THE WHARTON SCHOOL OF THE UNIVERSITY OF PENNSYLVANIA

MGMT 802: INNOVATION, CHANGE AND ENTREPRENEURIAL MANAGEMENT

Version 1.1 090308

This syllabus is a game plan subject to change, not a contract

Spring 2009 Q3

Instructor: Ian MacMillan:
4th Floor Vance Hall, 37th and Spruce

Office Hours: Friday **Noon- 1 pm by appointment only**

Textbook

"The Entrepreneurial Mindset" by McGrath and MacMillan. HBSP, 2000.

Bulkpack

This course will provide you with a theoretical foundation and a set of practical tools for the management of innovation, both in corporate settings and start-up situations. For the purposes of the course innovation is defined as the profitable commercialization of a new idea: product, market or technology. The theoretical backdrop will be provided by multiple readings, your knowledge of which will be tested in a readings report. The practical tools will be provided via lecture/discussion sessions, your skills at which will be demonstrated in an innovation plan for an actual innovation situation.

GRADING:

Class participation	20%
Readings report	15%
Innovation plan	65%

Class participation is an integral component of your learning experience as well as your grade. Your class participation score will be based on the assessment of the quality of your comments in class and the consistency of your attendance. To help us learn your name and recognize your participation, please use a tent card in class. I shall assume for each class that you have prepared the readings – these will not be repeated in class. You may be called on to present a summary of the readings at the start of class.

It is an explicit condition of signing up for this class that you can expect to be cold called.

Individual contribution to Group Effort:

In order to minimize the free rider problem with respect to group work, you will be asked to rate the contribution of each of the group members by assigning a percentage score to each member, using the GROUP MEMBER EVALUATION FORM below. These scores will be used to calculate a weighting score that will be applied to the individual's group work as follows

PERCENTAGE GIVEN TO		**TO** A	**TO** B	**TO** C
PERCENTAGE GIVEN BY				
	BY A	NA	100	65
	BY B	85	NA	55
	BY C	75	100	NA
AVERAGE		80	100	60

GRAND AVERAGE (80+ 100+ 60)/3 = 80

FINAL WEIGHTING:			
= AVERAGE/GRAND AVERAGE =	80/80	100/80	60/80
	1.0	1.25	0.75

SO IF GROUP REPORT SCORE WAS 50 POINTS

A WOULD GET 1.0*50 = 50
B WOULD GET 1.25*50 = 62.5
C WOULD GET 0.75*50= 37.5

There have been (rare) occasions when one group member got a QC while others got an A

COURSE OUTLINE – The specifics of course timing may change during the semester

The numbers **without** Ch in front of them refer to the list of readings at the end of this syllabus, the numbers **with** Ch in front of them refer to the Chapters in the textbook

Session	Q3 Date	Q4 Date	TOPIC	Readings
1	Jan 14	Mar 16	Introduction	Ch1, Ch2
2	Jan 21	Mar 18	Consumption Chain and Attribute Maps	3, 4, Ch3, Ch4
3	Jan 26	Mar 23	Managing innovation programs **Due: project description**	6, 15
4	Jan 28	Mar 25	Stage Gating and Discovery Driven Planning	Ch10
5	Feb 2	Mar 30	Stage Gating and Discovery Driven Planning	12, 13, 16
6	Feb 4	Apr 1	Simulating innovation programs **Due: Executive summary plus Consumption Chain and Attribute Map**	7,11, 17
7	Feb 9	Apr 6	Real options reasoning (ROR) and opportunity engineering	8, 10
8	Feb 11	Apr 8	Opportunity portfolios: **Due: Initial DDP**	9, Ch8
9	Feb 16	Apr 13	MarketBusting: Consumption Chain, Attribute Map	1, 2, Ch 5
10	Feb 18	Apr 15	MarketBusting: Key Metrics **Due: Simulation and BareBones option valuation**	Ch6,
11	Feb 23	Apr 20	MarketBusting : Industry Dynamics **Due: Portfolio plot of your project (single point plot)**	Ch9.
12	Feb 25	Apr 22	Stakeholder analysis and DRAT analysis	5, 14
13	Mar 2		**Review**	
14	Mar 4	Apr 27	Guest speaker: Innovation programs in practice **Due: Innovation plan and readings report**	Ch12, Ch13

Innovation Plan Description

This project is intended to help you refine your skills at assessing the potential of a proposed innovation and designing a system to commercialize it.

Form a team consisting of at least 5 members. Assume the role of a team charged with commercializing an innovation. Select an innovation that really interests your team. Startups are OK, as are innovations being considered by existing firms – even previous/current employers of group members.

Your goal is to learn enough about the innovation; using whatever data sources you can, to prepare a report for an appropriate strategy and action plan for commercializing the innovation.

The following outline should serve as a guide, but use your own best judgment as to the best way to present your work. Confine your text to **no more than** 20 double-spaced pages of 12 point type. Your Discovery Driven Plan, Consumption Chain, Attribute Maps, and other exhibits, supporting materials and additional analyses should not be more than another 12 pages.

1. **Executive Summary** (maximum 1 page)
2. **Impact statement** Description of the innovation, the problem to be solved, how your innovation solves it better than the current alternatives, the expected impact, what the intellectual property issues (if any) are with this innovation, and expected financial benefits (maximum 2 pages).
3. **Market analysis.** Analysis of the market for the innovation: Five forces with areas of greatest potential or vulnerability, arenas that will benefit, and the benefits themselves (Size and growth rate of the arenas), target revenue arenas, or target application arenas, with detailed value propositions, the revenue model and profit model or the cost/benefit model (Maximum 2pp)
4. **NCO analysis.** Nearest competitive solutions, benchmarks these NCO's are setting, what makes you better, what protects you from competitive matching? (maximum 3pp)
5. **Operations plan** Required scope of your effort, resources and capabilities must be developed, alliances and partnerships you suggest (maximum 2 pp).
6. **Discovery Driven Plan** for implementing the innovation, including reverse financials, operations spec and benchmarks, milestone/assumption table and a Staircase chart. Your plan should have maximum twelve major CheckPoints and a maximum twenty assumptions with their ranges, Portfolio plot
7. **Recommendations and key risks.** What the client should do next, and why you feel this is the best way to proceed. Your recommendation may be to not go forward, in which case your analysis should show why. Critical environmental risks, customer-response issues alternate competitor reaction scenarios, impact on your base-case plan, contingency plan
8. **Appendices**
    a. Your consumption chain with trigger events, attribute maps of major links, compared to the NCO
    b. Your completed scores for ACE, and your interpretation of these scores.
    c. A completed DRAT table for expected external and internal resistance, if any.
    d. Other appendices that you deem necessary.
9. **Extra Credit:** Scorecards and mapping of reactiveness, attractiveness and market power for key market segments

READINGS REPORT DESCRIPTION

You will be required to submit a five page report describing how the bulkpack (not textbook) readings applied to your innovation project.

The structure is simple: Pick five of the readings that you think are particularly appropriate for a decision your team made about your venture. The reading does not have to support your decision, but

please explain what concepts and conclusions were useful to you and how you incorporated the learnings into your venture.

Here is a score-card an earlier group used, rating the readings under each heading on a 1 to 4 scale:

Relevance	*Practicality*	*Up to date and Current*	*Interesting and Easy to Read*	*Total*

Appendix: List all readings (including your top five) and rate the reading's usefulness along the spectrum: no value, some value, useful, very useful. At the end of the appendix also include any recommendations of readings that your team is aware of that did not appear in the required readings list, but you feel should be included. Finally list any readings that have been used in other courses, and specify the course
This report will then be used to improve the readings for this course.
THE READINGS REPORT WILL COUNT 15% TOWARDS YOUR FINAL GRADE

GROUP MEMBER EVALUATION FORM: E-mail to your TA on the day before the exam

GROUP NAME
GROUP LEADER

YOUR NAME: SOCIAL SECURITY NUMBER:

GROUP MEMBER'S NAME (PLEASE PRINT)	PERCENTAGE EFFORT
DO NOT RATE YOURSELF	

802 READINGS

1. Bower, Joseph L. and Christensen, Clayton M. 1995. 'Disruptive Technologies: Catching the Wave" Harvard Business Review January/February, 1995.
2. Drucker, Peter. F. "The Discipline of Innovation". Harvard Business Review, November/December, 1998.
3. Leonard-Barton, Dorothy, "Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development". Strategic Management Journal, Summer 1992, Vol. 13 Issue 5, p111.
4. Anderson, Philip and Tushman, Michael, "Managing Through Cycles of Technological Change". Research/Technology Management, May/June 1991, p. 26-31.
5. van Putten, MacMillan and McGrath. ""Global Gamesmanship". Harvard Business Review. May-June 2003: pp. 62-74
6. Von Hippel, E. 1986. 'Lead Users: A Source of Novel Product Concepts' Management Science v32n7.
7. Arthur, B. (July-August 1996), Increasing Returns and the New World of Business," Harvard Business Review, pp. 100-109
8. Lynn, Gary S., Morone, Joseph G., Paulson, Albert S. "Marketing and Discontinuous Innovation: The Probe and Learn Process". California Management Review, Spring 1996, Vol. 38, Issue 3, p. 8.
9. Wheelwright, S. C. and Clark, K. B. 'Creating project plans to focus product development' Harvard Business Review March-April 1992 p. 70-82.
10. Mitchell, Graham R., Hamilton, William F., "Managing R&D as a Strategic Option". Research/Technology Management, May/June 1988.
11. Amabile, Teresa. 1998. How to kill creativity. Harvard Business Review, September/October 1998
12. **SKIM:** Cooper, Edgett and Kleinschmidt, "Optimizing the Stage-Gate Process: What Best-Practice Companies Do – I" . Research—Technology Management. Sep-Oct 2002. pp 21-27
13. **SKIM:** Cooper, Edgett and Kleinschmidt. "Optimizing the Stage-Gate Process: What Best-Practice Companies Do – II" Research—Technology Management. Nov-Dec 2002. pp 43-49
14. Horn, Lovallo and Viguerde. "Learning to let go: Making better exit decisions" McKinsey Quarterly online journal; mckinseyquarterly.com.
15. Selden, L and MacMillan, I.C. "Manage Customer-Centric Innovation - Systematically" Harvard Business Review April 2006. pp. 108-116.
16. **SKIM:** Sethi, R and Iqbal, Z. "Stage-gate controls, Learning failure and Adverse effect on Novel new products" Journal of Marketing, Vol. 72 (January2008), 118-134.
17. Rice, M, O'Connor, G and Pierantozzi, R. "Implementing a learning plan to counter project uncertainty" MIT Sloan Management Review, Vol. 49, No 2 (Winter 2008) 54-62.