrate the frameworks and content of the certificate courses. Students will work one-on-one with a faculty advisor in drawing together: opportunity identification, value proposition, value creation, industry attractiveness, business model, financials, development plan, competitor analysis, partnership strategy, entrepreneurial team and commercialization strategy. This is the second part of a two part course.

OBJECTIVES

- Integrate frameworks and content of other courses into a coherent and compelling business plan
- Customize business plan to each student's particular invention/product or service idea
- Work one-on-one with a faculty supervisor to create a polished business plan for the venture commercializing the students product/service

BOOK AND MATERIALS

Relevant business plans and reference material TBA

LEARNING AND ASSESSMENT

Assessment summary

Evaluation in the course will be in progress/complete assessed by the faculty instructor on the content of the business plan.

Academic Honesty

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About the course instructors

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SFU | BEEDIE SCHOOL OF BUSINESS
SIMON FRASER UNIVERSITY

Graduate Certificate in Science & Technology Commercialization

BUS 797: Business Plan II

Instructor: Sarah Lubik / Elicia Maine / Colleen Collins / Paul Terry / Ian Hand
Office Phone:
Email:

Semester: Fall 2015
LMS: TBA

COURSE DESCRIPTION

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OBJECTIVES

- Integrate frameworks and content of other courses into a coherent and compelling business plan
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BOOK AND MATERIALS

Relevant business plans and reference material TBA

LEARNING AND ASSESSMENT

Assessment summary

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SFU SIMON FRASER UNIVERSITY
DEAN OF GRADUATE STUDIES

New Graduate Course Proposal Form

PROPOSED COURSE

Subject (eg. MAPH) BUS	Number (eg. 810) 790	Units (eg. 4) 2

Course Title (max 80 characters)
Lab to Market

Short Title (appears on transcripts, max 25 characters)
Lab to Market

Course Description for SFU Calendar ☐ see attached document ☐ Learning outcomes identified

Innovation management frameworks are introduced and applied to articulate value propositions, assess viability, and manage resources in the commercialization of science. The students will apply these frameworks to an invention within their own lab or a related interest.

Available Course Components: ☑ Lecture ☐ Seminar ☐ Laboratory ☐ Practicum ☐ Online ☐ _____

Grading Basis ☐ Letter grades ☑ Satisfactory/Unsatisfactory ☐ In Progress/Complete

This is a capstone course ☐ Yes ☑ No

Prerequisites (if any) ☐ see attached document (if more space is required)

☐ This proposed course is combined with an undergrad course: Course number and units: _____

Additional course requirements for graduate students ☐ See attached document (if this space is insufficient)

Campus at which course will be offered (check all that apply) ☐ Burnaby ☑ Vancouver ☐ Surrey ☐ GNW ☑ Segal building

Estimated enrolment	Date of initial offering	Course delivery (eg. 3 hrs/week for 13 weeks)
15	January 2015	3.5 hrs/week for 6 weeks

☐ Yes ☑ No Practicum work done in this class will involve children or vulnerable adults
(If the "Yes" box is checked, all students will require criminal record checks)

Justification ☐ See attached document (if more space is required)

Required course for new certificate program

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course ☐ information about their competency to teach the course is appended
Elicia Maine or Sarah Lubik

Number of additional faculty members required in order to offer this course
0

Additional space required in order to offer this course ☐ see attached document
No

Additional specialized equipment required in order to offer this course ☐ see attached document
No

Additional Library resources required (append details) ☐ Annually $_____ ☐ One-time $_____
No

PROPOSED COURSE *from first page*

Program (eg. MAPH) BUS	Number (eg. 810) 790	Units (eg. 4) 2
Course title (max 80 characters) Lab to Market		

APPROVAL SIGNATURES

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attached to this form).

The new course proposal must also be sent to the Library for a report on library resources.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Other Faculties
The signature(s) below indicate that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty	Signature of Dean or Designate	Date

Departmental Approval (non-departmentalized faculties need not sign)

Department Graduate Program Committee Mark Wexler	Signature M. M. Wexler...	Date April 15/14
Department Chair Mark Wexler	Signature M. M. Wexler...	Date April 15/14

Faculty Approval
Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Program Committee Mark Wexler	Signature M. M. Wexler...	Date April 15/14

Senate Graduate Studies Committee Approval
SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

Senate Graduate Studies Committee	Signature	Date

CONTACT

Upon approval of the course, the Office of the Dean of Graduate Studies will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

Department / School / Program	Contact name	Contact email
Beedie/Graduate Programs	Sharan Minhas	busarcrd@sfu.ca

SFU SIMON FRASER UNIVERSITY
DEAN OF GRADUATE STUDIES

New Graduate Course Proposal Form

PROPOSED COURSE

Subject (eg. MAPH)	Number (eg. 810)	Units (eg. 4)
BUS	791	2

Course Title (max 80 characters)
Opportunity Identification and Assessment

Short Title (appears on transcripts, max 25 characters)
Opportunity ID & Assess

Course Description for SFU Calendar ☐ see attached document ☐ Learning outcomes identified

Frameworks for identifying customers, prioritizing target markets, customer segmentation, technology adoption, product development and product/service pricing. Students will define value propositions for an invention within their own lab.

Available Course Components: ☑ Lecture ☐ Seminar ☐ Laboratory ☐ Practicum ☐ Online ☐ _____

Grading Basis ☐ Letter grades ☑ Satisfactory/Unsatisfactory ☐ In Progress/Complete | This is a capstone course ☐ Yes ☑ No

Prerequisites (if any) ☐ see attached document (if more space is required)

☐ This proposed course is combined with an undergrad course: Course number and units: _____

Additional course requirements for graduate students ☐ See attached document (if this space is insufficient)

Campus at which course will be offered (check all that apply) ☐ Burnaby ☑ Vancouver ☐ Surrey ☐ GNW ☑ Segal Building

Estimated enrolment	Date of initial offering	Course delivery (eg. 3 hrs/week for 13 weeks)
15	January 2015	3.5 hours/week for 6 weeks

☐ Yes ☑ No Practicum work done in this class will involve children or vulnerable adults
(If the "Yes" box is checked, all students will require criminal record checks)

Justification ☐ See attached document (if more space is required)

Required course for new certificate program

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course ☐ information about their competency to teach the course is appended
Colleen Collins or Sarah Lubik or Brent McFerran

Number of additional faculty members required in order to offer this course
0

Additional space required in order to offer this course ☐ see attached document
None

Additional specialized equipment required in order to offer this course ☐ see attached document
None

Additional Library resources required (append details) ☐ Annually $_____ ☐ One-time $_____
None

PROPOSED COURSE *from first page*

Program (eg. MAPH) BUS	Number (eg. 810) 791	Units (eg. 4) 2
Course title (max 80 characters) Opportunity Identification and Assessment		

APPROVAL SIGNATURES

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attached to this form).

The new course proposal must also be sent to the Library for a report on library resources.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Other Faculties
The signature(s) below indicate that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty	Signature of Dean or Designate	Date

Departmental Approval (non-departmentalized faculties need not sign)

Department Graduate Program Committee Mark Wexler	Signature M. M. Wexler...	Date April 15/14
Department Chair Mark Wexler	Signature M. M. Wexler...	Date April 15/14

Faculty Approval
Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Program Committee Mark Wexler	Signature M. M. Wexler...	Date April 15/14

Senate Graduate Studies Committee Approval
SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

Senate Graduate Studies Committee	Signature	Date

CONTACT

Upon approval of the course, the Office of the Dean of Graduate Studies will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

Department / School / Program	Contact name	Contact email
Beedie/Grad Programs	Sharan Minhas	busarcrd@sfu.ca

SFU SIMON FRASER UNIVERSITY
DEAN OF GRADUATE STUDIES

New Graduate Course Proposal Form

PROPOSED COURSE

Subject (eg. MAPH) BUS	Number (eg. 810) 792	Units (eg. 4) 2

Course Title (max 80 characters)
Financial Literacy for Entrepreneurs

Short Title (appears on transcripts, max 25 characters)
Fin Lit for Entrep

Course Description for SFU Calendar ☐ see attached document ☐ Learning outcomes identified

Develop proficiency in performing financial calculations and in reading and interpreting financial statements. Students will choose a public corporation of interest and will interpret the information found in their annual financial statements

Available Course Components: ☑ Lecture ☐ Seminar ☐ Laboratory ☐ Practicum ☐ Online ☐ _____

Grading Basis ☐ Letter grades ☑ Satisfactory/Unsatisfactory ☐ In Progress/Complete | This is a capstone course ☐ Yes ☑ No

Prerequisites (if any) ☐ see attached document (if more space is required)

☐ This proposed course is combined with an undergrad course: Course number and units: _____

Additional course requirements for graduate students ☐ See attached document (if this space is insufficient)

Campus at which course will be offered (check all that apply) ☐ Burnaby ☑ Vancouver ☐ Surrey ☐ GNW ☑ Segal building

Estimated enrolment	Date of initial offering	Course delivery (eg. 3 hrs/week for 13 weeks)
15	May 2015	3.5 hours/week for 6 weeks

☐ Yes ☑ No Practicum work done in this class will involve children or vulnerable adults
(If the "Yes" box is checked, all students will require criminal record checks)

Justification ☐ See attached document (if more space is required)

Required for new certificate program

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course ☐ information about their competency to teach the course is appended
Ian Hand or Jan Simon

Number of additional faculty members required in order to offer this course
0

Additional space required in order to offer this course ☐ see attached document
None

Additional specialized equipment required in order to offer this course ☐ see attached document
None

Additional Library resources required (append details) ☐ Annually $_____ ☐ One-time $_____
None

PROPOSED COURSE *from first page*

Program (eg. MAPH) BUS	Number (eg. 810) 792	Units (eg. 4) 2
Course title (max 80 characters) Financial Literacy for Entrepreneurs		

APPROVAL SIGNATURES

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attached to this form).

The new course proposal must also be sent to the Library for a report on library resources.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Other Faculties
The signature(s) below indicate that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty	Signature of Dean or Designate	Date

Departmental Approval (non-departmentalized faculties need not sign)

Department Graduate Program Committee Mark Wexler	Signature M. N. Wexler...	Date Apr. 15/14
Department Chair Mark Wexler	Signature M. N. Wexler...	Date Apr. 15/14

Faculty Approval
Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Program Committee Mark Wexler	Signature M. N. Wexler...	Date Apr. 15/14.

Senate Graduate Studies Committee Approval
SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

Senate Graduate Studies Committee	Signature	Date

CONTACT

Upon approval of the course, the Office of the Dean of Graduate Studies will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

Department / School / Program	Contact name	Contact email
Beedie/Graduate Programs	Sharan Minhas	busarcrd@sfu.ca

SFU SIMON FRASER UNIVERSITY
DEAN OF GRADUATE STUDIES

New Graduate Course Proposal Form

PROPOSED COURSE

Subject (eg. MAPH) BUS	Number (eg. 810) 793	Units (eg. 4) 2

Course Title (max 80 characters)
Business Models

Short Title (appears on transcripts, max 25 characters)
Business Models

Course Description for SFU Calendar ☐ see attached document ☐ Learning outcomes identified

Develop alternate business models for commercializing an invention or a related technology. By the end of the course students will be able to recognize the key aspects and considerations of a business model.

Available Course Components: ☑ Lecture ☐ Seminar ☐ Laboratory ☐ Practicum ☐ Online ☐ _____

Grading Basis ☐ Letter grades ☑ Satisfactory/Unsatisfactory ☐ In Progress/Complete | This is a capstone course ☐ Yes ☑ No

Prerequisites (if any) ☐ see attached document (if more space is required)

☐ This proposed course is combined with an undergrad course: Course number and units: _____

Additional course requirements for graduate students ☐ See attached document (if this space is insufficient)

Campus at which course will be offered (check all that apply) ☐ Burnaby ☑ Vancouver ☐ Surrey ☐ GNW ☑ Segal building

Estimated enrolment	Date of initial offering	Course delivery (eg. 3 hrs/week for 13 weeks)
15	May 2015	3.5 hours/week for 6 weeks

☐ Yes ☑ No Practicum work done in this class will involve children or vulnerable adults
(If the "Yes" box is checked, all students will require criminal record checks)

Justification ☐ See attached document (if more space is required)

Required course for new certificate program

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course ☐ information about their competency to teach the course is appended
Sarah Lubik or Jan Kietzman or Terry Beech

Number of additional faculty members required in order to offer this course
0

Additional space required in order to offer this course ☐ see attached document
None

Additional specialized equipment required in order to offer this course ☐ see attached document
None

Additional Library resources required (append details) ☐ Annually $_____ ☐ One-time $_____
None

PROPOSED COURSE *from first page*

Program (eg. MAPH) BUS	Number (eg. 810) 793	Units (eg. 4) 2
Course title (max 80 characters) Business Models		

APPROVAL SIGNATURES

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attached to this form).

The new course proposal must also be sent to the Library for a report on library resources.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Other Faculties
The signature(s) below indicate that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty	Signature of Dean or Designate	Date

Departmental Approval (non-departmentalized faculties need not sign)

Department Graduate Program Committee Mark Wexler	Signature M. M. Wexler...	Date April 15/14
Department Chair Mark Wexler	Signature M. M. Wexler...	Date April 15/14

Faculty Approval
Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Program Committee Mark Wexler	Signature M. M. Wexler...	Date April 15/14

Senate Graduate Studies Committee Approval
SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

Senate Graduate Studies Committee	Signature	Date

CONTACT

Upon approval of the course, the Office of the Dean of Graduate Studies will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

Department / School / Program Beedie/Graduate Programs	Contact name Sharan Minhas	Contact email busarcrd@sfu.ca

SFU SIMON FRASER UNIVERSITY
DEAN OF GRADUATE STUDIES

New Graduate Course Proposal Form

PROPOSED COURSE

Subject (eg. MAPH) BUS	Number (eg. 810) 794	Units (eg. 4) 2

Course Title (max 80 characters)
Leadership and Managing Teams

Short Title (appears on transcripts, max 25 characters)
Lead & Manage Teams

Course Description for SFU Calendar ☐ see attached document ☐ Learning outcomes identified

Developing and balancing critical management competencies at the individual, interpersonal, team and organizational levels. Focus is on effective organization, motivation and leadership.

Available Course Components: ☑ Lecture ☐ Seminar ☐ Laboratory ☐ Practicum ☐ Online ☐ _____

Grading Basis ☐ Letter grades ☑ Satisfactory/Unsatisfactory ☐ In Progress/Complete | This is a capstone course ☐ Yes ☑ No

Prerequisites (if any) ☐ see attached document (if more space is required)

☐ This proposed course is combined with an undergrad course: Course number and units: _____

Additional course requirements for graduate students ☐ See attached document (if this space is insufficient)

Campus at which course will be offered (check all that apply) ☐ Burnaby ☑ Vancouver ☐ Surrey ☐ GNW ☑ Segal building

Estimated enrolment	Date of initial offering	Course delivery (eg. 3 hrs/week for 13 weeks)
15	September 2015	3.5 hours/week for 6 weeks

☐ Yes ☑ No Practicum work done in this class will involve children or vulnerable adults
(If the "Yes" box is checked, all students will require criminal record checks)

Justification ☐ See attached document (if more space is required)

Required course for new certificate program

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course ☐ information about their competency to teach the course is appended
Gary Wagenheim or Carolyn Egri or Paul Terry

Number of additional faculty members required in order to offer this course
0

Additional space required in order to offer this course ☐ see attached document
None

Additional specialized equipment required in order to offer this course ☐ see attached document
None

Additional Library resources required (append details) ☐ Annually $_____ ☐ One-time $_____
None

PROPOSED COURSE *from first page*

Program (eg. MAPH) BUS	Number (eg. 810) 794	Units (eg. 4) 2
Course title (max 80 characters) Leadership and Managing Teams		

APPROVAL SIGNATURES

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attached to this form).

The new course proposal must also be sent to the Library for a report on library resources.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Other Faculties
The signature(s) below indicate that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty	Signature of Dean or Designate	Date

Departmental Approval (non-departmentalized faculties need not sign)

Department Graduate Program Committee Mark Wexler	Signature M. M. Wexler	Date April 15/14
Department Chair Mark Wexler	Signature M. M. Wexler	Date April 15/14

Faculty Approval
Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Program Committee Mark Wexler	Signature M. M. Wexler	Date April 15/14

Senate Graduate Studies Committee Approval
SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

Senate Graduate Studies Committee	Signature	Date

CONTACT

Upon approval of the course, the Office of the Dean of Graduate Studies will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

Department / School / Program Beedie/Graduate Programs	Contact name Sharan Minhas	Contact email busarcrd@sfu.ca

SFU SIMON FRASER UNIVERSITY
DEAN OF GRADUATE STUDIES

New Graduate Course Proposal Form

PROPOSED COURSE

Subject (eg. MAPH) BUS	Number (eg. 810) 795	Units (eg. 4) 2

Course Title (max 80 characters)
Financing the New Venture

Short Title (appears on transcripts, max 25 characters)
Finance New Venture

Course Description for SFU Calendar ☐ see attached document ☐ Learning outcomes identified

Sources of capital available for taking an invention to market, including angel investors, venture capital, non-dilutive financing, and public markets. Students will create financial statements for their own technology commercialization.

Available Course Components: ☑ Lecture ☐ Seminar ☐ Laboratory ☐ Practicum ☐ Online ☐ _____

Grading Basis ☐ Letter grades ☑ Satisfactory/Unsatisfactory ☐ In Progress/Complete | This is a capstone course ☐ Yes ☑ No

Prerequisites (if any) ☐ see attached document (if more space is required)
Bus 792 Financial Literacy for Entrepreneurs

☐ This proposed course is combined with an undergrad course: Course number and units: _____

Additional course requirements for graduate students ☐ See attached document (if this space is insufficient)

Campus at which course will be offered (check all that apply) ☐ Burnaby ☑ Vancouver ☐ Surrey ☐ GNW ☑ Segal Building

Estimated enrolment	Date of initial offering	Course delivery (eg. 3 hrs/week for 13 weeks)
15	September 2015	3.5 hours/week for 6 weeks

☐ Yes ☑ No Practicum work done in this class will involve children or vulnerable adults
(If the "Yes" box is checked, all students will require criminal record checks)

Justification ☐ See attached document (if more space is required)
Required course for new certificate program

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course ☐ information about their competency to teach the course is appended
Jan Simon or Ian Hand or Malcolm kendall

Number of additional faculty members required in order to offer this course
0

Additional space required in order to offer this course ☐ see attached document
None

Additional specialized equipment required in order to offer this course ☐ see attached document
None

Additional Library resources required (append details) ☐ Annually $_____ ☐ One-time $_____
None

PROPOSED COURSE *from first page*

Program (eg. MAPH) BUS	Number (eg. 810) 795	Units (eg. 4) 2
Course title (max 80 characters) Financing the New Venture		

APPROVAL SIGNATURES

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attached to this form).

The new course proposal must also be sent to the Library for a report on library resources.

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Other Faculties
The signature(s) below indicate that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty	Signature of Dean or Designate	Date

Departmental Approval (non-departmentalized faculties need not sign)

Department Graduate Program Committee Mark Wexler	Signature M. M. Wexler	Date April 15/14
Department Chair Mark Wexler	Signature M. M. Wexler	Date April 15/14

Faculty Approval
Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Program Committee Mark Wexler	Signature M. M. Wexler	Date April 15/14

Senate Graduate Studies Committee Approval
SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

Senate Graduate Studies Committee	Signature	Date

CONTACT

Upon approval of the course, the Office of the Dean of Graduate Studies will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

Department / School / Program	Contact name	Contact email
Beedie / Graduate Programs	Sharan Minhas	busarcrd@sfu.ca

SFU SIMON FRASER UNIVERSITY
DEAN OF GRADUATE STUDIES

New Graduate Course Proposal Form

PROPOSED COURSE

Subject (eg. MAPH) BUS	Number (eg. 810) 796	Units (eg. 4) 2

Course Title (max 80 characters)
Business Plan I

Short Title (appears on transcripts, max 25 characters)
Business Plan I

Course Description for SFU Calendar ☐ see attached document ☐ Learning outcomes identified
Integrates the frameworks and content of the GCSTC courses. Students work one-on-one with a faculty advisor in drawing together: opportunity identification, value proposition, value creation, industry attractiveness, competitor analysis, and commercialization strategy. This is the first part of a two part course.

Available Course Components: ☐ Lecture ☐ Seminar ☐ Laboratory ☐ Practicum ☐ Online ☑ Project

Grading Basis ☐ Letter grades ☐ Satisfactory/Unsatisfactory ☑ In Progress/Complete | This is a capstone course ☐ Yes ☑ No

Prerequisites (if any) ☐ see attached document (if more space is required)

☐ This proposed course is combined with an undergrad course: Course number and units: _____

Additional course requirements for graduate students ☐ See attached document (if this space is insufficient)
BUS 790 Lab to Market
BUS 791 Opportunity Identification and Assessment

Campus at which course will be offered (check all that apply) ☐ Burnaby ☑ Vancouver ☐ Surrey ☐ GNW ☐ _____

Estimated enrolment	Date of initial offering	Course delivery (eg. 3 hrs/week for 13 weeks)
15	May 2015	1 hr/week for 11 weeks

☐ Yes ☑ No Practicum work done in this class will involve children or vulnerable adults
(If the "Yes" box is checked, all students will require criminal record checks)

Justification ☐ See attached document (if more space is required)
Required course for new certificate program

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course ☐ information about their competency to teach the course is appended
Sarah Lubik, Elicia Maine, Colleen Collins, Paul Terry or Ian Hand

Number of additional faculty members required in order to offer this course
0

Additional space required in order to offer this course ☐ see attached document
None

Additional specialized equipment required in order to offer this course ☐ see attached document
None

Additional Library resources required (append details) ☐ Annually $_____ ☐ One-time $_____
None

PROPOSED COURSE *from first page*

Program (eg. MAPH) BUS	Number (eg. 810) 796	Units (eg. 4) 2
Course title (max 80 characters) Business Plan I		

APPROVAL SIGNATURES

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attached to this form).

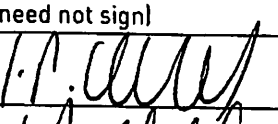
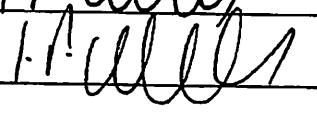
The new course proposal must also be sent to the Library for a report on library resources.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

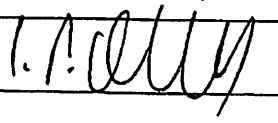
Other Faculties
The signature(s) below indicate that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty	Signature of Dean or Designate	Date

Departmental Approval (non-departmentalized faculties need not sign)

Department Graduate Program Committee Ian McCarthy	Signature 	Date 14-May-2014
Department Chair Ian McCarthy	Signature 	Date 14-May-2014

Faculty Approval
Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Program Committee Ian McCarthy	Signature 	Date 14-May-2014

Senate Graduate Studies Committee Approval
SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

Senate Graduate Studies Committee	Signature	Date

CONTACT

Upon approval of the course, the Office of the Dean of Graduate Studies will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

Department / School / Program	Contact name	Contact email

SFU SIMON FRASER UNIVERSITY
DEAN OF GRADUATE STUDIES

New Graduate Course Proposal Form

PROPOSED COURSE

Subject (eg. MAPH) BUS	Number (eg. 810) 797	Units (eg. 4) 2

Course Title (max 80 characters)
Business Plan II

Short Title (appears on transcripts, max 25 characters)
Business Plan II

Course Description for SFU Calendar ☐ see attached document ☐ Learning outcomes identified

Integrate the frameworks and content of the GCSTC courses. Students work one-on-one with a faculty advisor in drawing together: opportunity identification, value proposition, value creation, industry attractiveness, business model, financials, development plan, competitor analysis, partnership strategy, entrepreneurial team and commercialization strategy. This is the second part of a two part course.

Available Course Components: ☐ Lecture ☐ Seminar ☐ Laboratory ☐ Practicum ☐ Online ☑ Project

Grading Basis ☐ Letter grades ☐ Satisfactory/Unsatisfactory ☑ In Progress/Complete | This is a capstone course ☐ Yes ☑ No

Prerequisites (if any) ☐ see attached document (if more space is required)

BUS 790 Lab to Market; BUS 791 Opporunity Identification & Assessment; BUS 792 Financial Literacy for Entrepreneurs; BUS 793 Business Models; BUS 796 Business Plan I

☐ This proposed course is combined with an undergrad course: Course number and units: _____

Additional course requirements for graduate students ☐ See attached document (if this space is insufficient)

Campus at which course will be offered (check all that apply) ☐ Burnaby ☑ Vancouver ☐ Surrey ☐ GNW ☐ _____

Estimated enrolment	Date of initial offering	Course delivery (eg. 3 hrs/week for 13 weeks)
15	September 2015	1 hr/week for 11 weeks

☐ Yes ☑ No Practicum work done in this class will involve children or vulnerable adults
(If the "Yes" box is checked, all students will require criminal record checks)

Justification ☐ See attached document (if more space is required)

Required course for the new certificate program

RESOURCES

If additional resources are required to offer this course, the department proposing the course should be prepared to provide information on the source(s) of those additional resources.

Faculty member(s) who will normally teach this course ☐ information about their competency to teach the course is appended
Sarah Lubik, Elicia Maine, Colleen Collins, Paul Terry or Ian Hand

Number of additional faculty members required in order to offer this course
0

Additional space required in order to offer this course ☐ see attached document
None

Additional specialized equipment required in order to offer this course ☐ see attached document
None

Additional Library resources required (append details) ☐ Annually $_____ ☐ One-time $_____
None

PROPOSED COURSE *from first page*

Program (eg. MAPH) BUS	Number (eg. 810) 797	Units (eg. 4) 2
Course title (max 80 characters) Business Plan II		

APPROVAL SIGNATURES

When a department proposes a new course it must first be sent to the chairs of each faculty graduate program committee where there might be an overlap in course content. The chairs will indicate that overlap concerns have been dealt with by signing the appropriate space or via a separate memo or e-mail (attached to this form).

The new course proposal must also be sent to the Library for a report on library resources.

Once overlap concerns have been dealt with, signatures indicate approval by the department, home faculty and Senate Graduate Studies Committee.

Other Faculties
The signature(s) below indicate that the Dean(s) or designate of other Faculties affected by the proposed new course support(s) the approval of the new course.

Name of Faculty	Signature of Dean or Designate	Date

Departmental Approval (non-departmentalized faculties need not sign)

Department Graduate Program Committee	Signature	Date 14-May-2014
Department Chair	Signature	Date 14-May-2014

Faculty Approval
Faculty approval indicates that all the necessary course content and overlap concerns have been resolved, and that the Faculty/Department commits to providing the required Library funds and any other necessary resources.

Faculty Graduate Program Committee	Signature	Date 14-May-2014

Senate Graduate Studies Committee Approval
SGSC approval indicates that the Library report has been seen, and all resource issues dealt with. Once approved, new course proposals are sent to Senate for information.

Senate Graduate Studies Committee	Signature	Date

CONTACT

Upon approval of the course, the Office of the Dean of Graduate Studies will consult with the department or school regarding other course attributes that may be required to enable the proper entry of the new course in the student record system.

Department / School / Program	Contact name	Contact email